Appendix F:Excluded studies

F.1 Classification

F.1.1 Classification systems for age-related macular degeneration (AMD)

RQ6: What effective classification tool should be used to inform people with AMD?

Study	Reason for Exclusion
Armstrong,J., Davis,M.D., Gangnon,R.E., Lee,L.-Y., Klein,R., Klein,B.E., Milton,R.C., Ferris,F.L., Hubbard,L.D., Illustration of the AMD Severity Scale from the Age-Related Eye Diseases Study, IOVS, 45, ARVO-abstract, 2004	Meeting abstract
Bartlett,H., Eperjesi,F., 20080304, Use of fundus imaging in quantification of age-related macular change. [Review] [88 refs], Survey of ophthalmologySurv Ophthalmol, 52, 655-671, 2007	Review (non systematic)
Beirne,R.O., Hogg,R.E., Stevenson,M.R., Zlatkova,M.B., Chakravarthy,U., Anderson,R.S., 20061024, Severity staging by early features of age-related maculopathy exhibits weak relationships with functional deficits on SWS grating acuity, Investigative ophthalmology & visual scienceInvest Ophthalmol Vis Sci, 47, 4624-4631, 2006	No outcomes of interest (descriptive outcomes only)
Biarnes,M., Mones,J., Trindade,F., Alonso,J., Arias,L., 20120523, Intra and interobserver agreement in the classification of fundus autofluorescence patterns in geographic atrophy secondary to age-related macular degeneration, Graefes Archive for Clinical & Experimental Ophthalmology, 250, 485-490, 2012	Geographic atrophy, features on fundus autoflourescence (not current standard of investigation).
Bird,A.C., Bressler,N.M., Bressler,S.B., Chisholm,I.H., Coscas,G., Davis,M.D., de Jong,P.T., Klaver,C.C., Klein,B.E., Klein,R., 19950810, An international classification and grading system for age-related maculopathy and age-related macular degeneration. The International ARM Epidemiological Study Group. [Review] [16 refs], Survey of OphthalmologySurv.Ophthalmol., 39, 367-374, 1995	Review (non systematic, descriptive)
Brader,H.S., Ying,G.S., Martin,E.R., Maguire,M.G., Complications of Age-Related Macular Degeneration Prevention Trial-CAPT Research Group, 20120127, New grading criteria allow for earlier detection of geographic atrophy in clinical trials, Investigative Ophthalmology & Visual Science, 52, 9218-9225, 2011	Geographic atrophy, grading system based on features on fluorescein angiography (not current standard of investigation).
Bressler,N.M., Bressler,S.B., West,S.K., Fine,S.L., Taylor,H.R., 19890707, The grading and prevalence of macular degeneration in	Does not give validation outcomes (or other outcomes of interest) for classification system described.

Study	Reason for Exclusion
Chesapeake Bay watermen, Archives of OphthalmologyARCH.OPHTHALMOL., 107, 847-852, 1989	
Bressler,S.B., Ferris,F.L., Davis,M.D., Gangnon,R.E., Hubbard,L.D., Lee,L.Y., Chew,E.Y., Klein,B.E., Klein,R., A Simple Clinical Scale for Estimating the Risk of Age-Related Macular Degeneration Progression, IOVS, 46, ARVO-abstract, 2005	Meeting abstract
Buitendijk,G.H., Rochtchina,E., Myers,C., van Duijn,C.M., Lee,K.E., Klein,B.E., Meuer,S.M., de Jong,P.T., Holliday,E.G., Tan,A.G., Uitterlinden,A.G., Sivakumaran,T.A., Attia,J., Hofman,A., Mitchell,P., Vingerling,J.R., Iyengar,S.K., Janssens,A.C., Wang,J.J., Klein,R., Klaver,C.C., 20140129, Prediction of age-related macular degeneration in the general population: the Three Continent AMD Consortium.[Erratum appears in Ophthalmology. 2014 Apr;121(4):976 Note: Sivakumaran, Theru S [corrected to Sivakumaran, Theru A]], Ophthalmology, 120, 2644-2655, 2013	Prediction model reported clinical factors mixed in with demographic variables
Buitendijk,G.H.S., Rochtchina,E., Myers,C., van Duijn,C.M., Lee,K.E., Klein,B.E.K., Meuer,S.M., De Jong,P.T.V.M., Holliday,E.G., Tan,A.G., Uitterlinden,A.G., Sivakumaran,T.S., Attia,J., Hofman,A., Mitchell,P., Vingerling,J.R., Iyengar,S.K., Janssens,A.C.J.W., Wang,J.J., Klein,R., Klaver,C.C.W., Prediction of age-related macular degeneration in the general population: The three continent AMD consortium, Ophthalmology, 120, 2644-2655, 2013	Prediction model reported clinical factors mixed in with demographic variables
Chew,E.Y., Clemons,T., Lindblad,A., Ferris,F.L., Klein,R., The Progression of Age-Related Macular Degeneration in African-Americans Enrolled in the Age-Related Eye Disease Study (AREDS), Using the AREDS Simple Scale, IOVS, 47, ARVO-abstract, 2006	Meeting abstract
Chew,E.Y., Clemons,T., Milton,R., Davis,M.D., Ferris,F.L., Visual Acuity Loss Associated With Advanced AMD Fundus Lesions and With the Simplified AREDS AMD Severity Scale, IOVS, 48, ARVO-Abstract, 2007	Meeting abstract
Chiu,C.J., Mitchell,P., Klein,R., Klein,B.E., Chang,M.L., Gensler,G., Taylor,A., 20140910, A risk score for the prediction of advanced age-related macular degeneration: development and validation in 2 prospective cohorts, Ophthalmology, 121, 1421-1427, 2014	Clinical variables mixed in with demographic variables to produce a risk score
Clemons,T.E., Ferris,F.L., Chew,E.Y., Davis,M.D., The Age-Related Eye Disease Study (AREDS) Simple Scale: The Relation of the AREDS Simple Scale for AMD to Long-Term Progression to Advanced AMD and Reduced Vision, IOVS, 48, ARVO-Abstract, 2007	Meeting abstract
Cukras,C., Fine,S.L., 20070320, Classification and grading system for age-related macular	Review (non systematic)

Study	Reason for Exclusion
degeneration. [Review] [48 refs], International Ophthalmology ClinicsINT.OPHTHALMOL.CLIN., 47, 51-63, 2007	
DeCroos,F.C., Toth,C.A., Stinnett,S.S., Heydary,C.S., Burns,R., Jaffe,G.J., CATT Research Group, 20130207, Optical coherence tomography grading reproducibility during the Comparison of Age-related Macular Degeneration Treatments Trials, Ophthalmology, 119, 2549-2557, 2012	Grading of optical coherence scan morphological features
Farsiu,S., Chiu,S.J., O'Connell,R.V., Folgar,F.A., Yuan,E., Izatt,J.A., Toth,C.A., Age-Related Eye Disease Study, 20140313, Quantitative classification of eyes with and without intermediate age-related macular degeneration using optical coherence tomography, Ophthalmology, 121, 162-172, 2014	No outcomes of interest (diagnostic accuracy)
Ferris,F.L., Davis,M.D., Clemons,T.E., Lee,L.Y., Chew,E.Y., Lindblad,A.S., Milton,R.C., Bressler,S.B., Klein,R., Age-Related Eye Disease Study (AREDS) Research Group, 20051122, A simplified severity scale for age-related macular degeneration: AREDS Report No. 18, Archives of OphthalmologyARCH.OPHTHALMOL., 123, 1570-1574, 2005	No outcomes of interest reported (crude rates of development of advanced AMD only)
Ferris,F.L.,III, Wilkinson,C.P., Bird,A., Chakravarthy,U., Chew,E., Csaky,K., Sadda,S.R., Beckman Initiative for Macular Research Classification Committee, 20130521, Clinical classification of age-related macular degeneration, Ophthalmology, 120, 844-851, 2013	No outcomes of interest reported (crude rates of development of advanced AMD only).
Hessellund,A., Larsen,D.A., Bek,T., 20130206, The predictive value of subjective symptoms and clinical signs for the presence of treatment-requiring exudative age-related macular degeneration, Acta Opthalmologica, 90, 471-475, 2012	Individual signs and symptoms (not classification system)
Klein,R., Davis,M.D., Magli,Y.L., Segal,P., Klein,B.E., Hubbard,L., 19911015, The Wisconsin age-related maculopathy grading system, Ophthalmology, 98, 1128-1134, 1991	A grading system for the individual clinical features of AMD (e.g. Drusen size, area, type) not a severity scale for AMD.
Klein,R., Klein,B.E.K., Myers,C.E., Risk assessment models for late age-related macular degeneration, Archives of ophthalmologyArch Ophthalmol, 129, 1605-1606, 2011	Review (non systematic)
KLIEN,B.A., 19961201, Some aspects of classification and differential diagnosis of senile macular degeneration, American Journal of OphthalmologyAm.J.Ophthalmol., 58, 927-939, 1964	Review and small case series
Marques,J.P., Costa,M., Melo,P., Oliveira,C.M., Pires,I., Cachulo,M.L., Figueira,J., Silva,R., 20140220, Ocular Risk Factors for Exudative	Individual ocular risk factors (covered in review question 2)

Study	Reason for Exclusion
AMD: A Novel Semiautomated Grading System, Isrn Ophthalmology Print, 2013, 464218-, 2013	
McCarthy,L.C., Newcombe,P.J., Whittaker,J.C., Wurzelmann,J.I., Fries,M.A., Burnham,N.R., Cai,G., Stinnett,S.W., Trivedi,T.M., Xu,C.F., 20121106, Predictive models of choroidal neovascularization and geographic atrophy incidence applied to clinical trial design, American Journal of OphthalmologyAm.J.Ophthalmol., 154, 568-578, 2012	No outcomes of interest (e.g. hazard ratios, time-adjusted odds ratios)
Mitchell,P., Foran,S., 20051122, Age-Related Eye Disease Study severity scale and simplified severity scale for age-related macular degeneration, Archives of OphthalmologyARCH.OPHTHALMOL., 123, 1598-1599, 2005	Editorial
Mookiah,M.R.K., Acharya,U.R., Fujita,H., Koh,J.E.W., Tan,J.H., Noronha,K., Bhandary,S.V., Chua,C.K., Lim,C.M., Laude,A., Tong,L., Local configuration pattern features for age-related macular degeneration characterization and classification, Computers in biology and medicineComput Biol Med, 63, 208-218, 2015	No outcomes of interest (diagnostic accuracy)
Sallo,F.B., Peto,T., Leung,I., Xing,W., Bunce,C., Bird,A.C., 20090508, The International Classification system and the progression of age-related macular degeneration, Current Eye ResearchCURR.EYE RES., 34, 238-240, 2009	A system for the grading of individual clinical features of AMD (e.g. Drusen size, area, type) not a severity scale for AMD.
Scholl,H.P., Peto,T., Dandekar,S., Bunce,C., Xing,W., Jenkins,S., Bird,A.C., 20030410, Inter- and intra-observer variability in grading lesions of age-related maculopathy and macular degeneration, Graefes Archive for Clinical & Experimental Ophthalmology, 241, 39-47, 2003	A grading system for the individual clinical features of AMD (e.g. Drusen size, area, type) not a severity scale for AMD.
Seddon,J.M., Reynolds,R., Maller,J., Fagerness,J.A., Daly,M.J., Rosner,B., 20090512, Prediction model for prevalence and incidence of advanced age-related macular degeneration based on genetic, demographic, and environmental variables, Investigative ophthalmology & visual scienceInvest Ophthalmol Vis Sci, 50, 2044-2053, 2009	No outcomes of interest (time to event data)
Seddon,J.M., Reynolds,R., Yu,Y., Daly,M.J., Rosner,B., 20111222, Risk models for progression to advanced age-related macular degeneration using demographic, environmental, genetic, and ocular factors, Ophthalmology, 118, 2203-2211, 2011	Predication model with clinical features and demographic variables mixed
Seddon,J.M., Reynolds,R., Yu,Y., Rosner,B., 20130605, Validation of a prediction algorithm for progression to advanced macular degeneration subtypes, JAMA OphthalmologyJAMA Ophthalmol., 131, 448-455, 2013	Reports risk of advanced AMD only with increase of CARMS stage in the fellow, not study, eye.

Study	Reason for Exclusion
Seddon,J.M., Silver,R.E., Kwong,M., Rosner,B., 20150825, Risk Prediction for Progression of Macular Degeneration: 10 Common and Rare Genetic Variants, Demographic, Environmental, and Macular Covariates, Investigative Ophthalmology & Visual Science, 56, 2192-2202, 2015	No outcomes for classification system
Sparrow,J.M., Dickinson,A.J., Duke,A.M., 19970722, The Wisconsin Age-related Macular Degeneration grading system: performance in an independent centre, Ophthalmic EpidemiologyOphthalmic Epidemiol., 4, 49-55, 1997	A grading system for the individual clinical features of AMD (e.g. Drusen size, area, type) not a severity scale for AMD.
Tan,C., Ngo,W.K., Lim,L.W., Lim,T.H., Noval classification of vascular channel filling in polypoidal choroidal vasculopathy predict its 5-year clinical outcomes, Annals of the Academy of Medicine SingaporeAnn.Acad.Med.Singapore, 43, S7-, 2014	A poster that could not be obtained
Tan,C.S., Ngo,W.K., Lim,L.W., Lim,T.H., 20150304, A novel classification of the vascular patterns of polypoidal choroidal vasculopathy and its relation to clinical outcomes, British Journal of OphthalmologyBr.J.Ophthalmol., 98, 1528-1533, 2014	Classification system for polypoidal choroidal vasculopathy alone. (breaking PCV into 3 further classifications)
Tan,C.S.H., Lim,T.H., Ngo,W.K., Lim,L.W.Y., Chew,M.C.Y., A novel angiographic and anatomic classification of polypoidal choroidal vasculopathy predicts its 5-year clinical outcomes, Annals of the Academy of Medicine SingaporeAnn.Acad.Med.Singapore, 40, S4-, 2011	Poster(cannot obtain its access)
Tan,C.S.H., Ngo,W.K., Gay,E.M.Q., Lim,L.W.Y., Lim,T.H., Classification of the vascular patterns of polypoidal choroidal vasculopathy and its relation to clinical outcomes, Annals of the Academy of Medicine SingaporeAnn.Acad.Med.Singapore, 39, S189-, 2010	Classification system for polypoidal choroidal vasculopathy alone
Tikellis,G., Robman,L.D., Dimitrov,P., Nicolas,C., McCarty,C.A., Guymer,R.H., 20070403, Characteristics of progression of early age-related macular degeneration: the cardiovascular health and age-related maculopathy study, Eye (London, England)Eye, 21, 169-176, 2007	Individual risk factors for AMD (covered by review question 2)
Ying,G.S., Maguire,M.G., Alexander,J., Martin,R.W., Antoszyk,A.N., The AREDS 9-Step AMD Severity Scale Applied to Participants in the Complications of Age-Related Macular Degeneration Prevention Trial (CAPT): Baseline Classification, Risk of Advanced AMD, and Longitudinal Path Analysis, IOVS, ARVO-abstract, 2008	Meeting abstract
Ying,G.S., Maguire,M.G., Alexander,J., Martin,R.W., Antoszyk,A.N., Complications of	No outcomes of interest reported (crude rates of development of advanced AMD only).

Study	Reason for Exclusion
Age-related Macular Degeneration Prevention Trial Research Group, 20090928, Description of the Age-Related Eye Disease Study 9-step severity scale applied to participants in the Complications of Age-related Macular Degeneration Prevention Trial, Archives of OphthalmologyARCH.OPHTHALMOL., 127, 1147-1151, 2009	
Ying,G.S., Maguire,M.G., Complications of Age-related Macular Degeneration Prevention Trial Research Group, 20110317, Development of a risk score for geographic atrophy in complications of the age-related macular degeneration prevention trial, Ophthalmology, 118, 332-338, 2011	Mixed clinical and demographic variables in prediction score

F.2 Risk factors

F.2.1 Risk factors for development or progression of AMD

RQ2: What risk factors increase the likelihood of a person developing AMD or progressing to late AMD?

Study	Reason for exclusion
Abugreen,S., Muldrew,K.A., Stevenson,M.R., VanLeeuwen,R., DeJong,P.T., Chakravarthy,U., 20030422, CNV subtype in first eyes predicts severity of ARM in fellow eyes, 2003	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Adams,M.K.M., Chong,E.W., Williamson,E., Aung,K.Z., Makeyeva,G.A., Giles,G.G., English,D.R., Hopper,J., Guymer,R.H., Baird,P.N., Robman,L.D., Simpson,J.A., 20/20-Alcohol and age-related macular degeneration, 2012	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Age-Related Eye Disease Study Research Group, 20001222, Risk factors associated with age-related macular degeneration. A case-control study in the age-related eye disease study: Age-Related Eye Disease Study Report Number 3, 2000	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Ajani,U.A., Schaumberg,D.A., Christen,W.G., Glynn,R.J., Manson,J.E., Buring,J.E., Hennekens,C.H., A prospective study of blood pressure and risk of age-related macular degeneration (amd) in male physicians, 1997	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Ambreen,Fareeha, Khan,Wajid Ali, Qureshi,Nadeem, Qureshi,Irfan Zia, Assessment of serum lipids in patients with age related macular degeneration from Pakistan, 2014	No risk factors of interest
Amirul Islam,Fakir M., Chong,Elaine W., Hodge,Allison M., Guymer,Robyn H., Aung,Khin Zaw, Makeyeva,Galina A., Baird,Paul N., Hopper,John L., English,Dallas R., Giles,Graham G., Robman,Liubov D., Dietary patterns and their associations with age-related macular degeneration: the Melbourne collaborative cohort study, 2014	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Augood,C., Chakravarthy,U., Young,I., Vioque,J., de Jong,P.T., Bentham,G., Rahu,M., Seland,J., Soubrane,G., Tomazzoli,L., Topouzis,F., Vingerling,J.R., Fletcher,A.E., 20080912, Oily fish consumption, dietary docosahexaenoic acid and eicosapentaenoic acid intakes, and associations with neovascular age-related macular degeneration, 2008	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Blumenkranz,M.S., Russell,S.R., Robey,M.G., Kott-Blumenkranz,R., Penneys,N., 19860815, Risk factors in age-related maculopathy complicated by choroidal neovascularization, 1986	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Boltz,A., Luksch,A., Wimpissinger,B., Maar,N., Weigert,G., Frantal,S., Brannath,W., Garhofer,G., Ergun,E., Stur,M., Schmetterer,L., 20100820, Choroidal blood flow and progression of age-	No risk factors of interest

Study	Reason for exclusion
related macular degeneration in the fellow eye in patients with unilateral choroidal neovascularization, 2010	
Bone,R.A., Landrum,J.T., Mayne,S.T., Gomez,C.M., Tibor,S.E., Twaroska,E.E., 20010118, Macular pigment in donor eyes with and without AMD: a case-control study.[Erratum appears in Invest Ophthalmol Vis Sci 2001 Mar;42(3):548], 2001	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Bressler,S., Bressler,N.M., Clemons,T., Ferris,F.L., Milton,R.C., Klein,R., Klein,B., Ocular Risk Factors for Developing Neovascular AMD in the Fellow Eyes of Patients with Unilateral Neovascular AMD, 2004	Abstract
Bressler,S.B., Ferris,F.L., Milton,R.C., Gensler,G., Harrington,M., Kim,J., Chew,E.Y., The Effect of Cataract Surgery on the Development of Neovascular Age-Related Macular Degeneration (AMD), 2006	Abstract
Buch,H., Vinding,T., la,Cour M., Jensen,G.B., Prause,J.U., Nielsen,N.V., 20050901, Risk factors for age-related maculopathy in a 14-year follow-up study: the Copenhagen City Eye Study, 2005	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Buitendijk,Gabrielle H.S., Rochtchina,Elena, Myers,Chelsea, van Duijn,Cornelia M., Lee,Kristine E., Klein,Barbara E.K., Meuer,Stacy M., de Jong,Paulus T.V.M., Holliday,Elizabeth G., Tan,Ava G., Uitterlinden,Andre G., Sivakumaran,Theru A., Sivakumaran,Theru S., Attia,John, Hofman,Albert, Mitchell,Paul, Vingerling,Johannes R., Iyengar,Sudha K., Janssens,A.Cecile, Wang,Jie Jin, Klein,Ronald, Klaver,Caroline C.W., Prediction of age-related macular degeneration in the general population: the Three Continent AMD Consortium, 2013	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Butt,Amir L., Lee,Elisa T., Klein,Ronald, Russell,Dana, Ogola,Gerald, Warn,Ann, Kingsley,Ronald M., Yeh,Jeunliang, Prevalence and risks factors of age-related macular degeneration in Oklahoma Indians: the Vision Keepers Study, 2011	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Caramoy,Albert, Ristau,Tina, Lechanteur,Yara T., Ersoy,Lebriz, Muller,Sebastian, Gelisken,Faik, Hoyng,Carel B., Kirchhof,Bernd, den Hollander,Anneke I., Fauser,Sascha, Environmental and genetic risk factors for retinal angiomatous proliferation, 2014	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Chaine,G., Hullo,A., Sahel,J., Soubrane,G., Espinasse-Berrod,M.-A., Schutz,D., Bourguignon,C., Harpey,C., Brault,Y., Coste,M., Moccatti,D., Bourgeois,H., Case-control study of the risk factors for age related macular degeneration, 1998	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Chakravarthy,U., Augood,C., Bentham,G.C., de Jong,P.T., Rahu,M., Seland,J., Soubrane,G., Tomazzoli,L., Topouzis,F., Vingerling,J.R.,	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
Vioque,J., Young,I.S., Fletcher,A.E., 20070619, Cigarette smoking and age-related macular degeneration in the EUREYE Study, 2007	
Chakravarthy,U., Wong,T.Y., Fletcher,A., Piault,E., Evans,C., Zlateva,G., Buggage,R., Pleil,A., Mitchell,P., 20110404, Clinical risk factors for age-related macular degeneration: a systematic review and meta-analysis. [Review], 2010	Systematic review providing no additional relevant data
Chakravarthy,Usha, McKay,Gareth J., de Jong,Paulus T.V.M., Rahu,Mati, Seland,Johan, Soubrane,Gisele, Tomazzoli,Laura, Topouzis,Fotis, Vingerling,Johannes R., Vioque,Jesus, Young,Ian S., Sofat,Reecha, Hingorani,Aroon D., Fletcher,Astrid E., ARMS2 increases the risk of early and late age-related macular degeneration in the European Eye Study, 2013	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Chang,M.A., Bressler,S.B., Munoz,B., West,S.K., 20080718, Racial differences and other risk factors for incidence and progression of age-related macular degeneration: Salisbury Eye Evaluation (SEE) Project, 2008	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Chen,X., Rong,S.S., Xu,Q., Tang,F.Y., Liu,Y., Gu,H., Tam,P.O.S., Chen,L.J., Brelen,M.E., Pang,C.P., Zhao,C., Diabetes mellitus and risk of age-related macular degeneration: A systematic review and meta-analysis, 2014	Systematic review providing no additional relevant data
Chen,Yuhong, Zeng,Jiexi, Zhao,Chao, Wang,Kevin, Trood,Elizabeth, Buehler,Jeanette, Weed,Matthew, Kasuga,Daniel, Bernstein,Paul S., Hughes,Guy, Fu,Victoria, Chin,Jessica, Lee,Clara, Crocker,Maureen, Bedell,Matthew, Salasar,Francesca, Yang,Zhenglin, Goldbaum,Michael, Ferreyra,Henry, Freeman,William R., Kozak,Igor, Zhang,Kang, Assessing susceptibility to age-related macular degeneration with genetic markers and environmental factors, 2011	Not a relevant population
Cheung,N., Liao,D., Islam,F.M., Klein,R., Wang,J.J., Wong,T.Y., 20070501, Is early age-related macular degeneration related to carotid artery stiffness? The Atherosclerosis Risk in Communities Study, 2007	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Chew,Emily Y., Clemons,Traci E., Agron,Elvira, Sperduto,Robert D., SanGiovanni,John Paul, Davis,Matthew D., Ferris,Frederick L., Age-Related Eye Disease Study Research Group, Ten-year follow-up of age-related macular degeneration in the age-related eye disease study: AREDS report no. 36, 2014	Incomplete outcomes (no confidence intervals provided)
Chiu,C.-J., Hubbard,L.D., Armstrong,J., Rogers,G., Jacques,P.F., Chylack,Jr, Hankinson,S.E., Willett,W.C., Taylor,A., Dietary glycemic index and carbohydrate in relation to early age-related macular degeneration, 2006	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
Chiu,C.J., Milton,R.C., Gensler,G., Taylor,A., 20070904, Association between dietary glycemic index and age-related macular degeneration in nondiabetic participants in the Age-Related Eye Disease Study, 2007	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Chiu,C.-J., Milton,R.C., Klein,R., Gensler,G., Taylor,A., Dietary Compound Score and Risk of Age-Related Macular Degeneration in the Age-Related Eye Disease Study, 2009	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Chiu,Chung Jung, Mitchell,Paul, Klein,Ronald, Klein,Barbara E., Chang,Min Lee, Gensler,Gary, Taylor,Allen, A risk score for the prediction of advanced age-related macular degeneration: development and validation in 2 prospective cohorts, 2014	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Cho,Bum Joo, Heo,Jang Won, Kim,Tae Wan, Ahn,Jeeyun, Chung,Hum, Prevalence and risk factors of age-related macular degeneration in Korea: the Korea National Health and Nutrition Examination Survey 2010-2011, 2014	Not a relevant population
Cho,E., Hankinson,S.E., Rosner,B., Willett,W.C., Colditz,G.A., 20080801, Prospective study of lutein/zeaxanthin intake and risk of age-related macular degeneration, 2008	Visually significant AMD only
Cho,E., Hankinson,S.E., Willett,W.C., Stampfer,M.J., Spiegelman,D., Speizer,F.E., Rimm,E.B., Seddon,J.M., Prospective study of alcohol consumption and the risk of age-related macular degeneration, 2000	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Cho,E., Hung,S., Willett,W.C., Spiegelman,D., Rimm,E.B., Seddon,J.M., Colditz,G.A., Hankinson,S.E., 20010315, Prospective study of dietary fat and the risk of age-related macular degeneration, 2001	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios))
Cho,E., Stampfer,M.J., Seddon,J.M., Hung,S., Spiegelman,D., Rimm,E.B., Willett,W.C., Hankinson,S.E., 20010809, Prospective study of zinc intake and the risk of age-related macular degeneration, 2001	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Cho,Eunyoung, Seddon,Johanna M., Rosner,Bernard, Willett,Walter C., Hankinson,Susan E., Prospective study of intake of fruits, vegetables, vitamins, and carotenoids and risk of age-related maculopathy, 2004	Visually significant AMD only
Cho,Han Joo, Yoo,Seul Gi, Kim,Hyoung Seok, Kim,Jae Hui, Kim,Chul Gu, Lee,Tae Gon, Kim,Jong Woo, Risk factors for geographic atrophy after intravitreal ranibizumab injections for retinal angiomatous proliferation, 2015	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Choi,Jae Kyung, Lym,Youl Lee, Moon,Jun Woong, Shin,Hyun Jin, Cho,Belong, Diabetes mellitus and early age-related macular degeneration, 2011	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Choi,Jaekyung, Moon,Jun Woong, Shin,Hyun Jin, Chronic kidney disease, early age-related	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
macular degeneration, and peripheral retinal drusen, 2011	
Chong,E.W., Wong,T.Y., Kreis,A.J., Simpson,J.A., Guymer,R.H., 20071029, Dietary antioxidants and primary prevention of age related macular degeneration: systematic review and meta-analysis. [Review] [48 refs], 2007	Systematic review providing no additional relevant data
Chong,E.W.-T., Kreis,A.J., Wong,T.Y., Simpson,J.A., Guymer,R.H., Alcohol Consumption and the Risk of Age-Related Macular Degeneration: A Systematic Review and Meta-Analysis, 2008	Systematic review providing no additional relevant data
Chong,E.W.-T., Simpson,J.A., Robman,L.D., Hodge,A.M., Aung,K.Z., English,D.R., Giles,G.G., Guymer,R.H., Red meat and chicken consumption and its association with age-related macular degeneration, 2009	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Chong,Elaine W.-T., Kreis,Andreas J., Wong,Tien Y., Simpson,Julie A., Guymer,Robyn H., Dietary omega-3 fatty acid and fish intake in the primary prevention of age-related macular degeneration: a systematic review and meta-analysis, 2008	Systematic review providing no additional relevant data
Chong,Elaine W.-T., Robman,Luibov D., Simpson,Julie A., Hodge,Allison M., Aung,Khin Zaw, Dolphin,Theresa K., English,Dallas R., Giles,Graham G., Guymer,Robyn H., Fat consumption and its association with age-related macular degeneration, 2009	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Choudhury,Farzana, Varma,Rohit, McKean-Cowdin,Roberta, Klein,Ronald, Azen,Stanley P., Los Angeles Latino Eye Study Group, Risk factors for four-year incidence and progression of age-related macular degeneration: the los angeles latino eye study, 2011	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Christen,W.G., Ajani,U.A., Glynn,R.J., Manson,J.E., Schaumberg,D.A., Chew,E.C., Buring,J.E., Hennekens,C.H., 19990318, Prospective cohort study of antioxidant vitamin supplement use and the risk of age-related maculopathy, 1999	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Christen,W.G., Glynn,R.J., Manson,J.E., Ajani,U.A., Buring,J.E., 19961031, A prospective study of cigarette smoking and risk of age-related macular degeneration in men, 1996	Outcomes for visually significant AMD only
Christen,W.G., Glynn,R.J., Manson,J.E., Seddon,J.M., Hennekens,C.H., Aspirin and age-related maculopathy, 1993	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Christen,William G., Schaumberg,Debra A., Glynn,Robert J., Buring,Julie E., Dietary omega-3 fatty acid and fish intake and incident age-related macular degeneration in women, 2011	Visually significant AMD only
Chua,Brian, Flood,Victoria, Rochtchina,Elena, Wang,Jie Jin, Smith,Wayne, Mitchell,Paul, Dietary fatty acids and the 5-year incidence of age-related maculopathy, 2006	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
Clemons,T.E., Milton,R.C., Klein,R., Seddon,J.M., Ferris,F.L.,III, Age-Related Eye Disease Study Research Group, 20050414, Risk factors for the incidence of Advanced Age-Related Macular Degeneration in the Age-Related Eye Disease Study (AREDS) AREDS report no. 19, 2005	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Coleman,Anne L., Seitzman,Robin L., Cummings,Steven R., Yu,Fei, Cauley,Jane A., Ensrud,Kristine E., Stone,Katie L., Hochberg,Marc C., Pedula,Kathryn L., Thomas,Edgar L., Mangione,Carol M., Study Of Osteoporotic Fractures Research Group, The association of smoking and alcohol use with age-related macular degeneration in the oldest old: the Study of Osteoporotic Fractures, 2010	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Cong,R., Zhou,B., Sun,Q., Gu,H., Tang,N., Wang,B., 20080828, Smoking and the risk of age-related macular degeneration: a meta-analysis, 2008	Meta-analysis providing no additional relevant data
Cougnard-Gregoire,Audrey, Delyfer,Marie Noelle, Korobelnik,Jean Francois, Rougier,Marie Benedicte, Le Goff,Melanie, Dartigues,Jean Francois, Barberger-Gateau,Pascale, Delcourt,Cecile, Elevated high-density lipoprotein cholesterol and age-related macular degeneration: the Alienor study, 2014	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Cougnard-Gregoire,Audrey, Delyfer,Marie Noelle, Korobelnik,Jean Francois, Rougier,Marie Benedicte, Malet,Florence, Le Goff,Melanie, Dartigues,Jean Francois, Colin,Joseph, Barberger-Gateau,Pascale, Delcourt,Cecile, Long-term blood pressure and age-related macular degeneration: the ALIENOR study, 2013	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Cruickshanks,K.J., Hamman,R.F., Klein,R., Nondahl,D.M., Shetterly,S.M., The prevalence of age-related maculopathy by geographic region and ethnicity. The Colorado-Wisconsin Study of Age-Related Maculopathy, 1997	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Cruickshanks,K.J., Klein,R., Klein,B.E., Sunlight and age-related macular degeneration. The Beaver Dam Eye Study, 1993	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Cruickshanks,K.J., Klein,R., Klein,B.E., Nondahl,D.M., Sunlight and the 5-year incidence of early age-related maculopathy: the beaver dam eye study, 2001	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Cugati,S., Mitchell,P., Rochtchina,E., Tan,A.G., Smith,W., Wang,J.J., 20061121, Cataract surgery and the 10-year incidence of age-related maculopathy: the Blue Mountains Eye Study, 2006	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Dandekar,S.S., Jenkins,S.A., Peto,T., Bird,A.C., Webster,A.R., 20060613, Does smoking influence the type of age related macular degeneration causing visual impairment?, 2006	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
DeAngelis,Margaret M., Ji,Fei, Kim,Ivana K., Adams,Scott, Capone,Antonio Jr, Ott,Jurg,	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
Miller,Joan W., Dryja,Thaddeus P., Cigarette smoking, CFH, APOE, ELOVL4, and risk of neovascular age-related macular degeneration, 2007	
Deangelis,Margaret M., Lane,Anne Marie, Shah,Chirag P., Ott,Jurg, Dryja,Thaddeus P., Miller,Joan W., Extremely discordant sib-pair study design to determine risk factors for neovascular age-related macular degeneration, 2004	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Delcourt,C., Carriere,I., Cristol,J.P., Lacroux,A., Gerber,M., 20080201, Dietary fat and the risk of age-related maculopathy: the POLANUT study, 2007	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Delcourt,C., Carriere,I., Ponton-Sanchez,A., Fourrey,S., Lacroux,A., Papoz,L., POLA Study Group, Light exposure and the risk of age-related macular degeneration: the Pathologies Oculaires Liees a l'Age (POLA) study, 2001	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Delcourt,C., Diaz,J.L., Ponton-Sanchez,A., Papoz,L., Smoking and age-related macular degeneration. The POLA Study. Pathologies Oculaires Liees a l'Age, 1998	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Delcourt,C., Korobelnik,J.F., Barberger-Gateau,P., Delyfer,M.N., Rougier,M.B., Le,Goff M., Malet,F., Colin,J., Dartigues,J.F., 20110214, Nutrition and age-related eye diseases: the Alienor (Antioxydants, Lipides Essentiels, Nutrition et maladies OculaiRes) Study, 2010	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Delcourt,C., Lacroux,A., Carriere,I., POLA Study Group, 20051222, The three-year incidence of age-related macular degeneration: the "Pathologies Oculaires Liees a l'Age" (POLA) prospective study, 2005	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Delcourt,C., Michel,F., Colvez,A., Lacroux,A., Delage,M., Vernet,M.H., POLA study group, 20010906, Associations of cardiovascular disease and its risk factors with age-related macular degeneration: the POLA study, 2001	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Delcourt,Cecile, Cougnard-Gregoire,Audrey, Boniol,Mathieu, Carriere,Isabelle, Dore,Jean Francois, Delyfer,Marie Noelle, Rougier,Marie Benedicte, Le Goff,Melanie, Dartigues,Jean Francois, Barberger-Gateau,Pascale, Korobelnik,Jean Francois, Lifetime exposure to ambient ultraviolet radiation and the risk for cataract extraction and age-related macular degeneration: the Alienor Study, 2014	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Erke,Maja G., Bertelsen,Geir, Peto,Tunde, Sjolie,Anne K., Lindekleiv,Haakon, Njolstad,Inger, Cardiovascular risk factors associated with age-related macular degeneration: the Tromso Study, 2014	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Ersoy,Lebriz, Ristau,Tina, Hahn,Moritz, Karlstetter,Marcus, Langmann,Thomas, Droge,Katharina, Caramoy,Albert, den Hollander,Anneke I., Fauser,Sascha, Genetic	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
and environmental risk factors for age-related macular degeneration in persons 90 years and older, 2014	
Ersoy,Lebriz, Ristau,Tina, Lechanteur,Yara T., Hahn,Moritz, Hoyng,Carel B., Kirchhof,Bernd, den Hollander,Anneke I., Fauser,Sascha, Nutritional risk factors for age-related macular degeneration, 2014	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Evans,J.R., Fletcher,A.E., Wormald,R.P., 20050513, 28,000 Cases of age related macular degeneration causing visual loss in people aged 75 years and above in the United Kingdom may be attributable to smoking, 2005	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Flood,V., Smith,W., Wang,J.J., Manzi,F., Webb,K., Mitchell,P., 20021220, Dietary antioxidant intake and incidence of early age-related maculopathy: the Blue Mountains Eye Study, 2002	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Francis,P.J., George,S., Schultz,D.W., Rosner,B., Hamon,S., Ott,J., Weleber,R.G., Klein,M.L., Seddon,J.M., 20070608, The LOC387715 gene, smoking, body mass index, environmental associations with advanced age-related macular degeneration, 2007	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Fraser-Bell,S., Wu,J., Klein,R., Azen,S.P., Hooper,C., Foong,A.W., Varma,R., 20080320, Cardiovascular risk factors and age-related macular degeneration: the Los Angeles Latino Eye Study, 2008	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Fraser-Bell,Samantha, Choudhury,Farzana, Klein,Ronald, Azen,Stanley, Varma,Rohit, Los Angeles Latino Eye Study Group, Ocular risk factors for age-related macular degeneration: the Los Angeles Latino Eye Study, 2010	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Fraser-Bell,Samantha, Donofrio,Jill, Wu,Joanne, Klein,Ronald, Azen,Stanley P., Varma,Rohit, Los Angeles Latino Eye Study Group, Sociodemographic factors and age-related macular degeneration in Latinos: the Los Angeles Latino Eye Study, 2005	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Fraser-Bell,Samantha, Wu,Joanne, Klein,Ronald, Azen,Stanley P., Varma,Rohit, Smoking, alcohol intake, estrogen use, and age-related macular degeneration in Latinos: the Los Angeles Latino Eye Study, 2006	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Freeman,E.E., Munoz,B., West,S.K., Tielsch,J.M., Schein,O.D., Is there an association between cataract surgery and age-related macular degeneration? Data from three population-based studies, 2003	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Friberg,Thomas R., Bilonick,Richard A., Brennen,Peter M., Risk factors for conversion to neovascular age-related macular degeneration based on longitudinal morphologic and visual acuity data, 2012	Incomplete outcomes (no confidence intervals provided)

Study	Reason for exclusion
Friedman,D.S., Katz,J., Bressler,N.M., Rahmani,B., Tielsch,J.M., 19990614, Racial differences in the prevalence of age-related macular degeneration: the Baltimore Eye Survey, 1999	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Glynn,R.J., Christen,W.G., Manson,J.E., Seddon,J.M., Hennekens,C.H., Cardiovascular risk factors and age-related maculopathy, 1993	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Gopinath,B., Flood,V.M., Kifley,A., Liew,G., Mitchell,P., Smoking, antioxidant supplementation and dietary intakes among older adults with age-related macular degeneration over 10 years, 2015	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Gopinath,Bamini, Flood,Victoria M., Louie,Jimmy C.Y., Wang,Jie Jin, Burlutsky,George, Rochtchina,Elena, Mitchell,Paul, Consumption of dairy products and the 15-year incidence of age-related macular degeneration, 2014	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Gopinath,Bamini, Flood,Victoria M., Rochtchina,Elena, Wang,Jie Jin, Mitchell,Paul, Homocysteine, folate, vitamin B-12, and 10-y incidence of age-related macular degeneration, 2013	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Gopinath,Bamini, Liew,Gerald, Burlutsky,George, Mitchell,Paul, Physical activity and the 15-year incidence of age-related macular degeneration, 2014	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Heuberger,R.A., Fisher,A.I., Jacques,P.F., Klein,R., Klein,B.E., Palta,M., Mares-Perlman,J.A., 20021011, Relation of blood homocysteine and its nutritional determinants to age-related maculopathy in the third National Health and Nutrition Examination Survey, 2002	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Heuberger,R.A., Mares-Perlman,J.A., Klein,R., Klein,B.E., Millen,A.E., Palta,M., Relationship of dietary fat to age-related maculopathy in the Third National Health and Nutrition Examination Survey, 2001	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Hirvela,H., Luukinen,H., Laara,E., Sc,L., Laatikainen,L., 19960717, Risk factors of age-related maculopathy in a population 70 years of age or older, 1996	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Ho,L., Boekhoorn,S.S., Liana, van Duijn,C.M., Uitterlinden,A.G., Hofman,A., de Jong,P.T., Stijnen,T., Vingerling,J.R., 20081118, Cataract surgery and the risk of aging macula disorder: the rotterdam study, 2008	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Hogg,R.E., Woodside,J.V., Gilchrist,S.E., Graydon,R., Fletcher,A.E., Chan,W., Knox,A., Cartmill,B., Chakravarthy,U., 20080612, Cardiovascular disease and hypertension are strong risk factors for choroidal neovascularization, 2008	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Hooper,C.Y., Lamoureux,E.L., Lim,L., Fraser-Bell,S., Yeoh,J., Harper,C.A., Keeffe,J.E., Guymer,R.H., 20091016, Cataract surgery in	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
high-risk age-related macular degeneration: a randomized controlled trial, 2009	
Hyman,L., Schachat,A.P., He,Q., Leske,M.C., Hypertension, cardiovascular disease, and age-related macular degeneration. Age-Related Macular Degeneration Risk Factors Study Group, 2000	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Ikram,M.K., van,Leeuwen R., Vingerling,J.R., Hofman,A., de Jong,P.T., 20030916, Relationship between refraction and prevalent as well as incident age-related maculopathy: the Rotterdam Study, 2003	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Jang,J.H., Park,J.M., Kim,S.S., Usefulness of Brachial-Ankle Pulse Wave Velocity and Ankle-Brachial Index as Predictors of Early Age-Related Maculopathy, 2011	Abstract
Joachim,N., Mitchell,P., Younan,C., Burlutsky,G., Cheng,C.-Y., Cheung,C.M.G., Zheng,Y., Moffitt,M., Wong,T.Y., Wang,J.J., Ethnic variation in early age-related macular degeneration lesions between white Australians and Singaporean asians, 2014	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Joachim,Nichole D.L., Mitchell,Paul, Kifley,Annette, Wang,Jie Jin, Incidence, Progression, and Associated Risk Factors of Medium Drusen in Age-Related Macular Degeneration: Findings From the 15-Year Follow-up of an Australian Cohort, 2015	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios))
Joachim,Nichole, Mitchell,Paul, Kifley,Annette, Rochtchina,Elena, Hong,Thomas, Wang,Jie Jin, Incidence and progression of geographic atrophy: observations from a population-based cohort, 2013	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Joachim,Nichole, Mitchell,Paul, Rochtchina,Elena, Tan,Ava Grace, Wang,Jie Jin, Incidence and progression of reticular drusen in age-related macular degeneration: findings from an older Australian cohort, 2014	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Jonasson,Fridbert, Fisher,Diana E., Eiriksdottir,Gudny, Sigurdsson,Sigurdur, Klein,Ronald, Launer,Lenore J., Harris,Tamara, Gudnason,Vilmundur, Cotch,Mary Frances, Five-year incidence, progression, and risk factors for age-related macular degeneration: the age, gene/environment susceptibility study, 2014	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Jones,Michael M., Manwaring,Neil, Wang,Jie Jin, Rochtchina,Elena, Mitchell,Paul, Sue,Carolyn M., Mitochondrial DNA haplogroups and age-related maculopathy, 2007	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Kaiserman,I., Kaiserman,N., Elhayany,A., Vinker,S., 20060921, Risk factors for photodynamic therapy of predominantly classic choroidal neovascularization in age-related macular degeneration, 2006	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Kaiserman,I., Kaiserman,N., Elhayany,A., Vinker,S., 20070220, Cataract surgery is associated with a higher rate of photodynamic	No outcomes of interest (photodynamic therapy rates)

Study	Reason for exclusion
therapy for age-related macular degeneration, 2007	
Kanis,M.J., Berendschot,T.T., van,Norren D., 20070917, Influence of macular pigment and melanin on incident early AMD in a white population, 2007	Not risk factors of interest
Kaushik,S., Wang,J.J., Flood,V., Tan,J.S., Barclay,A.W., Wong,T.Y., Brand-Miller,J., Mitchell,P., 20081104, Dietary glycemic index and the risk of age-related macular degeneration, 2008	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Kawasaki,R., Wang,J.J., Amirul,F.M.A., Rochtchina,E., Aung,T., Saw,S.M., Mitchell,P., Wong,T.Y., Is bilateral age-related macular degeneration less common in asians than caucasians?, 2011	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Keilhauer,Claudia N., Fritsche,Lars G., Guthoff,Rainer, Haubitz,Imme, Weber,Bernhard H., Age-related macular degeneration and coronary heart disease: evaluation of genetic and environmental associations, 2013	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Khan,J.C., Shahid,H., Thurlby,D.A., Bradley,M., Clayton,D.G., Moore,A.T., Bird,A.C., Yates,J.R., Genetic Factors in AMD Study, 20060123, Age related macular degeneration and sun exposure, iris colour, and skin sensitivity to sunlight, 2006	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Kiernan,D.F., Hariprasad,S.M., Rusu,I.M., Mehta,S.V., Mieler,W.F., Jager,R.D., 20110224, Epidemiology of the association between anticoagulants and intraocular hemorrhage in patients with neovascular age-related macular degeneration, 2010	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Kim,I.K., Ji,F., Morrison,M.A., Adams,S., Zhang,Q., Lane,A.M., Capone,A., Dryja,T.P., Ott,J., Miller,J.W., Deangelis,M.M., 20081114, Comprehensive analysis of CRP, CFH Y402H and environmental risk factors on risk of neovascular age-related macular degeneration, 2008	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,Barbara E.K., Howard,Kerri P., Lee,Kristine E., Iyengar,Sudha K., Sivakumaran,Theru A., Klein,Ronald, The relationship of cataract and cataract extraction to age-related macular degeneration: the Beaver Dam Eye Study, 2012	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,R., Klein,B.E., Franke,T., 19930429, The relationship of cardiovascular disease and its risk factors to age-related maculopathy. The Beaver Dam Eye Study, 1993	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,R., Klein,B.E., Jensen,S.C., Cruickshanks,K.J., The relationship of ocular factors to the incidence and progression of age-related maculopathy, 1998	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,R., Klein,B.E., Jensen,S.C., Cruickshanks,K.J., Lee,K.E., Danforth,L.G., Tomany,S.C., Medication use and the 5-year	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
incidence of early age-related maculopathy: the Beaver Dam Eye Study, 2001	
Klein,R., Klein,B.E., Jensen,S.C., Mares-Perlman,J.A., Cruickshanks,K.J., Palta,M., 19990614, Age-related maculopathy in a multiracial United States population: the National Health and Nutrition Examination Survey III, 1999	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,R., Klein,B.E., Jensen,S.C., Meuer,S.M., 19970225, The five-year incidence and progression of age-related maculopathy: the Beaver Dam Eye Study, 1997	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,R., Klein,B.E., Jensen,S.C., Moss,S.E., Cruickshanks,K.J., 19950113, The relation of socioeconomic factors to age-related cataract, maculopathy, and impaired vision. The Beaver Dam Eye Study, 1994	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,R., Klein,B.E., Jensen,S.C., Moss,S.E., 20010726, The relation of socioeconomic factors to the incidence of early age-related maculopathy: the Beaver Dam eye study, 2001	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,R., Klein,B.E., Jensen,S.C., 19971128, The relation of cardiovascular disease and its risk factors to the 5-year incidence of age-related maculopathy: the Beaver Dam Eye Study, 1997	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,R., Klein,B.E., Knudtson,M.D., Wong,T.Y., Cotch,M.F., Liu,K., Burke,G., Saad,M.F., Jacobs,D.R.,Jr., 20060321, Prevalence of age-related macular degeneration in 4 racial/ethnic groups in the multi-ethnic study of atherosclerosis, 2006	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,R., Klein,B.E., Marino,E.K., Kuller,L.H., Furberg,C., Burke,G.L., Hubbard,L.D., 20030116, Early age-related maculopathy in the cardiovascular health study, 2003	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,R., Klein,B.E., Tomany,S.C., Cruickshanks,K.J., 20030507, The association of cardiovascular disease with the long-term incidence of age-related maculopathy: the Beaver Dam eye study.[Republished in Ophthalmology. 2003 Jun;110(6):1273-80; PMID: 12799274], 2003	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,R., Klein,B.E., Tomany,S.C., Moss,S.E., 20021025, Ten-year incidence of age-related maculopathy and smoking and drinking: the Beaver Dam Eye Study, 2002	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,R., Klein,B.E., Wang,Q., Moss,S.E., Is age-related maculopathy associated with cataracts?, 1994	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,R., Klein,B.E., Wong,T.Y., Tomany,S.C., Cruickshanks,K.J., 20021126, The association of cataract and cataract surgery with the long-term incidence of age-related maculopathy: the Beaver Dam eye study, 2002	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,R., Knudtson,M.D., Lee,K.E., Gangnon,R.E., Klein,B.E., 20080911, Age-period-cohort effect on the incidence of age-	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
related macular degeneration: the Beaver Dam Eye Study, 2008	
Klein,Ronald, Cruickshanks,Karen J., Nash,Scott D., Krantz,Elizabeth M., Nieto,F.Javier, Huang,Guan H., Pankow,James S., Klein,Barbara E.K., The prevalence of age-related macular degeneration and associated risk factors, 2010	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,Ronald, Klein,Barbara E.K., Knudtson,Michael D., Cotch,Mary Frances, Wong,Tien Yin, Liu,Kiang, Burke,Gregory L., Saad,Mohammed F., Jacobs,David R.J., Sharrett,A.Richey, Subclinical atherosclerotic cardiovascular disease and early age-related macular degeneration in a multiracial cohort: the Multiethnic Study of Atherosclerosis, 2007	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Klein,Ronald, Myers,Chelsea E., Buitendijk,Gabrielle H.S., Rochtchina,Elena, Gao,Xiaoyi, de Jong,Paulus T.V.M., Sivakumaran,Theru A., Burlutsky,George, McKean-Cowdin,Roberta, Hofman,Albert, Iyengar,Sudha K., Lee,Kristine E., Stricker,Bruno H., Vingerling,Johannes R., Mitchell,Paul, Klein,Barbara E.K., Klaver,Caroline C.W., Wang,Jie Jin, Lipids, lipid genes, and incident age-related macular degeneration: the three continent age-related macular degeneration consortium, 2014	Meta-analysis containing no outcomes of interest
Klein,Ronald, Myers,Chelsea E., Klein,Barbara E.K., Vasodilators, blood pressure-lowering medications, and age-related macular degeneration: the Beaver Dam Eye Study, 2014	No risk factors of interest
Kuzniarz,M., Mitchell,P., Flood,V.M., Wang,J.J., Use of vitamin and zinc supplements and age-related maculopathy: The Blue Mountains Eye Study, 2002	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
La,Tae Yoon, Cho,Eunyoung, Kim,Eun Chul, Kang,Seungbum, Jee,Donghyun, Prevalence and risk factors for age-related macular degeneration: Korean National Health and Nutrition Examination Survey 2008-2011, 2014	Not a relevant population
Lawrenson,John G., Evans,Jennifer R., Omega 3 fatty acids for preventing or slowing the progression of age-related macular degeneration, 2015	Systematic review containing no additional relevant data
Leske,M.C., Wu,S.Y., Hennis,A., Nemesure,B., Yang,L., Hyman,L., Schachat,A.P., Barbados Eye Studies Group, 20060110, Nine-year incidence of age-related macular degeneration in the Barbados Eye Studies, 2006	Not a relevant population
Leske,M.C., Wu,S.Y., Nemesure,B., Hennis,A., Barbados Eye Studies Group, 20100831, Causes of visual loss and their risk factors: an incidence summary from the Barbados Eye Studies, 2010	Not a relevant population
Li,L., Li,W., Chen,C.Z., Yi,Z.H.Z., Zhou,Y.Y., Is aspirin use associated with age-related macular degeneration? A meta-analysis, 2015	Systematic review containing no additional relevant data

Study	Reason for exclusion
Li,Ying, Wang,Jiwen, Zhong,Xiaojing, Tian,Zhen, Wu,Peipei, Zhao,Wenbo, Jin,Chenjin, Refractive error and risk of early or late age-related macular degeneration: a systematic review and meta-analysis, 2014	Systematic review containing no additional relevant data
Liew,G., Kaushik,S., Rochtchina,E., Tan,A.G., Mitchell,P., Wang,J.J., 20060914, Retinal vessel signs and 10-year incident age-related maculopathy: the Blue Mountains Eye Study, 2006	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Liew,Gerald, Mitchell,Paul, Wong,Tien Yin, Rochtchina,Elena, Wang,Jie Jin, The association of aspirin use with age-related macular degeneration, 2013	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Liu,C., Maguire,M., Ying,G.S., Refractive Error in the Complications of Age-Related Macular Degeneration Prevention Trial (CAPT): Risk of Late AMD and 5-Year Changes, 2007	Abstract
Ma,Le, Dou,Hong Liang, Wu,Yi Qun, Huang,Yang Mu, Huang,Yu Bei, Xu,Xian Rong, Zou,Zhi Yong, Lin,Xiao Ming, Lutein and zeaxanthin intake and the risk of age-related macular degeneration: a systematic review and meta-analysis, 2012	Systematic review containing no additional relevant data
Mares,Julie A., Voland,Rick P., Sondel,Sherie A., Millen,Amy E., Larowe,Tara, Moeller,Suzen M., Klein,Mike L., Blodi,Barbara A., Chappell,Richard J., Tinker,Lesley, Ritenbaugh,Cheryl, Gehrs,Karen M., Sarto,Gloria E., Johnson,Elizabeth, Snodderly,D.Max, Wallace,Robert B., Healthy lifestyles related to subsequent prevalence of age-related macular degeneration, 2011	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Mares-Perlman,J.A., Brady,W.E., Klein,R., Klein,B.E., Bowen,P., Stacewicz-Sapuntzakis,M., Palta,M., Serum antioxidants and age-related macular degeneration in a population-based case-control study, 1995	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Mares-Perlman,J.A., Brady,W.E., Klein,R., VandenLangenberg,G.M., Klein,B.E., Palta,M., Dietary fat and age-related maculopathy, 1995	Abstract
Mares-Perlman,J.A., Fisher,A.I., Klein,R., Palta,M., Block,G., Millen,A.E., Wright,J.D., 20010329, Lutein and zeaxanthin in the diet and serum and their relation to age-related maculopathy in the third national health and nutrition examination survey, 2001	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
McCarty,C.A., Mukesh,B.N., Fu,C.L., Mitchell,P., Wang,J.J., Taylor,H.R., Risk factors for age-related maculopathy: the Visual Impairment Project, 2001	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Merle,Benedicte, Delyfer,Marie Noelle, Korobelnik,Jean Francois, Rougier,Marie Benedicte, Colin,Joseph, Malet,Florence, Feart,Catherine, Le Goff,Melanie, Dartigues,Jean Francois, Barberger-Gateau,Pascale, Delcourt,Cecile, Dietary omega-3 fatty acids and	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
the risk for age-related maculopathy: the Alienor Study, 2011	
Mitchell,P., Smith,W., Wang,J.J., 19980825, Iris color, skin sun sensitivity, and age-related maculopathy. The Blue Mountains Eye Study, 1998	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Mitchell,P., Wang,J.J., 19991014, Diabetes, fasting blood glucose and age-related maculopathy: The Blue Mountains Eye Study, 1999	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Mitchell,Paul, Wang,Jie Jin, Smith,Wayne, Leeder,Stephen R., Smoking and the 5-year incidence of age-related maculopathy: the Blue Mountains Eye Study, 2002	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Moeini,H.A., Masoudpour,H., Ghanbari,H., 20050920, A study of the relation between body mass index and the incidence of age related macular degeneration, 2005	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Moeller,S.M., Parekh,N., Tinker,L., Ritenbaugh,C., Blodi,B., Wallace,R.B., Mares,J.A., Associations between intermediate age-related macular degeneration and lutein and zeaxanthin in the Carotenoids in Age-Related Eye Disease Study (CAREDS): Ancillary study of the Women's Health Initiative, 2006	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Moon,Byung Gil, Joe,Soo Geun, Hwang,Jong uk, Kim,Hong Kyu, Choe,Jaewon, Yoon,Young Hee, Prevalence and risk factors of early-stage age-related macular degeneration in patients examined at a health promotion center in Korea, 2012	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Morris,M.S., Jacques,P.F., Chylack,L.T., Hankinson,S.E., Willett,W.C., Hubbard,L.D., Taylor,A., 20071219, Intake of zinc and antioxidant micronutrients and early age-related maculopathy lesions, 2007	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Moss,S.E., Klein,R., Klein,B.E., Jensen,S.C., Meuer,S.M., 19980521, Alcohol consumption and the 5-year incidence of age-related maculopathy: the Beaver Dam eye study, 1998	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Mukesh,B.N., Dimitrov,P.N., Leikin,S., Wang,J.J., Mitchell,P., McCarty,C.A., Taylor,H.R., 20040628, Five-year incidence of age-related maculopathy: the Visual Impairment Project, 2004	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Munch,Inger Christine, Linneberg,Allan, Larsen,Michael, Precursors of age-related macular degeneration: associations with physical activity, obesity, and serum lipids in the inter99 eye study, 2013	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Neuner,B., Komm,A., Wellmann,J., Dietzel,M., Pauleikhoff,D., Walter,J., Busch,M., Hense,H.W., 20110119, Smoking history and the incidence of age-related macular degeneration--results from the Muenster Aging and Retina Study (MARS) cohort and systematic review and meta-analysis	Systematic review providing no additional relevant data

Study	Reason for exclusion
of observational longitudinal studies. [Review], 2009	
Neuner,B., Wellmann,J., Dasch,B., Behrens,T., Claes,B., Dietzel,M., Pauleikhoff,D., Hense,H.W., 20071106, Modeling smoking history: a comparison of different approaches in the MARS study on age-related maculopathy, 2007	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Neuner,B., Wellmann,J., Dasch,B., Dietzel,M., Farwick,A., Stoll,M., Pauleikhoff,D., Hense,H.W., 20080813, LOC387715, smoking and their prognostic impact on visual functional status in age-related macular degeneration-The Muenster Aging and Retina Study (MARS) cohort, 2008	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Nicolas,C.M., Robman,L.D., Tikellis,G., Dimitrov,P.N., Dowrick,A., Guymer,R.H., McCarty,C.A., 20040217, Iris colour, ethnic origin and progression of age-related macular degeneration, 2003	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Nidhi,Bhatiwada, Mamatha,Bangera Sheshappa, Padmaprabhu,Chamrajnagar Anantharajiah, Pallavi,Prabhu, Vallikannan,Baskaran, Dietary and lifestyle risk factors associated with age-related macular degeneration: a hospital based study, 2013	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Obisesan,T.O., Hirsch,R., Kosoko,O., Carlson,L., Parrott,M., 19980127, Moderate wine consumption is associated with decreased odds of developing age-related macular degeneration in NHANES-1, 1998	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Pan,Chen Wei, Ikram,M.Kamran, Cheung,Carol Y., Choi,Hyung Won, Cheung,Chiu Ming Gemmy, Jonas,Jost B., Saw,Seang Mei, Wong,Tien Yin, Refractive errors and age-related macular degeneration: a systematic review and meta-analysis, 2013	Systematic review providing no additional relevant data
Parekh,Niyati, Voland,Rickie P., Moeller,Suzen M., Blodi,Barbara A., Ritenbaugh,Cheryl, Chappell,Richard J., Wallace,Robert B., Mares,Julie A., CAREDS Research Study Group, Association between dietary fat intake and age-related macular degeneration in the Carotenoids in Age-Related Eye Disease Study (CAREDS): an ancillary study of the Women's Health Initiative, 2009	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Park,Sang Jun, Lee,Ju Hyun, Woo,Se Joon, Ahn,Jeeyun, Shin,Jae Pil, Song,Su Jeong, Kang,Se Woong, Park,Kyu Hyung, Epidemiologic Survey Committee of the Korean Ophthalmologic Society, Age-related macular degeneration: prevalence and risk factors from Korean National Health and Nutrition Examination Survey, 2008 through 2011, 2014	Not a relevant population
Peeters,Anna, Magliano,Dianna J., Stevens,June, Duncan,Bruce B., Klein,Ronald, Wong,Tien Y., Changes in abdominal obesity and age-related macular degeneration: the Atherosclerosis Risk in Communities Study, 2008	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
Pham,T.Q., Rochtchina,E., Mitchell,P., Smith,W., Wang,J.J., 20090508, Sunlight-related factors and the 10-year incidence of age-related maculopathy, 2009	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Prenner,J.L., Rosenblatt,B.J., Tolentino,M.J., Ying,G., Javornik,N.B., Maguire,M.G., Ho,A.C., Risk factors for choroidal neovascularization in the fellow eye arm of the Choroidal Neovascularization Prevention Trial (CNVPT), 2001	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Rasoulinejad,S.A., Zarghami,A., Hosseini,S.R., Rajaee,N., Rasoulinejad,S.E., Mikaniki,E., Prevalence of age-related macular degeneration among the elderly, 2015	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Ristau,Tina, Ersoy,Lebriz, Hahn,Moritz, den Hollander,Anneke I., Kirchhof,Bernd, Liakopoulos,Sandra, Fauser,Sascha, Nongenetic risk factors for neovascular age-related macular degeneration, 2014	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Robman,Liubov D., Islam,Fakir M.A., Chong,Elaine W.T., Adams,Madeleine K.M., Simpson,Julie A., Aung,Khin Zaw, Makeyeva,Galina A., Hopper,John L., English,Dallas R., Giles,Graham G., Baird,Paul N., Guymer,Robyn H., Age-related macular degeneration in ethnically diverse Australia: Melbourne Collaborative Cohort Study, 2015	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Roh,M.I., Kim,J.H., Byeon,S.H., Koh,H.J., Lee,S.C., Kwon,O.W., 20090303, Estimated prevalence and risk factor for age-related maculopathy, 2008	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Ryu,E., Fridley,B.L., Tosakulwong,N., Bailey,K.R., Edwards,A.O., 20110208, Genome-wide association analyses of genetic, phenotypic, and environmental risks in the age-related eye disease study, 2010	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Sakurada,Yoichi, Yoneyama,Seigo, Imasawa,Mitsuhiro, Iijima,Hiroyuki, Systemic risk factors associated with polypoidal choroidal vasculopathy and neovascular age-related macular degeneration, 2013	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
SanGiovanni,J.P., Agron,E., Meleth,A.D., Reed,G.F., Sperduto,R.D., Clemons,T.E., Chew,E.Y., Age-Related Eye Disease Study Research Group, 20091208, {omega}-3 Long-chain polyunsaturated fatty acid intake and 12-y incidence of neovascular age-related macular degeneration and central geographic atrophy: AREDS report 30, a prospective cohort study from the Age-Related Eye Disease Study, 2009	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
SanGiovanni,John Paul, Chew,Emily Y., Agron,Elvira, Clemons,Traci E., Ferris,Frederick L., Gensler,Gary, Lindblad,Anne S., Milton,Roy C., Seddon,Johanna M., Klein,Ronald, Sperduto,Robert D., Age-Related Eye Disease Study Research Group, The relationship of dietary omega-3 long-chain polyunsaturated fatty	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
acid intake with incident age-related macular degeneration: AREDS report no. 23, 2008	
SanGiovanni,John Paul, Chew,Emily Y., Clemons,Traci E., Davis,Matthew D., Ferris,Frederick L., Gensler,Gary R., Kurinij,Natalie, Lindblad,Anne S., Milton,Roy C., Seddon,Johanna M., Sperduto,Robert D., Age-Related Eye Disease Study Research Group, The relationship of dietary lipid intake and age-related macular degeneration in a case-control study: AREDS Report No. 20, 2007	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Schaumberg,D.A., Christen,W.G., Hankinson,S.E., Glynn,R.J., Body mass index and the incidence of visually significant age-related maculopathy in men, 2001	Visually significant AMD only
Schmidt,S., Haines,J.L., Postel,E.A., Agarwal,A., Kwan,S.Y., Gilbert,J.R., Pericak-Vance,M.A., Scott,W.K., 20060413, Joint effects of smoking history and APOE genotypes in age-related macular degeneration, 2005	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Schmidt,S., Hauser,M.A., Scott,W.K., Postel,E.A., Agarwal,A., Gallins,P., Wong,F., Chen,Y.S., Spencer,K., Schnetz-Boutaud,N., Haines,J.L., Pericak-Vance,M.A., 20060609, Cigarette smoking strongly modifies the association of LOC387715 and age-related macular degeneration, 2006	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Seddon,J.M., Ajani,U.A., Mitchell,B.D., 19970710, Familial aggregation of age-related maculopathy, 1997	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Seddon,J.M., Ajani,U.A., Sperduto,R.D., Hiller,R., Blair,N., Burton,T.C., Farber,M.D., Gragoudas,E.S., Haller,J., Miller,D.T., 19941122, Dietary carotenoids, vitamins A, C, and E, and advanced age-related macular degeneration. Eye Disease Case-Control Study Group.[Erratum appears in JAMA 1995 Feb 22;273(8):622], 1994	Abstract
Seddon,J.M., George,S., Rosner,B., Klein,M.L., 20061026, CFH gene variant, Y402H, and smoking, body mass index, environmental associations with advanced age-related macular degeneration, 2006	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Seddon,J.M., George,S., Rosner,B., Rifai,N., 20050623, Progression of age-related macular degeneration: prospective assessment of C-reactive protein, interleukin 6, and other cardiovascular biomarkers, 2005	Blood biomarkers only (not risk factors of interest)
Seddon,J.M., Reynolds,R., Maller,J., Fagerness,J.A., Daly,M.J., Rosner,B., 20090512, Prediction model for prevalence and incidence of advanced age-related macular degeneration based on genetic, demographic, and environmental variables, 2009	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios))
Seddon,J.M., Rosner,B., Sperduto,R.D., Yannuzzi,L., Haller,J.A., Blair,N.P., Willett,W., Dietary fat and risk for advanced age-related macular degeneration, 2001	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
Seddon,J.M., Willett,W.C., Speizer,F.E., Hankinson,S.E., 19961031, A prospective study of cigarette smoking and age-related macular degeneration in women, 1996	Abstract
Seddon,Johanna M., George,Sarah, Rosner,Bernard, Cigarette smoking, fish consumption, omega-3 fatty acid intake, and associations with age-related macular degeneration: the US Twin Study of Age-Related Macular Degeneration, 2006	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Shahid,Humma, Khan,Jane C., Cipriani,Valentina, Sepp,Tiina, Matharu,Baljinder K., Bunce,Catey, Harding,Simon P., Clayton,David G., Moore,Anthony T., Yates,John R.W., Genetic Factors in AMD Study Group, Age-related macular degeneration: the importance of family history as a risk factor, 2012	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Sharma,Neel Kamal, Sharma,Suresh Kumar, Gupta,Amod, Prabhakar,Sudesh, Singh,Ramandeep, Anand,Akshay, Predictive model for earlier diagnosis of suspected age-related macular degeneration patients, 2013	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Sigler,E.J., Randolph,J.C., Calzada,J.I., Charles,S., Smoking and choroidal thickness in patients over 65 with early-atrophic age-related macular degeneration and normals, 2014	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Smith,W., Assink,J., Klein,R., Mitchell,P., Klaver,C.C., Klein,B.E., Hofman,A., Jensen,S., Wang,J.J., de Jong,P.T., 20010419, Risk factors for age-related macular degeneration: Pooled findings from three continents, 2001	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Smith,W., Mitchell,P., Leeder,S.R., Smoking and age-related maculopathy. The Blue Mountains Eye Study, 1996	Abstract
Smith,W., Mitchell,P., Leeder,S.R., Wang,J.J., Plasma fibrinogen levels, other cardiovascular risk factors, and age-related maculopathy: the Blue Mountains Eye Study, 1998	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Smith,W., Mitchell,P., Wang,J.J., Gender, oestrogen, hormone replacement and age-related macular degeneration: results from the Blue Mountains Eye Study, 1997	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Smith,W., Mitchell,P., Webb,K., Leeder,S.R., 19990415, Dietary antioxidants and age-related maculopathy: the Blue Mountains Eye Study, 1999	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Smith,W., Mitchell,P., 19981013, Family history and age-related maculopathy: the Blue Mountains Eye Study, 1998	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Snellen,E.L., Verbeek,A.L., Van Den Hoogen,G.W., Cruysberg,J.R., Hoyng,C.B., 20021118, Neovascular age-related macular degeneration and its relationship to antioxidant intake, 2002	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Song,S.J., Youm,D.J., Chang,Y., Yu,H.G., Age-related macular degeneration in a screened	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
south Korean population: Prevalence, risk factors, and subtypes, 2009	
Spencer,Kylee L., Olson,Lana M., Schnetz-Boutaud,Nathalie, Gallins,Paul, Agarwal,Anita, Iannaccone,Alessandro, Kritchevsky,Stephen B., Garcia,Melissa, Nalls,Michael A., Newman,Anne B., Scott,William K., Pericak-Vance,Margaret A., Haines,Jonathan L., Using genetic variation and environmental risk factor data to identify individuals at high risk for age-related macular degeneration, 2011	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Sui,Guo Yuan, Liu,Guang Cong, Liu,Guang Ying, Gao,Yan Yan, Deng,Yan, Wang,Wen Ying, Tong,Shu Hui, Wang,Lie, Is sunlight exposure a risk factor for age-related macular degeneration? A systematic review and meta-analysis, 2013	Systematic review providing no additional relevant data
Sun,C., Klein,R., Wong,T.Y., 20091016, Age-related macular degeneration and risk of coronary heart disease and stroke: the Cardiovascular Health Study, 2009	Risk of stroke/CHD (not AMD)
Sun,H.P., Lin,Y., Pan,C.W., 20141028, Iris color and associated pathological ocular complications: a review of epidemiologic studies, 2014	Non-systematic review
Swenor,B.K., Bressler,S., Caulfield,L., West,S.K., 20110112, The impact of fish and shellfish consumption on age-related macular degeneration, 2010	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Tan,J.S., Mitchell,P., Smith,W., Wang,J.J., 20070619, Cardiovascular risk factors and the long-term incidence of age-related macular degeneration: the Blue Mountains Eye Study, 2007	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Tan,J.S., Wang,J.J., Flood,V., Rochtchina,E., Smith,W., Mitchell,P., 20080211, Dietary antioxidants and the long-term incidence of age-related macular degeneration: the Blue Mountains Eye Study, 2008	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Tan,Jennifer S.L., Mitchell,Paul, Kifley,Annette, Flood,Victoria, Smith,Wayne, Wang,Jie Jin, Smoking and the long-term incidence of age-related macular degeneration: the Blue Mountains Eye Study, 2007	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Tan,Jennifer S.L., Wang,Jie Jin, Flood,Victoria, Mitchell,Paul, Dietary fatty acids and the 10-year incidence of age-related macular degeneration: the Blue Mountains Eye Study, 2009	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Thomas,J., Mohammad,S., Charnigo,R., Baffi,J., Abdel-Latif,A., Ziada,K.M., Age-related macular degeneration and coronary artery disease in a VA Population, 2015	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Thornton,J., Edwards,R., Mitchell,P., Harrison,R.A., Buchan,I., Kelly,S.P., Smoking and age-related macular degeneration: a review of association, 2005	Non-systematic review

Study	Reason for exclusion
Tomany,S.C., Klein,R., Klein,B.E., Beaver Dam,Eye Study, 20030902, The relationship between iris color, hair color, and skin sun sensitivity and the 10-year incidence of age-related maculopathy: the Beaver Dam Eye Study, 2003	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Tomany,Sandra C., Cruickshanks,Karen J., Klein,Ronald, Klein,Barbara E.K., Knudtson,Michael D., Sunlight and the 10-year incidence of age-related maculopathy: the Beaver Dam Eye Study, 2004	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Topouzis,F., Anastasopoulos,E., Augood,C., Bentham,G.C., Chakravarthy,U., de Jong,P.T., Rahu,M., Seland,J., Soubrane,G., Tomazzoli,L., Vingerling,J.R., Vioque,J., Young,I.S., Fletcher,A.E., 20090903, Association of diabetes with age-related macular degeneration in the EUREYE study, 2009	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Ulas,Fatih, Balbaba,Mehmet, Ozmen,Sedat, Celebi,Serdal, Dogan,Umit, Association of dehydroepiandrosterone sulfate, serum lipids, C-reactive protein and body mass index with age-related macular degeneration, 2013	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Uyama,M., Takahashi,K., Ida,N., Miyashiro,M., Ando,A., Takahashi,A., Yamada,E., Shirasu,J., Nagai,Y., Takeuchi,M., 20001010, The second eye of Japanese patients with unilateral exudative age related macular degeneration, 2000	Not a relevant population
Vaicaitiene,R., Luksiene,D.K., Paunksnis,A., Cerniauskiene,L.R., Domarkiene,S., Cimbalas,A., 20040130, Age-related maculopathy and consumption of fresh vegetables and fruits in urban elderly, 2003	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
van Leeuwen,Redmer, Klaver,Caroline C.W., Vingerling,Johannes R., Hofman,Albert, de Jong,Paulus T.V.M., The risk and natural course of age-related maculopathy: follow-up at 6 1/2 years in the Rotterdam study, 2003	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
van,Leeuwen R., Ikram,M.K., Vingerling,J.R., Witteman,J.C., Hofman,A., de Jong,P.T., 20030916, Blood pressure, atherosclerosis, and the incidence of age-related maculopathy: the Rotterdam Study, 2003	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
van,Leeuwen R., Tomany,S.C., Wang,J.J., Klein,R., Mitchell,P., Hofman,A., Klein,B.E., Vingerling,J.R., Cumming,R.G., de Jong,P.T., 20040628, Is medication use associated with the incidence of early age-related maculopathy? Pooled findings from 3 continents, 2004	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Vassilev,Zdravko P., Ruigomez,Ana, Soriano-Gabarro,Montse, Garcia Rodriguez,Luis A., Diabetes, cardiovascular morbidity, and risk of age-related macular degeneration in a primary care population, 2015	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Vinding,T., Appleyard,M., Nyboe,J., Jensen,G., 19920507, Risk factor analysis for atrophic and	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
exudative age-related macular degeneration. An epidemiological study of 1000 aged individuals, 1992	
Vinding,T., 19900614, Pigmentation of the eye and hair in relation to age-related macular degeneration. An epidemiological study of 1000 aged individuals, 1990	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Vingerling,J.R., Hofman,A., Grobbee,D.E., de Jong,P.T., Age-related macular degeneration and smoking. The Rotterdam Study, 1996	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Voutilainen-Kaunisto,R.M., Terasvirta,M.E., Uusitupa,M.I., Niskanen,L.K., 20010531, Age-related macular degeneration in newly diagnosed type 2 diabetic patients and control subjects: a 10-year follow-up on evolution, risk factors, and prognostic significance, 2000	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Wang,J.J., Foran,S., Smith,W., Mitchell,P., 20030603, Risk of age-related macular degeneration in eyes with macular drusen or hyperpigmentation: the Blue Mountains Eye Study cohort, 2003	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Wang,J.J., Jakobsen,K., Smith,W., Mitchell,P., 20031120, Five-year incidence of age-related maculopathy in relation to iris, skin or hair colour, and skin sun sensitivity: the Blue Mountains Eye Study, 2003	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Wang,J.J., Jakobsen,K.B., Smith,W., Mitchell,P., Refractive status and the 5-year incidence of age-related maculopathy: The Blue Mountains Eye Study, 2004	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Wang,J.J., Klein,R., Smith,W., Klein,B.E., Tomany,S., Mitchell,P., 20031030, Cataract surgery and the 5-year incidence of late-stage age-related maculopathy: pooled findings from the Beaver Dam and Blue Mountains eye studies, 2003	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Wang,J.J., Mitchell,P., Smith,W., Cumming,R.G., Bilateral involvement by age related maculopathy lesions in a population, 1998	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios))
Wang,J.J., Mitchell,P., Smith,W., 19981008, Refractive error and age-related maculopathy: the Blue Mountains Eye Study, 1998	Abstract only
Wang,J.J., Mitchell,P.G., Cumming,R.G., Lim,R., 19991228, Cataract and age-related maculopathy: the Blue Mountains Eye Study, 1999	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Wang,J.J., Rochtchina,E., Lee,A.J., Chia,E.M., Smith,W., Cumming,R.G., Mitchell,P., 20070116, Ten-year incidence and progression of age-related maculopathy: the blue Mountains Eye Study, 2007	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Wang,Jie Jin, Fong,Calvin Sze-Un, Rochtchina,Elena, Cugati,Sudha, de Loryn,Tania, Kaushik,Shweta, Tan,Jennifer S.L., Arnold,Jennifer, Smith,Wayne, Mitchell,Paul, Risk of age-related macular degeneration 3 years	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

Study	Reason for exclusion
after cataract surgery: paired eye comparisons, 2012	
Wang,S.B., Mitchell,P., Chiha,J., Liew,G., Plant,A.J.H., Thiagalingam,A., Burlutsky,G., Gopinath,B., Severity of coronary artery disease is independently associated with the frequency of early age-related macular degeneration, 2015	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
West,S.K., Rosenthal,F.S., Bressler,N.M., Bressler,S.B., Munoz,B., Fine,S.L., Taylor,H.R., Exposure to sunlight and other risk factors for age-related macular degeneration, 1989	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Wittenberg,S., 19861030, Solar radiation and the eye: a review of knowledge relevant to eye care. [Review] [77 refs], 1986	Abstract only
Wong,T.Y., Klein,R., Klein,B.E., Tomany,S.C., 20020912, Refractive errors and 10-year incidence of age-related maculopathy, 2002	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Xu,L., You,Q.S., Jonas,J.B., 20091016, Prevalence of alcohol consumption and risk of ocular diseases in a general population: the Beijing Eye Study, 2009	Not a relevant population
Ying,G.S., Folk,J., Risk Factors for Choroidal Neovascularization and Geographic Atrophy in the Complications of Age-related Macular Degeneration Prevention Trial (CAPT), 2007	Abstract
Yip,J.L., Khawaja,A.P., Chan,M.P., Broadway,D.C., Peto,T., Tufail,A., Luben,R., Hayat,S., Bhaniani,A., Wareham,N.J., Khaw,K.T., Foster,P.J., Cross Sectional and Longitudinal Associations between Cardiovascular Risk Factors and Age Related Macular Degeneration in the EPIC-Norfolk Eye Study, 2015	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Yip,J.L.Y., Khawaja,A.P., Chan,M.P.Y., Broadway,D.C., Peto,T., Luben,R., Hayat,S., Bhaniani,A., Wareham,N., Foster,P.J., Khaw,K.-T., Area deprivation and age related macular degeneration in the EPIC-Norfolk Eye Study, 2015	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
You,Qi Sheng, Xu,Liang, Yang,Hua, Li,Yi Bin, Wang,Shuang, Wang,Jin Da, Zhang,Jing Shang, Wang,Ya Xing, Jonas,Jost B., Five-year incidence of age-related macular degeneration: the Beijing Eye Study, 2012	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Zerbib,Jennyfer, Delcourt,Cecile, Puche,Nathalie, Querques,Giuseppe, Cohen,Salomon Yves, Sahel,Jose, Korobelnik,Jean Francois, Le Goff,Melanie, Souied,Eric H., Risk factors for exudative age-related macular degeneration in a large French case-control study, 2014	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)
Zweifel,S.A., Imamura,Y., Spaide,T.C., Fujiwara,T., Spaide,R.F., 20100917, Prevalence and significance of subretinal drusenoid deposits (reticular pseudodrusen) in age-related macular degeneration, 2010	No outcomes of interest (for example, no hazard ratios or time-adjusted odds ratios)

F.2.2 Strategies to slow the progression of age-related macular degeneration (AMD)

RQ7: What is the effectiveness of strategies to reduce the risk of developing AMD in the unaffected eye or slow the progression of AMD?

This review was undertaken as a collaboration between the NICE Internal Clinical Guidelines Team and the Cochrane Eyes and Vision Group. The search was done by the Cochrane Eyes and Vision Groop.

Excluded studies for statins for age-related macular degeneration

Study	Reason for exclusion
Berendschot TT, Plat J, de Jong A, Mensink RP. 2009 Longterm plant stanol and sterol ester-enriched functional food consumption, serum lutein/zeaxanthin concentration and macular pigment optical density. British Journal of Nutrition;101(11):1607–10.	Study participants were not randomized to statin use; randomized controlled trial of participants on statins assigned to one of three dietary groups (control margarine, plant sterol-enriched margarine, or plant stanol-enriched margarine)
Della Valle V, Scorolli L, Meduri R. 2000 Retinal effects of Simvastatin in SMD: Cases up-date Annali Di Ottalmologia e Clinica Oculistica;126(11-12): 249–55.	Study participants were not randomized; control arm included participants who refused to use simvastatin for various reasons
Drobek-Slowik M, Karczewicz D, Safranow K, Jakubowska K, Chlubek D. 2008 Use of statins as a form of protection against age-related macular degeneration (AMD) Klinika Oczna;1-3: 50–4.	Study participants were not randomized; history of statin use for people with AMD compared with people without AMD
Maguire MG, Ying GS, McCannel CA, Liu C, Dai Y, 2009 Complications of Age-related Macular Degeneration Prevention Trial (CAPT)Research Group. Statin use and the incidence of advanced age-related macular degeneration in the Complications of Age-related Macular Degeneration Prevention Trial. Ophthalmology;116(12):2381–5.	Study participants were not randomized to statin use; retrospective study based on a cohort of trial participants
Mao YQ, Qi XY, Peng W, Sun JX, Wang AP 2009. Effect of lovastatin on hemodynamic changes in early stage patients with age-related macular degeneration. [Chinese]. International Journal of Ophthalmology;9(8):1521–3	Not the outcome of interest; randomized controlled trial of participants with AMD assigned to statins or placebo; analyzed hemodynamic changes after three months (no vision-related outcomes assessed)
Martini E, Scorolli L, Burgagni MS, Fessehaie S. 1991 Evaluation of the retinal effects of simvastatin in patients with agerelated macular. Annali Di Ottalmologia e Clinica Oculistica;117(11):1121–6.	Study follow-up was less than 1 year.
Sen K, Misra A, Kumar A, Pandey RM. 2002 Simvastatin retards progression of retinopathy in diabetic patients with hypercholesterolemia. Diabetes Research and Clinical Practice;56(1):1–11.	The study was in patients with diabetic retinopathy

Excluded studies for omega 3 fatty acids supplementation for age-related macular degeneration

Study	Reason for exclusion
Arnold C, Winter L, Fröhlich K, Jentsch S, Dawczynski, J, Jahreis G, et al. 2013. Macular xanthophylls and w-3 longchain	Omega 3 fatty acids combined with carotenoids. Not able to isolate the effect of omega 3 treatment

Study	Reason for exclusion
polyunsaturated fatty acids in age-related macular degeneration: a randomized trial. JAMA Ophthalmology;131(5):564–72.	
Feher J, Kovacs B, Kovacs I, SchveollerM, Papale A, Balacco Gabrieli C. 2005. Improvement of visual functions and fundus alterations in early age-related macular degeneration treated with a combination of acetyl-L-carnitine, n-3 fatty acids, and coenzyme Q10. Ophthalmologica ;219(3):154–66.	A total of 106 participants with early AMD were randomised to receive a supplement containing acetyl-L-carnitine, co-enzyme Q10 and omega 3 fatty acids or placebo for 12 months. The outcomes measured were change in visual field defect, visual acuity and AMD grading from baseline. This study was excluded since it was not possible to isolate the specific effects of the omega 3 treatment
García-Layana, A, Recalde S, Alamán AS, Robredo PF. 2013. Effects of lutein and docosahexaenoic acid supplementation on macular pigment optical density in a randomized controlled trial. Nutrients;5(2):543–51.	Omega 3 fatty acids combined with carotenoids. Not able to isolate the effect of omega 3 treatment
Huang LL, Coleman HR, Kim J, de Monasterio F, Wong WT, Schleicher RL, et al. 2008. Oral supplementation of lutein/ zeaxanthin and omega-3 long chain polyunsaturated fatty acids in persons aged 60 years or older, with or without AMD. Investigative Ophthalmology and Visual Science; 49(9):3864–9.	This was a bioavailability study for the AREDS2 trial; 40 participants with AMD were randomly assigned to receive lutein and zeaxanthin, docosahexaenoic acid (DHA)/ eicosapentaenoic acid (EPA) or placebo for 6 months. Serum levels of lutein, zeaxanthin, DHA and EPA were measured in addition to macular pigment optical density. This study was excluded since no data on AMD outcomes were reported
Johnson EJ, Chung HY, Caldarella SM, Snodderly DM. 2008. The influence of supplemental lutein and docosahexaenoic acid on serum, lipoproteins, and macular pigmentation. American Journal of Clinical Nutrition;87(5):1521–9.	A total of 49 participants recruited from the general population were randomly assigned to placebo, lutein or lutein plus DHA. Supplements were taken for 4 months. The outcomes were serum levels of lutein and DHA and macular pigment optical density. This study was excluded since no data on AMD outcomes were reported
NCT01258335. Short term ocular safety assessment of high dose omega-3 supplementation for age-related macular degeneration. clinicaltrials.gov/ct2/show/NCT01258335 (accessed 8 June 2012).	The 'Short Term Ocular Safety Assessment of High Dose Omega 3 Supplementation for Age-Related Macular Degeneration' study was a RCT that used multifocal electroretinogram (ERGs) to establish the safety of omega LCPUFA supplements. The trialists confirmed that no AMD outcomes were collected and safety data or quality of life data were not available
ISRCTN72331636. The OPAL study: older people and n-3 long-chain polyunsaturated fatty acids. controlledtrials. com/ISRCTN72331636 (accessed 11 June 2012).	The 'Older People And n-3 Long-chain polyunsaturated fatty acids' study was a randomised trial to assess the effects of oral supplementation with omega 3 long-chain polyunsaturated fatty acids (LCPUFAs) on cognitive decline. The effect of the supplement on visual function was also investigated in a sub-set of participants by assessing rod photoreceptor response to light and visual-cortical integration. Trialists confirmed that no AMD outcomes were collected and the study was therefore excluded. Reporting of minor adverse events was similar between trial arms
Scorolli L, Scalinci SZ, Limoli PG, Morara M, Vismara S, Scorolli L, et al. 2002. Photodynamic therapy for age relatedmacular	A total of 35 participants with bilateral late AMD were randomly assigned to either receive (20 patients) or not receive (15 patients) a supplement

Study	Reason for exclusion
degeneration with and without antioxidants [La phototherapie dynamique de la degenerescence maculaire liee a l'age avec ou sans therapie aux antioxydants]. Canadian Journal of Ophthalmology;37(7):399–404.	containing vitamin E and polyunsaturated fatty acid for 60 days after photodynamic therapy. The outcomes measured were visual acuity (logMAR) and retinal metabolic function. This study was excluded since it was not possible to isolate the specific effects of the omega 3 treatment
Ziegler R. 2013. Supplementary carotinoids and omega-3-fatty acids are ineffective [Zusatzliche carotinoide und omega–3–fettsauren wirkungslos]. Medizinische Monatsschrift fur Pharmazeuten;36(9):348–9.	Commentary

Excluded studies for laser treatment of drusen to prevent progression to advanced age-related macular degeneration

Study	Reason for exclusion
Guymer RH, Brassington KH, Dimitrov P, Makeyeva G, Plunkett M, Xia W, et al. 2014. Nanosecond-laser application in intermediate AMD: 12-month results of fundus appearance and macular function. Clinical and Experimental Ophthalmology;2(5):466–79.	Non-randomised study assessing a novel, ultra-low energy nanosecond laser (retinal rejuvenation therapy) to slow progression of early age-related macular degeneration. Drusen reduction was achieved in 44% of treated eyes and 22% of untreated fellow eyes
Huang YX, Xiang LN, Wang YL, Li MM, Hu YX. 2011. Lon-gterm effect of prophylactic laser treatment for bilateral soft drusen. Chinese Medical Journal;124(4):541–5.	Paired controlled study (10 participants): 1 eye randomly assigned to laser, the fellow eye to control. However, authors reported that participants could have chosen which eye had to receive laser, so unclear whether randomisation was maintained
Sarks SH, Arnold JJ, Killingsworth MC, Sarks JP. 1999. Early drusen formation in the normal and aging eye and their relation to age related maculopathy: a clinicopathological study. British Journal of Ophthalmology;83(3):358–68.	Comparative study but no randomisation
Sigelman J. 1991. Foveal drusen resorption one year after perifoveal laser photocoagulation. Ophthalmology;98 (9):1379–83.	Case report

Excluded studies for antioxidant vitamin and mineral supplements for slowing the progression of age-related macular degeneration

Reviews were undertaken as a collaboration between the NICE Internal Clinical Guidelines Team

Study	Reasons for exclusion
Anonymous 2015. Eye health: The role of nutritional supplements in reducing the risk and progression of age-related macular degeneration. Australian Journal of Pharmacy;96(1139):60-62.	Review
Bahrami H, Melia M, Dagnelie G. 2006. Lutein supplementation in retinitis pigmentosa: PC-based vision assessment in a randomized	Not AMD

Study	Reasons for exclusion
double-masked placebo-controlled clinical trial. BMC Ophthalmology 6:23.	
Barakat MR, Metelitsina TI, DuPont JC, Grunwald JE. 2006 Effect of niacin on retinal vascular diameter in patients with age-related macular degeneration. Current Eye Research 31(7-8):629-34.	Not antioxidant vitamin
Benzie IF, Chung WY, Wang J, Richelle M, Bucheli P. 2006 Enhanced bioavailability of zeaxanthin in a milk-based formulation of wolfberry (Gou Qi Zi; Fructus barbarum L). British Journal of Nutrition 96(1):154-60.	Bioavailability study
Bone RA, Landrum JT, Cao Y, Howard AN, Alvarez-Calderon F. 2007 Macular pigment response to a supplement containing meso-zeaxanthin, lutein and zeaxanthin. Nutrition and Metabolism4:12.	Bioavailability study
Cangemi FE. 2007. TOZAL Study: an open case control study of an oral antioxidant and omega-3 supplement for dry AMD. BMC Ophthalmology7:3.	No control group
Christen WG, Manson JE, Glynn RJ, Gaziano JM, Chew EY, Buring JE, et al. 2007 Beta carotene supplementation and age-related maculopathy in a randomized trial of US physicians. Archives of Ophthalmology;125(3):333-9.	RCT in healthy population group. Included in Cochrane review on prevention of AMD with antioxidant supplements.
Connolly EE, Beatty S, Loughman J, Howard AN, Louw MS, Nolan JM. 2011 Supplementation with all three macular carotenoids: response, stability, and safety. Investigative Ophthalmology and Visual Science 52(12):9207-17.	No AMD outcomes
Akuffo KO, Beatty S, Stack J, Dennison J, O'Regan S, Meagher KA, et al. 2014 Central Retinal Enrichment Supplementation Trials (CREST): design and methodology of the CREST randomized controlled trials. Ophthalmic Epidemiology 21(2):111-23.	Lutein and zeaxanthin compared to placebo with the aim of enhancing vision in healthy people. Some of the participants had AMD but they were all given supplementation i.e. no control group.
Cumurcu T, Mendil D, Etikan I. 2006 Serum zinc and copper level in age-related macular degeneration. Trace Elements and Electrolytes 23(2):103-7.	Not an RCT
Falsini B, Piccardi M, Minnella A, Savastano C, Capoluonga E, Fadda A, et al. 2010 Influence of saffron supplementation on retinal flicker sensitivity in early age-related macular degeneration. Investigative Ophthalmology and Visual Science 51(12):6118-24.	Trial of saffron

Study	Reasons for exclusion
France 1998 Zinc supplementation. Universitaire de Creteil, France	Trial is unpublished
Franciose JL, Askew EW, Lang JC, Bernstein PS. 2006. Serum and macular responses to antioxidant supplementation versus a carotenoid-rich dietary intervention in the elderly. Current Topics in Nutraceuticals Research 4(1):69-78.	Bioavailability study
Goodrow EF, Wilson TA, Houde SC, Vishwanathan R, Scollin PA, Handelman G, et al. 2006 Consumption of one egg per day increases serum lutein and zeaxanthin concentrations in older adults without altering serum lipid and lipoprotein cholesterol concentrations. Journal of Nutrition 136(10):2519-24.	Bioavailability study
Holz FG, Wolfensberger TJ, Piguet B, Gross-Jendroska M, Arden GB, Bird AC. 1993 Oral zinc-therapy in age-related macular degeneration: a double-blind study (abstract). German Journal of Ophthalmology 2:391.	Abstract
ISRCTN35481392. Macular pigment and its contribution to visual performance and comfort. www.controlled-trials.com/ISRCTN35481392 (accessed 5 April 2012).	Participants had no ocular pathology
ISRCTN57556290. A multi-site trial of a novel nutritional supplement (taurine, omega-3 fatty acids, zinc, antioxidants, and lutein) and micro-current stimulation in the treatment of atrophic (dry) age-related macular degeneration. www.controlled-trials.com/ISRCTN57556290 (accessed 5 April 2012).	No comparator group
ISRCTN81595685. Comparison of macular and serum responses after supplementation with two different macular carotenoid formulations. www.controlled-trials.com/ISRCTN81595685 (accessed 24 March 2012).	Comparison of two active formulations
Kaiser HJ, Flammer J, Stumpfig D, Hendrickson P. 1995 Visaline in the treatment of age-related macular degeneration: a pilot study. Ophthalmologica 209(6):302-5.	6 months follow-up
Kamburoglu G, Gumus K, Kadayifcilar S, Eldem B. 2006 Plasma homocysteine, vitamin B12 and folate levels in age-related macular degeneration. Graefe's Archive for Clinical and Experimental Ophthalmology 244(5):565-9.	Not an RCT, not antioxidant
Khachik F, de Moura FF, Chew EY, Douglass LW, Ferris FL, Kim J, et al. 2006 The effect of lutein and zeaxanthin supplementation on metabolites of these carotenoids in the serum of persons aged 60 or older. Investigative Ophthalmology and Visual Science 47(12):5234-42.	Bioavailability study
Kolber MR, Tennant M, Nickonchuk T. 2013 Vitamins for age-related macular degeneration	Review

Study	Reasons for exclusion
demonstrate minimal differences. Canadian Family Physician 59(5):503.	
Kopsell DA, Lefsrud MG, Kopsell DE, Wenzel AJ, Gerweck C, Curran-Celentano J. 2006 Spinach cultigen variation for tissue carotenoid concentrations influences human serum carotenoid levels and macular pigment optical density following a 12-week dietary intervention. Journal of Agricultural and Food Chemistry 54(21):7998-8005.	Bioavailability study
Landrum J, Bone R, Mendez V, Valenciaga A, Babino D. 2012 Comparison of dietary supplementation with lutein diacetate and lutein: a pilot study of the effects on serum and macular pigment. Acta Biochimica Polonica 59(1):167-9.	Pilot study of effects of lutein supplementation on serum and macular pigment
Lim JI, Walonker AF, Levin L, Mahmoud M, Sadda S, Flaxel CJ, et al. 2006 One-year results of a pilot study using oral 13-cis retinoic acid as a treatment for subfoveal predominantly occult choroidal neovascularization in patients with age-related macular degeneration. Retina 26(3):314-21.	Not antioxidant
LISA 2011 Weigert G, Kaya S, Pemp B, Sacu S, Lasta M, Werkmeister RM, et al. Effects of lutein supplementation on macular pigment optical density and visual acuity in patients with age-related macular degeneration. Investigative Ophthalmology and Visual Science 2011;52(11):8174-8.	6 months follow-up
LUNA study 2007 Trieschmann M, Beatty S, Nolan JM, Hense HW, Heimes B, Austermann U, et al. Changes in macular pigment optical density and serum concentrations of its constituent carotenoids following supplemental lutein and zeaxanthin: the LUNA study. Experimental Eye Research84(4):718-28.	Bioavailability study
LUTEGA Arnold C, Winter L, Frohlich K, Jentsch S, Dawczynski J, Jahreis G, et al. Macular xanthophylls and omega-3 long-chain polyunsaturated fatty acids in age-related macular degeneration: a randomized trial. JAMA Ophthalmology 2013;131(5):564-72.	Antioxidants combined with omega-3 fatty acids
LUXEA Schalch W, Cohn W, Barker FM, Köpcke W, Mellerio J, Bird AC, et al. Xanthophyll accumulation in the human retina during supplementation with lutein or zeaxanthin - the LUXEA (LUtein Xanthophyll Eye Accumulation) study. Archives of Biochemistry and Biophysics 2007;458(2):128-35.	MPOD only measured; no clinical outcomes
Meagher K, Nolan JM, Thurnham DI, Howard AN, Beatty S. 2013 Macular response to supplementation with differing carotenoid formulations in subjects with and without age-related macular degeneration. European Journal of Ophthalmology 612:23.	Conference abstract reporting MPOD only

Study	Reasons for exclusion
Moeller SM, Parekh N, Tinker L, Ritenbaugh C, Blodi B, Wallace RB, et al. 2006 Associations between intermediate age-related macular degeneration and lutein and zeaxanthin in the Carotenoids in Age-related Eye Disease Study (CAREDS): ancillary study of the Women's Health Initiative. Archives of Ophthalmology 124(8):1151-62.	Not RCT
NCT00006202 Dose ranging study of lutein supplementation in persons over age 60. clinicaltrials.gov/ct2/show/NCT00006202 (accessed 5 May 2012)	Dose ranging study for lutein supplementation. No control group.
NCT00121589 Lutein/zeaxanthin and omega-3 supplementation in persons over age 60. clinicaltrials.gov/ct2/show/NCT00121589 (accessed 24 March 2012)	Phase I study only. Looking at changes in plasma levels and macular pigment density only.
NCT00563979 Enhancement of Macular Pigment Density by Oral Lutein Supplementation (EMPOLS). clinicaltrials.gov/ct2/show/NCT00563979 (accessed 5 April 2012)	Active comparator (omega-3)
NCT00564902 Randomized, double blind, lutein controlled study of zeaxanthin and visual function in atrophic age related macular degeneration patients. clinicaltrials.gov/ct2/show/NCT00564902 (accessed 24 March 2012)	Active comparator (lutein)
NCT00718653 Effects of antioxidants on human macular pigments. clinicaltrials.gov/ct2/show/NCT00718653 (accessed 24 March 2012)	Effect on macular pigments only, not on AMD
NCT00800995 Superoxide Dismutase (SOD) as antioxidant treatment of age related macular degeneration (ARMD). clinicaltrials.gov/ct2/show/NCT00800995 (accessed 5 April 2012).	Not antioxidant vitamin or mineral (superoxide dismutase)
NCT00893724 The effect of supplemental adjuvants for intracellular nutrition and treatment on diabetic macular edema and neovascular age-related macular degeneration. clinicaltrials.gov/ct2/show/NCT00893724 (accessed 5 May 2012).	Antioxidants combined with inosine
NCT02264938 Drusen morphology changes in nonexudative age-related degeneration using spectral domain optical coherence tomography after oral antioxidants supplementation: one-year results. clinicaltrials.gov/ct2/show/NCT02264938 (accessed 31 March 2016)	No control group
Newsome DA, Swartz M, Leone NC, Elston RC, Miller E. 1988 Oral zinc in macular degeneration. Archives of Ophthalmology 106(2):192-8.	6 months follow-up
Nolan J, Stack J, Mellerio J, Godhinio M, O'Donovan O, Neelam K, et al. 2006 Monthly consistency of macular pigment optical density	Not a RCT

Study	Reasons for exclusion
and serum concentrations of lutein and zeaxanthin. Current Eye Research 31(2):199-213.	
Nolan JM, Stack J, O'Donovan O, Loane E, Beatty S. 2007 Risk factors for age-related maculopathy are associated with a relative lack of macular pigment. Experimental Eye Research 84(1):61-74.	Not a RCT
Nolan JM, Akkali MC, Loughman J, Howard AN, Beatty S. 2012 Macular carotenoid supplementation in subjects with atypical spatial profiles of macular pigment. Experimental Eye Research 101:9-15.	Effect on macular pigments in healthy people only, not on AMD
Nussenblatt RB, Kim J, Thompson DJ, Davis MD, Chew E, Ferris FL, et al. 2006 Vitamin E in the treatment of uveitis-associated macular edema. American Journal of Ophthalmology 141(1):193-4.	Not AMD
Owsley C, McGwin G, Jackson GR, Heimburger DC, Piyathilake CJ, Klein R, et al. 2006 Effect of short-term, high-dose retinol on dark adaptation in aging and early age-related maculopathy. Investigative Ophthalmology and Visual Science 47(4):1310-8.	Not antioxidant
Christen WG, Glynn RJ, Sesso HD, Kurth T, Macfadyen J, Bubes V, et al.2012 Vitamins E and C and medical record-confirmed age-related macular degeneration in a randomized trial of male physicians. Ophthalmology 119(8):1642-9.	RCT in healthy population group. Will be included in Cochrane Review on prevention of AMD with antioxidant supplements.
Rosenthal JM, Kim J, de Monasterio F, de Monastario F, Thompson DJ, Bone RA, et al. 2006 Dose-ranging study of lutein supplementation in persons aged 60 years or older. Investigative Ophthalmology and Visual Science 47(12):5227-33.	Small dose ranging study. Data on vision only collected for nine months and not possible to extract from report.
Sabour-Pickett S, Beatty S, Connolly E, Loughman J, Stack J, Howard A, et al. 2014 Supplementation with three different macular carotenoid formulations in patients with early age-related macular degeneration. Retina 34(9):1757-66.	No control group
Sasamoto Y, Gomi F, Sawa M, Tsujikawa M, Nishida K. 2011 Effect of 1-year lutein supplementation on macular pigment optical density and visual function. Graefe's Archive for Clinical and Experimental Ophthalmology 249(12):1847-54.	Not a RCT
Scalinci SZ, Limoli PG, Morara M, Vismara S. Scorolli L, Corazza D, et al. 2002 Dynamic phototherapy of age-related macular degeneration with or without antioxidant therapy. Canadian Journal of Ophthalmology 37(7):399-404.	Antioxidants combined with omega-3
Scorolli L, Scalinci SZ, Limoli PG, Morara M, Vismara S, Scorolli L, et al. 2002 Photodynamic therapy for age related macular	Antioxidants combined with PDT

Study	Reasons for exclusion
degeneration with and without antioxidants. Canadian Journal of Ophthalmology 37(7):399-404.	
Souied EH, Delcourt C, Querques G, Bassols A, Merle B, Zourdani A, et al. 2013 Oral docosahexaenoic acid in the prevention of exudative age-related macular degeneration: the Nutritional AMD Treatment 2 study. Ophthalmology 120(8):1619-31.	Not an antioxidant supplement (omega-3)
Told R, Palkovits S, Schmidl D, Boltz A, Gouya G, Wolzt M, et al. 2014 Retinal hemodynamic effects of antioxidant supplementation in an endotoxin-induced model of oxidative stress in humans. Invest Ophthalmol Vis Sci 55:2220-7.	Small study of physiological effects in healthy volunteers
Told R, Schmidl D, Palkovits S, Boltz A, Gouya G, Wolzt M, et al. 2015 Antioxidative capacity of a dietary supplement on retinal hemodynamic function in a human lipopolysaccharide (LPS) model. Investigative Ophthalmology and Visual Science 56(1):403-11.	Small study of physiological effects in healthy volunteers
Vannas S, Orma H. 1958 On the treatment of arteriosclerotic chorioretinopathy. Acta Ophthalmologica 36:601-12.	Allocation concealment inadequate
Vidal K, Bucheli P, Gao QT, Moulin J, Shen LS, Blum S, et al. 2011 Effect of a milk-based wolfberry preparation on immune function and physical status of elderly. In: Clinical Nutrition. Supplement; Conference: 33rd Congress of the European Society for Clinical Nutrition and Metabolism edition. Gothenurg Sweden: ESPEN,.	RCT in healthy population group. Will be included in Cochrane review on prevention of AMD with antioxidant supplements.
Wang W, Connor SL, Johnson EJ, Klein ML, Hughes S, Connor WE. 2007 Effect of dietary lutein and zeaxanthin on plasma carotenoids and their transport in lipoproteins in age-related macular degeneration. American Journal of Clinical Nutrition 85(3):762-9.	Bioavailability study
Wenzel AJ, Gerweck C, Barbato D, Nicolosi RJ, Handelman GJ, Curran-Celentano J. 2006 A 12-wk egg intervention increases serum zeaxanthin and macular pigment optical density in women. Journal of Nutrition 136(10):2568-73.	Bioavailability study
Wolf-Schnurrbusch UE, Zinkernagel MS, Munk MR, Ebneter A, Wolf S. 2015 Oral Lutein Supplementation Enhances Macular Pigment Density and Contrast Sensitivity but Not in Combination With Polyunsaturated Fatty Acids. Investigative Ophthalmology and Visual Science 56(13):8069-74.	Antioxidant compared to antioxidant plus omega-3
Wong WT, Kam W, Cunningham D, Harrington M, Hammel K, Meyerle CB, et al. 2010 Treatment of geographic atrophy by the topical administration of OT-551: results of a phase II clinical trial. Investigative Ophthalmology and Visual Science 51(12):6131-9.	Phase II open-label study in 10 participants only

Study	Reasons for exclusion
Zhao DY, Bhosale P, Bernstein PS. 2006 Carotenoids and ocular health. Current Topics in Nutraceuticals Research 4(1):53-68.	Bioavailability study

Excluded studies for exercise, smoking cessation and weight management for slowing the progression of age-related macular degeneration

Study	Reason for exclusion
Widder (1997) Changes of visual acuity in patients with age related macular degeneration (amd) after elimination of high molecular weight proteins and lipids	Not available
Seddon (2001) Dietary fat and risk for advanced age-related macular degeneration	Study type (case control)
Schaumberg (2001) Body mass index and the incidence of visually significant age-related maculopathy in men	Study type (cohort study)
Moeini (2005)	Study type (case control)
Everitt (2006) Dietary approaches that delay age-related diseases.	Study type (review)
Chong (2007) Dietary antioxidants and primary prevention of age related macular degeneration: Systematic review and meta-analysis.	Dietary antioxidants as study intervention
Parekh (2008) Dietary fats and age-related macular degeneration	Not a RCT
Gale (2009) Effects of exercise on ocular physiology and disease	Study type (review)
Rovner (2009) Activity loss is associated with cognitive decline in age-related macular degeneration	Problem solving treatment as study intervention
Kaur (2009) Varenicline for smoking cessation: A review of the literature.[Erratum appears in Curr Ther Res Clin Exp. 2010;71(1):89	Not a RCT
Nicita-Mauro (2010) Non smoking for successful aging: Therapeutic perspectives	Study population were not AMD specific
Kirby (2011) Changes in macular pigment optical density and serum concentrations of lutein and zeaxanthin in response to weight loss	Study outcome was not disease progression
Momeni-Moghaddam (2012) Body mass index and binocular vision skills	Study population (people with no history of eye and head trauma and normal eye health)
Munch (2013) Precursors of age-related macular degeneration: associations with physical activity, obesity, and serum lipids in the inter99 eye study	Not a RCT
Sin (2013) Lifestyle modification, nutritional and vitamins supplements for age-related macular degeneration	Study type (a review of cohort studies)
Sabour-Pickett (2014) Supplementation with three different macular carotenoid formulations in patients with early age-related macular degeneration	Supplementation as study intervention

Study	Reason for exclusion
Pardue (2015) Potential Role of Exercise in Retinal Health	Not a RCT
Zhang (2016) Overweight, obesity, and risk of age-related macular degeneration	Not a RCT

F.3 Diagnosis

F.3.1 Signs and symptoms of AMD

RQ1: What signs and symptoms should prompt a healthcare professional to suspect AMD in people presenting to healthcare services?

Study	Reason for Exclusion
Achiron,L.R., Witkin,N.S., McCarey,B., Primo,S., 19960314, The illuminated high contrast macular grid: a pilot study, Journal of the American Optometric AssociationJ Am Optom Assoc, 66, 693-697, 1995	Unable to derive outcomes of interest. Also non separable for people with age related macular degeneration.
Ampornpruet,A., Ruamviboonsuk,P., Kokekhuntod,S., The fundoscopic features for differentiation between polypoidal choroidal vasculopathy and choroidal neovascularization from age-related macular degeneration, Journal of the Medical Association of ThailandJ.Med.Assoc.Thailand, 88, S51-S56, 2005	Article unavailable
Arimura,E., Matsumoto,C., Nomoto,H., Hashimoto,S., Takada,S., Okuyama,S., Shimomura,Y., Correlations between M-CHARTS and PHP findings and subjective perception of metamorphopsia in patients with macular diseases, Investigative Ophthalmology and Visual Science, 52, 128-135, 2011	All participants were required to have a positive Amsler test before inclusion into study.
Ariyasu,R.G., Lee,P.P., Linton,K.P., LaBree,L.D., Azen,S.P., Siu,A.L., Sensitivity, specificity, and predictive values of screening tests for eye conditions in a clinic-based population, Ophthalmology, 103, 1751-1760, 1996	Detection of "ocular disease" not AMD
Augustin,A.J., Offermann,I., Lutz,J., Schmidt,Erfurth U., Tornambe,P., Comparison of the original Amsler grid with the modified Amsler grid: result for patients with age-related macular degeneration, SO: Retina (Philadelphia, Pa.), 25, 443-445, 2005	People with established AMD diagnosis and also not enough information to derive diagnostic outcomes
Bhuiyan,A., Karmakar,C., Xiao,D., Ramamohanarao,K., Kanagasingam,Y., Drusen quantification for early identification of age related macular degeneration (AMD) using color fundus imaging, Conference proceedings : ...Annual International Conference of the IEEE Engineering in Medicine and Biology Society.IEEE Engineering in Medicine and Biology Society.Annual Conference, 2013, 7392-7395, 2013	Computerised drusen detection
Bonomi,L., Subjective symptomatology of age-related macular degeneration, New Trends in OphthalmologyNEW TRENDS OPHTHALMOL., 5, 83-88, 1990	No outcomes of interest (as outlined in protocol)

Study	Reason for Exclusion
Cheng,A.S., Vingrys,A.J., 19930405, Visual losses in early age-related maculopathy, Optometry & Vision Science, 70, 89-96, 1993	Test of visual acuity, however early AMD was defined by visual acuity score, therefore unable to derive meaningful diagnostic outcomes for VA tests.
Collins,M., Brown,B., Glare recovery and its relation to other clinical findings in age related maculopathy, Clinical Vision SciencesCLIN.VIS.SCI., 4, 155-163, 1989	Healthy controls were excluded on the basis of abnormal Amsler test (unable to derive diagnostic outcomes)
Curcio,C.A., Millican,C.L., Basal linear deposit and large drusen are specific for early age-related maculopathy, Archives of OphthalmologyArch.Ophthalmol., 117, 329-339, 1999	Post-mortem samples
Dimitrov,P.N., Robman,L.D., Varsamidis,M., Aung,K.Z., Makeyeva,G.A., Guymer,R.H., Vingrys,A.J., Visual function tests as potential biomarkers in age-related macular degeneration, Investigative Ophthalmology and Visual Science, 52, 9457-9469, 2011	No signs and symptoms of interest (results of psychophysical assessment, steady state thresholds, dynamic tests and dark adaption tests)
Eisner,A., Klein,M.L., Zilis,J.D., Watkins,M.D., Visual function and the subsequent development of exudative age-related macular degeneration, Investigative ophthalmology & visual scienceInvest Ophthalmol Vis Sci, 33, 3091-3102, 1992	Prognostic study
Faes,L., Bodmer,N.S., Bachmann,L.M., Thiel,M.A., Schmid,M.K., 20141215, Diagnostic accuracy of the Amsler grid and the preferential hyperacuity perimetry in the screening of patients with age-related macular degeneration: systematic review and meta-analysis. [Review], Eye (Basingstoke)Eye, 28, 788-796, 2014	Systematic review and meta-analysis of the accuracy Amsler grid for detecting neovascular AMD. Overlap with review question 23.
Fine,A.M., Elman,M.J., Ebert,J.E., Earliest symptoms caused by neovascular membranes in the macula, Archives of OphthalmologyArch.Ophthalmol., 104, 513-514, 1986	No outcomes of interest, data non-separable for study population.
Fraccaro,P., Nicolo,M., Bonetto,M., Giacomini,M., Weller,P., Traverso,C.E., Prosperi,M., OSullivan,D., Combining macula clinical signs and patient characteristics for age-related macular degeneration diagnosis: a machine learning approach, BMC ophthalmologyBMC ophthalmol., 15, 10-, 2015	Sensitivity of machine learning, using OCT imagery.
Gass,J.D.M., Agarwal,A., Lavina,A.M., Tawansy,K.A., Focal inner retinal hemorrhages in patients with drusen: An early sign of occult choroidal neovascularization and chorioretinal anastomosis, Retina, 23, 741-751, 2003	Seven case reports
Gorin,M.B., Weeks,D.E., Baron,R.V., Conley,Y.P., Ortube,M.C., Nusinowitz,S., 20150804, Endophenotypes for Age-Related Macular Degeneration: Extending Our Reach into the Preclinical Stages of Disease, Journal of Clinical MedicineJ.Clin.Med., 3, 1335-1356, 2014	Not using any of the first line investigations of interest.(handheld diagnostic lens, biomicroscopy, slit lamp fundoscopy, ophthalmoscopy)

Study	Reason for Exclusion
Guven,A., Automatic detection of age-related macular degeneration pathologies in retinal fundus images, Computer Methods in Biomechanics and Biomedical EngineeringComput.Methods Biomech.Biomed.Eng., 16, 425-434, 2013	Computer-automated drusen detection
Hirami,Y., Mandai,M., Takahashi,M., Teramukai,S., Tada,H., Yoshimura,N., Association of clinical characteristics with disease subtypes, initial visual acuity, and visual prognosis in neovascular age-related macular degeneration, Japanese Journal of OphthalmologyJpn.J.Ophthalmol., 53, 396-407, 2009	Not population of interest (study only included people with an diagnosis of neovascular AMD)
Hogg,R.E., Chakravarthy,U., 20060801, Visual function and dysfunction in early and late age-related maculopathy. [Review] [232 refs], Progress in Retinal & Eye Research, 25, 249-276, 2006	Review, non-systematic
Isaac,D.L.C., de Avila,M.P., Cialdini,A.P., Comparison of the original Amsler grid with the preferential hyperacuity perimeter for detecting choroidal neovascularization in age-related macular degeneration, Arquivos brasileiros de oftalmologiaArq Bras Oftalmol, 70, 771-776, 2007	Not population of interest (diagnostic case control study looking at the use of the Amsler grid to differentiate those with secondary neovascularisation from those with different stages of AMD.)
Kampmeier,J., Zorn,M.M., Lang,G.K., Botros,Y.T., Lang,G.E., [Comparison of Preferential Hyperacuity Perimeter (PHP) test and Amsler grid test in the diagnosis of different stages of age-related macular degeneration], Klinische Monatsblätter für Augenheilkunde, 223, 752-756, 2006	Foreign language
Liang,Z., Wong,D.W., Liu,J., Chan,K.L., Wong,T.Y., 20110310, Towards automatic detection of age-related macular degeneration in retinal fundus images, Conference Proceedings:, Annual, International-3, 2010	Computerised drusen detection
Lim,J.I., Labree,L., Nichols,T., Cardenas,I., Comparison of nonmydriatic digitized video fundus images with standard 35-mm slides to screen for and identify specific lesions of age-related macular degeneration, Retina, 22, 59-64, 2002	Not sensitivity and specificity of a specific clinical feature for the diagnosis of AMD
Loewenstein,A., Malach,R., Goldstein,M., Leibovitch,I., Barak,A., Baruch,E., Alster,Y., Rafaeli,O., Avni,I., Yassur,Y., Replacing the Amsler grid: A new method for monitoring patients with age-related macular degeneration, Ophthalmology, 110, 966-970, 2003	Not population of interest (diagnostic case control study among people with an established diagnosis of AMD compared to health controls)
Marmor,M.F., Contrast sensitivity versus visual acuity in retinal disease, The British journal of ophthalmologyBr J Ophthalmol, 70, 553-559, 1986	Data non separable for age related macular degeneration
Mayer,M.J., Ward,B., Klein,R., Talcott,J.B., Dougherty,R.F., Glucs,A., Flicker sensitivity and	Not population of interest. (Diagnostic case-control study looking at the ability of diagnostic

Study	Reason for Exclusion
fundus appearance in pre-exudative age-related maculopathy, Investigative ophthalmology & visual scienceInvest Ophthalmol Vis Sci, 35, 1138-1149, 1994	tests to differentiate between those with "pre-exudative" AMD and healthy age matched controls.)
Mokwa,N.F., Ristau,T., Keane,P.A., Kirchhof,B., Sadda,S.R., Liakopoulos,S., 20130614, Grading of Age-Related Macular Degeneration: Comparison between Color Fundus Photography, Fluorescein Angiography, and Spectral Domain Optical Coherence Tomography, Journal of ophthalmology, 2013, 385915-, 2013	Not sensitivity or specificity of specific clinical feature but of tests
Mookiah,M.R., Acharya,U.R., Koh,J.E., Chandran,V., Chua,C.K., Tan,J.H., Lim,C.M., Ng,E.Y., Noronha,K., Tong,L., Laude,A., Automated diagnosis of Age-related Macular Degeneration using greyscale features from digital fundus images, Computers in biology and medicineComput.Biol.Med., 53, 55-64, 2014	Computerised diagnosis of AMD
Mookiah,M.R.K., Acharya,U.R., Fujita,H., Koh,J.E.W., Tan,J.H., Noronha,K., Bhandary,S.V., Chua,C.K., Lim,C.M., Laude,A., Tong,L., Local configuration pattern features for age-related macular degeneration characterization and classification, Computers in biology and medicineComput Biol Med, 63, 208-218, 2015	Automated (computerised) AMD diagnosis
Mookiah,M.R.K., Acharya,U.R., Koh,J.E.W., Chua,C.K., Tan,J.H., Chandran,V., Lim,C.M., Noronha,K., Laude,A., Tong,L., Decision support system for age-related macular degeneration using discrete wavelet transform, Medical and Biological Engineering and ComputingMed.Biol.Eng.Comput., 52, 781-796, 2014	Computer-aided diagnosis (not investigation of interest)
Nivison-Smith,L., Milston,R., Madigan,M., Kalloniatis,M., Age-related macular degeneration: linking clinical presentation to pathology, Optometry and vision science : official publication of the American Academy of OptometryOptom Vis Sci, 91, 832-848, 2014	Review (non-systematic)
Nowomiejska,K., Oleszczuk,A., Brzozowska,A., Grzybowski,A., Ksiazek,K., Maciejewski,R., Ksiazek,P., Juenemann,A., Rejdak,R., M-charts as a tool for quantifying metamorphopsia in age-related macular degeneration treated with the bevacizumab injections, BMC ophthalmologyBMC Ophthalmol, 13, 13-, 2013	Sensitivity of investigation to detect clinical feature (not of clinical feature to detect AMD)
Okubo,A., Hirakawa,M., Ito,M., Sameshima,M., Saskamoto,T., Clinical features of early and late stage polypoidal choroidal vasculopathy characterized by lesion size and disease duration, Graefe's Archive for Clinical and Experimental OphthalmologyGraefe's Arch.Clin.Exp.Ophthalmol., 246, 491-499, 2008	Unable to derive outcomes of interest (diagnostic accuracy)

Study	Reason for Exclusion
Puell,M.C., Barrio,A.R., Palomo-Alvarez,C., Gomez-Sanz,F.J., Clement-Corral,A., Perez-Carrasco,M.J., Impaired mesopic visual acuity in eyes with early age-related macular degeneration, Investigative Ophthalmology and Visual Science, 53, 7310-7314, 2012	Diagnostic case control study comparing visual acuity testing in people with established not suspected AMD compared to health controls.
Robison,C.D., Jivrajka,R.V., Bababeygy,S.R., Fink,W., Sadun,A.A., Sebag,J., Distinguishing wet from dry age-related macular degeneration using three-dimensional computer-automated threshold Amsler grid testing, British Journal of OphthalmologyBr.J.Ophthalmol., 95, 1419-1423, 2011	Not able to derive diagnostic outcomes: 1) no outcomes provided for paper Amsler test for control subjects 2) 3D computer automated threshold Amsler not specified investigation of interest for this review question
Roquet,W., Roudot-Thoraval,F., Coscas,G., Soubrane,G., Clinical features of drusenoid pigment epithelial detachment in age related macular degeneration, The British journal of ophthalmologyBr J Ophthalmol, 88, 638-642, 2004	Unable to derive outcomes of interest
Sho,K., Takahashi,K., Yamada,H., Wada,M., Nagai,Y., Otsuji,T., Nishikawa,M., Mitsuma,Y., Yamazaki,Y., Matsumura,M., Uyama,M., Polypoidal choroidal vasculopathy: Incidence, demographic features, and clinical characteristics, Archives of OphthalmologyArch.Ophthalmol., 121, 1392-1396, 2003	Not population of interest (established diagnosis of neovascular AMD)
Siddalingaswamy,P.C., Prabhu,K.G., Jain,V., Automatic detection and grading of severity level in exudative maculopathy, Biomedical Engineering - Applications, Basis and CommunicationsBiomed.Eng.Appl.Basis Commun., 23, 173-179, 2011	Computer automated neovascularisation detection
Simunovic,M.P., Metamorphopsia and its quantification, Retina, 35, 1285-1291, 2015	Systematic review
Smith,R.T., Chan,J.K., Nagasaki,T., Ahmad,U.F., Barbazetto,I., Sparrow,J., Figueroa,M., Merriam,J., Automated detection of macular drusen using geometric background leveling and threshold selection, Archives of OphthalmologyArch.Ophthalmol., 123, 200-206, 2005	Sensitivity and specificity of automated drusen quantification
Spraul,C.W., Lang,G.E., Grossniklaus,H.E., Morphometric analysis of the choroid, Bruch's membrane, and retinal pigment epithelium in eyes with age-related macular degeneration, Investigative Ophthalmology and Visual Science, 37, 2724-2735, 1996	Abstract only
Sykes,S.O., Bressler,N.M., Maguire,M.G., Schachat,A.P., Bressler,S.B., Detecting recurrent choroidal neovascularization: Comparison of clinical examination with and without fluorescein angiography, Archives of OphthalmologyArch.Ophthalmol., 112, 1561-1566, 1994	Sensitivity of biomicroscopy compared to angiography to detect CNV recurrence after laser treatment. Not clinical features.

Study	Reason for Exclusion
Tikellis,G., Robman,L.D., Harper,A., McNeil,J.J., Taylor,H.R., McCarty,C.A., Methods for detecting age-related maculopathy: a comparison between photographic and clinical assessment, Clinical & experimental ophthalmologyClin Experiment Ophthalmol, 28, 367-372, 2000	1) Sensitivity of a test to detect a specific feature 2) Sensitivity of an investigation/test (not the individual feature itself)
Wall,M., May,D.R., Threshold Amsler grid testing in maculopathies, Ophthalmology, 94, 1126-1133, 1987	Case series, mixed population (some diabetic retinopathy)
Wiecek,E., Lashkari,K., Dakin,S.C., Bex,P., 20150414, A statistical analysis of metamorphopsia in 7106 amsler grids, Ophthalmology, 122, 431-433, 2015	Unable to derive outcomes of interest
Wilkinson,C.P., The clinical examination. Limitation and over-utilization of angiographic services, Ophthalmology, 93, 401-404, 1986	Review
Wu,Z., Ayton,L.N., Guymer,R.H., Luu,C.D., Low-luminance visual acuity and microperimetry in age-related macular degeneration, Ophthalmology, 121, 1612-1619, 2014	Unable to derive outcomes of interest (as outlined in protocol)
Zheng,Y., Hijazi,M.H., Coenen,F., 20130214, Automated "disease/no disease" grading of age-related macular degeneration by an image mining approach, Investigative ophthalmology & visual scienceInvest.Ophthalmol.Vis.Sci., 53, 8310-8318, 2012	Machine learning technique
Zweifel,S.A., Imamura,Y., Spaide,T.C., Fujiwara,T., Spaide,R.F., Prevalence and significance of subretinal drusenoid deposits (Reticular Pseudodrusen) in age-related macular degeneration, Ophthalmology, 117, 1775-1781, 2010	Unable to derive diagnostic outcomes. Drusen were confirmed by OCT.

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F.3.21 Tools for triage, diagnosis and informed treatment

2 RQ4: What tools are useful for triage, diagnosis, informing treatment and determining
3 management in people with suspected AMD?

Study	Reason for exclusion
Alster,Y. et al. Preferential hyperacuity perimeter for detecting choroidal neovascularisation study. Ophthalmology 112, 10, 2005.	Self monitoring tool (preferential hyperacuity perimeter)
Armstrong,J.R., Webster,M., Domalpally,A., Danis,R.,Jr., Blodi,B., Zhang,B., Fleischli,M., Larry,H. Comparison of Fundus Autofluorescence Images to Digital Color Images for RPE Atrophy in AREDS2.IOVS, ARVO-abstract, 2008.	Meeting abstract
Atmaca,L.S., Batioglu,F., Atmaca,P. Evaluation of choroidal neovascularization in age-related macular degeneration with fluorescein and indocyanine green videoangiography.Ophthalmologica, 210, 3, 148-151, 1996.	No diagnostic outcome of interest
Atmaca,L.S., Batioglu,F., Atmaca,P. ICG videoangiography of occult choroidal neovascularization in age-related macular degeneration. Acta Ophthalmologica ScandinavicaActa Ophthalmol.Scand., 75, 1, 44-47, 1997.	Unable to derive diagnostic outcomes of interest
Axer-Siegel,R., Bourla,D., Priel,E., Yassur,Y., Weinberger,D. Angiographic and flow patterns of retinal choroidal anastomoses in age-related macular degeneration with occult choroidal neovascularization.Ophthalmology, 109, 9, 1726-1736, 2002.	Unable to derive diagnostic outcomes of interest
Barteselli,G. Fundus autofluorescence and optical coherence tomography findings in pigmented paravenous retinochoroidal atrophy.Canadian Journal of OphthalmologyCan.J.Ophthalmol., 49, 6, e144-e146, 2014.	Letter
Bartsch,D.U., El-Bradey,M.H., El-Musharaf,A., Freeman,W.R. Improved visualisation of choroidal neovascularisation by scanning laser ophthalmoscope using image averaging. British Journal of OphthalmologyBr.J.Ophthalmol., 89, 8, 1026-1030, 2005.	Unable to derive diagnostic outcomes of interest
Batioglu,F., Demirel,S., Ozmert,E., Oguz,Y.G., Ozyol,P. Autofluorescence patterns as a predictive factor for neovascularization. Optometry & Vision Science, 91, 8, 950-955, 2014.	Unable to derive diagnostic outcomes of interest
Baumal,C.R., Reichel,E., Duker,J.S., Wong,J., Puliafito,C.A.. Indocyanine green hyperfluorescence associated with serous retinal pigment epithelial detachment in age-related macular degeneration. Ophthalmology, 104, 5, 761-769, 1997.	Unable to derive diagnostic outcomes of interest

Study	Reason for exclusion
Bottoni,F.G., Aandekerk,A.L., Deutman,A.F. Clinical application of digital indocyanine green videoangiography in senile macular degeneration. Graefes Archive for Clinical & Experimental Ophthalmology, 232, 8, 458-468, 1994.	Unable to derive diagnostic outcomes of interest
Brader,H.S., Ying,G.S., Martin,E.R., Maguire,M.G. Complications of Age-Related Macular Degeneration Prevention Trial (CAPT) Research Group, 20131119 Characteristics of incident geographic atrophy in the complications of age-related macular degeneration prevention trial. Ophthalmology, 120, 9, 1871-1879, 2013.	Unable to derive diagnostic outcomes of interest
Brader,H.S., Ying,G.S., Martin,E.R., Maguire, M. G. New Grading criteria allow for earlier detection of geographic atrophy in clinical trials. Investigative ophthalmology & visual science 52; 12: 9218; 2011	Unale to derive diagnostic outcomes of interest
Byeon,S.H., Lee,S.C., Oh,H.S., Kim,S.S., Koh,H.J., Kwon,O.W. Incidence and clinical patterns of polypoidal choroidal vasculopathy in Korean patients. Japanese journal of ophthalmology, 52, 1, 57-62, 2008.	Unable to derive diagnostic outcomes of interest
Cackett,P., Htoon,H., Wong,D., Yeo,I. Haemorrhagic pigment epithelial detachment as a predictive feature of polypoidal choroidal vasculopathy in a Chinese population. Eye (London, England)Eye, 24, 5, 789-792, 2010.	Unable to derive diagnostic outcomes of interest
Campa,C., Harding,S.P., Pearce,I.A., Beare,N.A., Briggs,M.C., Heimann,H. Incidence of neovascularization in the fellow eye of patients with unilateral retinal angiomatous proliferation. Eye (London, England)Eye, 24, 10, 1585-1589, 2010.	Unable to derive diagnostic outcomes of interest
Caramoy,A., Kirchhof,B., Fauser,S. Retinal pigment epithelium tears secondary to age-related macular degeneration: a simultaneous confocal scanning laser ophthalmoscopy and spectral-domain optical coherence tomography study. Archives of Ophthalmology, 129, 5, 575-579, 2011.	Unable to derive diagnostic outcomes of interest
Castill MM, Mowatt G, Lois N, Elders A, Fraser C, Amoaku W, Burr J M, Lotery A J, Ramsay C R and Azuara-Blance A. Optialca coherence tomography for the diagnosis of neovascular age-related macular degeneration: a systematic reivew	No additional new evidence
Chamberlin,J.A., Bressler,N.M., Bressler,S.B., Elman,M.J., Murphy,R.P., Flood,T.P., Hawkins,B.S., Maguire,M.G., Fine,S.L. The use of fundus photographs and fluorescein angiograms in the identification and treatment of choroidal neovascularization in the Macular Photocoagulation Study. The Macular Photocoagulation Study Group. Ophthalmology, 96, 10, 1526-1534, 1989.	Unable to derive diagnostic outcomes of interest

Study	Reason for exclusion
Cheung,C.M., Lai,T.Y., Chen,S.J., Chong,V., Lee,W.K., Htoon,H., Ng,W.Y., Ogura,Y., Wong,T.Y., Understanding indocyanine green angiography in polypoidal choroidal vasculopathy: the group experience with digital fundus photography and confocal scanning laser ophthalmoscopy. Retina, 34, 12, 2397-2406, 2014.	Unable to derive diagnostic outcomes of interest
Cho,M., Barbazetto,I.A., Freund,K.B. Refractory neovascular age-related macular degeneration secondary to polypoidal choroidal vasculopathy. American Journal of OphthalmologyAM, 148, 1, 70-78, 2009.	Unable to derive diagnostic outcomes of interest
Choi,W., Moult,E.M., Waheed,N.K., Adhi,M., Lee,B., Lu,C.D., de Carlo,T.E., Jayaraman,V., Rosenfeld,P.J., Duker,J.S., Fujimoto,J.G. Ultrahigh-Speed, Swept-Source Optical Coherence Tomography Angiography in Nonexudative Age-Related Macular Degeneration with Geographic Atrophy. Ophthalmology, 122, 12, 2532-2544, 2015.	Unable to derive diagnostic outcomes of interest
Colin,T., Kiong,N.W., Yi Louis,L.W., Han,L.T. Angiographic characteristics and their relationship with clinical outcomes in polypoidal choroidal vasculopathy. Annals of the Academy of Medicine Singapore, 41, 9 SUPPL. 1, S137-, 2012.	Unable to derive diagnostic outcomes of interest
De Bats, Flore/Mathis, Thibaud/Mauget-Fa. Prevalence of reticular pseudodrusen in age-related macular degeneration using multioodal imaging. Retina36: 46-52. 2016	No refernce test
Destro,M., Puliafito,C.A. Indocyanine green videoangiography of choroidal neovascularization. Ophthalmology, 96, 6, 846-853, 1989.	Unable to derive diagnostic outcomes of interest
Do,D.V. Detection of new-onset choroidal neovascularization. [Review].Current Opinion in OphthalmologyCurr.Opin. Ophthalmol., 24, 3, 244-247, 2013.	Study type (not diagnositic study)
Donati,M.C., Carifi,G., Virgili,G., Menchini,U. Retinal angiomatous proliferation: association with clinical and angiographic features.Ophthalmologica. Journal international d'ophtalmologie, 220, 1, 31-36, 2006.	Unable to derive diagnostic outcomes of interest
Elsner,A.E., Zhou,Q., Beck,F., Tornambe,P.E., Burns,S.A., Weiter,J.J., Dreher,A.W. Detecting AMD with multiply scattered light tomography. International Ophthalmology 23, 42525, 245-250, 2001.	Unable to derive diagnostic outcomes of interest
Farsiu,S., Chiu,S.J., O'Connell,R.V., Folgar,F.A., Yuan,E., Izatt,J.A., Toth,C.A., Age-Related Eye Disease Study, 20140313 Quantitative classification of eyes with and without intermediate age-related macular degeneration using optical coherence	Unable to derive diagnostic outcomes of interest

Study	Reason for exclusion
tomography. Ophthalmology, 121, 1, 162-172, 2014.	
Forte,R., Querques,G., Querques,L., Massamba,N., Le,Tien,V, Souied,E.H., Multimodal imaging of dry age-related macular degeneration. Acta Opthalmologica, 90, 4, e281-e287, 2012.	Unable to derive diagnostic outcomes of interest
Fujii,G.Y., De Juan E Jr, Humayun,M.S., Sunness,J.S., Chang,T.S., Rossi,J.V. Characteristics of visual loss by scanning laser ophthalmoscope microperimetry in eyes with subfoveal choroidal neovascularization secondary to age-related macular degeneration.American Journal of OphthalmologyAM, 136, 6, 1067-1078, 2003.	Unable to derive diagnostic outcomes of interest
Gaudio,A., Miller,S., Sandberg,M. Ophthalmic findings among the participants of the "vitamin e, cataract & age related macular degeneration" (vecat) study.IOVS, 37, , ARVO-, 1996.	Meeting abstract
Gess,A.J., Fung,A.E., Rodriguez,J.G., 20110819 Imaging in neovascular age-related macular degeneration. [Review].Seminars in OphthalmologySemin.Ophthalmol., 26, 3, 225-233, 2011	Study type
Gotoh,N., Hangai,M., Sasahara,M., Makita,S., Yamanari,M., Yasuno,Y., Yatagai,T., Kigawa,T., Fukuma,Y., Yoshimura,N. Three-Dimensional Fourier Domain OCT of Age-Related Macular Degeneration: Comparison With Conventional OCT.IOVS, 47, , ARVO-abstract, 2006.	Meeting abstract
Grunwald,J.E., Daniel,E., Ying,G.S., Pistilli,M., Maguire,M.G., Alexander,J., Whittock-Martin,R., Parker,C.R., Sepielli,K., Blodi,B.A., Martin,D.F., CATT Research Group. Photographic assessment of baseline fundus morphologic features in the Comparison of Age-Related Macular Degeneration Treatments Trials.Ophthalmology, 119, 8, 1634-1641, 2012.	Unable to derive diagnostic outcomes of interest
Haddad,W.M., Coscas,G., Soubrane,G., Eligibility for treatment and angiographic features at the early stage of exudative age related macular degeneration.British Journal of Ophthalmology, 86, 6, 663-669, 2002.	Unable to determine diagnostic outcomes of interest
Hartnett,M.E., Elsner,A.E. Characteristics of exudative age-related macular degeneration determined in vivo with confocal and indirect infrared imaging.Ophthalmology, 103, 1, 58-71, 1996.	Unable to derive diagnostic outcomes of interest
Hayashi,K., Hasegawa,Y., Tazawa,Y., De Laey,J.J. Clinical application of indocyanine green angiography to choroidal neovascularization.Japanese Journal of Ophthalmology, 33, 1, 57-65, 1989.	Unable to derive diagnostic outcomes of interest

Study	Reason for exclusion
Health,Quality Ontario. Optical coherence tomography for age-related macular degeneration and diabetic macular edema: an evidence-based analysis. Ontario Health Technology Assessment Series, 9, 13, 44562, 2009.	Study type
Helbig,H., Niederberger,H., Valmaggia,C., Bischoff,P. Simultaneous fluorescein and indocyanine green angiography for exudative macular degeneration.Klinische Monatsblatter fur AugenheilkundeKlin, 222, 3, 202-205, 2005.	Unable to derive diagnostic outcomes of interest
Henschel,A., Spital,G., Lommatzsch,A., Pauleikhoff,D. Optical coherence tomography in neovascular age related macular degeneration compared with fluorescein angiography and visual acuity. European Journal of Ophthalmology, 19, 5, 831-835, 2009.	Monitoring namd (to be included for rq23b)
Hirami,Y., Mandai,M., Takahashi,M., Teramukai,S., Tada,H., Yoshimura,N. Association of clinical characteristics with disease subtypes, initial visual acuity, and visual prognosis in neovascular age-related macular degeneration.Japanese journal of ophthalmologyJpn, 53, 4, 396-407, 2009.	Unable to derive diagnostic outcomes of interest
Holz,F.G., Strauss,E.C., Schmitz-Valckenberg,S., van Lookeren,Campagne M. Geographic atrophy: clinical features and potential therapeutic approaches. [Review].Ophthalmology, 121, 5, 1079-1091, 2014.	Unable to derive diagnostic outcomes of interest
Iranmanesh,R., Eandi,C.M., Peiretti,E., Klais,C.M., Garuti,S., Goldberg,D.E., Slakter,J.S., Yannuzzi,L.A., The nature and frequency of neovascular age-related macular degeneration. European journal of ophthalmology, 17, 1, 75-83, 2007.	Unable to derive diagnostic outcomes of interest
Ishiko,S., Akiba,J., Horikawa,Y., Yoshida,A. Detection of drusen in the fellow eye of Japanese patients with age-related macular degeneration using scanning laser ophthalmoscopy. Ophthalmology, 109, 11, 2165-2169, 2002.	Unable to derive diagnostic outcomes of interest
Kamami-Levy,C., Querques,G., Rostaqui,O., Blanco-Garavito,R., Souied,E.H. Choroidal neovascularization associated with extensive macular atrophy with pseudodrusen-like appearance. Journal Francais d Opthalmologie, 37, 10, 780-786, 2014.	Unable to derive diagnostic outcomes of interest
Kameda,T., Tsujikawa,A., Otani,A., Sasahara,M., Gotoh,N., Tamura,H., Yoshimura,N. Polypoidal choroidal vasculopathy examined with en face optical coherence tomography. Clinical & Experimental Ophthalmology, 35, 7, 596-601, 2007.	Unable to derive diagnostic outcomes of interest

Study	Reason for exclusion
Kang,S.W., Chung,S.E., Shin,W.J., Lee,J.H. Polypoidal choroidal vasculopathy and late geographic hyperfluorescence on indocyanine green angiography.British Journal of Ophthalmology, 93, 6, 759-764, 2009.	Unable to derive diagnostic outcomes of interest
Keane,P.A., Liakopoulos,S., Chang,K.T., Heussen,F.M., Ongchin,S.C., Walsh,A.C., Sadda,S.R. Comparison of the optical coherence tomographic features of choroidal neovascular membranes in pathological myopia versus age-related macular degeneration, using quantitative subanalysis.British Journal of Ophthalmology, 92, 8, 1081-1085, 2008.	Unable to derive diagnostic outcomes of interest
Kellner,U., Kellner,S., Weinitz,S. Fundus autofluorescence (488 NM) and near-infrared autofluorescence (787 NM) visualize different retinal pigment epithelium alterations in patients with age-related macular degeneration. Retina, 30, 1, 42156, 2010.	Unable to derive diagnostic outcomes of interest
Kim,H., Lee,J.H., Kwon,K.Y., Byeon,S.H., Lee,S.C., Lee,C.S. Punctate hyperfluorescent spots associated with polypoidal choroidal vasculopathy on indocyanine green angiography.Ophthalmic Surgery, Lasers & Imaging Retina, 46, 4, 423-427, 2015.	Unable to derive diagnostic outcomes of interest
Ko,T.H., Fujimoto,J.G., Schuman,J.S., Paunescu,L.A., Kowalevicz,A.M., Hartl,I., Drexler,W., Wollstein,G., Ishikawa,H., Duker,J.S. Comparison of ultrahigh- and standard-resolution optical coherence tomography for imaging macular pathology. Ophthalmology, 112, 11, 1922-15, 2005.	Unable to derive diagnostic outcomes of interest
Koh,A.H., Expert,PCV Panel, Chen,L.J., Chen,S.J., Chen,Y., Giridhar,A., Iida,T., Kim,H., Yuk Yau,Lai T., Lee,W.K., Li,X., Han,Lim T., Ruamviboonsuk,P., Sharma,T., Tang,S., Yuzawa,M. Polypoidal choroidal vasculopathy: evidence-based guidelines for clinical diagnosis and treatment. Retina, 33, 4, 686-716, 2013.	Study type (guideline)
Kohno,T., De Laey,J.J., Miki,T. Detection of choroidal neovascularization in age-related macular degeneration using subtraction methods in indocyanine green angiography. Bulletin de la Societe Belge d Ophtalmologie, 259, , 81-88, 1995.	Unable to derive diagnostic outcomes of interest
Kramer,M., Mimouni,K., Priel,E., Yassur,Y., Weinberger,D. Comparison of fluorescein angiography and indocyanine green angiography for imaging of choroidal neovascularization in hemorrhagic age-related macular degeneration.American Journal of Ophthalmology, 129, 4, 495-500, 2000.	Unable to derive diagnostic outcomes of interest
Kuck,H., Inhoffen,W., Schneider,U., Kreissig,I., Diagnosis of occult subretinal neovascularization in age-related macular	Unable to derive diagnostic outcomes of interest

Study	Reason for exclusion
degeneration by infrared scanning laser videoangiography. Retina, 13, 1, 36-39, 1993.	
Kunze,C., Elsner,A.E., Beausencourt,E., Moraes,L., Hartnett,M.E., Trempe,C.L. Spatial extent of pigment epithelial detachments in age-related macular degeneration. Ophthalmology, 106, 9, 1830-1840, 1999.	Unable to derive diagnostic outcomes of interest
Kwok,A.K., Lai,T.Y., Chan,C.W., Neoh,E.L., Lam,D.S. Polypoidal choroidal vasculopathy in Chinese patients. [Review] [16 refs].British Journal of Ophthalmology, 86, 8, 892-897, 2002.	Unable to derive diagnostic outcomes of interest
Ladas,I.D., Rouvas,A.A., Moschos,M.M., Synodinos,E.E., Karagiannis,D.A., Koutsandrea,C.N. Polypoidal choroidal vasculopathy and exudative age-related macular degeneration in Greek population.Eye (London, England)Eye, 18, 5, 455-459, 2004.	Unable to derive diagnostic outcomes of interest
Lafaut,B.A., Sallet,G., De Laey,J.J. Discrepancy between indocyanine green and fluorescein angiography in occult choroidal neovascularization.Bulletin de la Societe Belge d Ophtalmologie, 255, , 69-77, 1995.	Study type
Lau,T., Wong,I.Y., Iu,L., Chhablani,J., Yong,T., Hideki,K., Lee,J., Wong,R. En-face optical coherence tomography in the diagnosis and management of age-related macular degeneration and polypoidal choroidal vasculopathy. Indian journal of ophthalmology, 63, 5, 378-383, 2015	Unable to derive diagnostic outcomes of interest
Lee,N., Laine,A.F., Smith,R.T. A hybrid segmentation approach for geographic atrophy in fundus auto-fluorescence images for diagnosis of age-related macular degeneration. Conference Proceedings:, Annual, , International-8, 2007.	Unable to derive diagnostic outcomes of interest
Lei,H., Schuchard,R.A. A two year follow-up of age-related macular degeneration (amd) with scanning laser ophthalmoscope imaging.IOVS, 39, , ARVO-, 1998.	Conference abstract
Leuschen,J.N., Schuman,S.G., Winter,K.P., McCall,M.N., Wong,W.T., Chew,E.Y., Hwang,T., Srivastava,S., Sarin,N., Clemons,T., Harrington,M., Toth,C.A., Spectral-domain optical coherence tomography characteristics of intermediate age-related macular degeneration. Ophthalmology, 120, 1, 140-150, 2013.	Unable to derive diagnostic accuracy outcomes
Li,J., Tso,M.O., Lam,T.T. Reduced amplitude and delayed latency in foveal response of multifocal electroretinogram in early age related macular degeneration.British Journal of Ophthalmology, 85, 3, 287-290, 2001.	Unable to derive diagnostic accuracy outcomes
Lim,J.I., Kwok,A., Wilson,D.K., Symptomatic age-related macular degeneration in Asian	Unable to derive diagnostic outcomes of interest

Study	Reason for exclusion
patients. Retina (Philadelphia, Pa.), 18, 5, 435-438, 1998.	
Lim,J.I., Sternberg,P.,Jr., Capone,A.,Jr., Aaberg,T.M.,Sr., Gilman,J.P., Selective use of indocyanine green angiography for occult choroidal neovascularization.American Journal of Ophthalmology, 120, 1, 75-82, 1995.	Unable to derive diagnostic outcomes of interest
Liu,Y., Wen,F., Huang,S., Luo,G., Yan,H., Sun,Z., Wu,D. Subtype lesions of neovascular age-related macular degeneration in Chinese patients. Graefes Archive for Clinical & Experimental Ophthalmology, 245, 10, 1441-1445, 2007.	Unable to derive diagnostic outcomes of interest
Lois,N., McBain,V., Abdelkader,E., Scott,N.W., Kumari,R., . Retinal pigment epithelial atrophy in patients with exudative age-related macular degeneration undergoing anti-vascular endothelial growth factor therapy. Retina, 33, 1, 13-22, 2013.	Unable to derive diagnostic outcomes of interest
Lupidi,M., Coscas,G., Cagini,C., Coscas,F. Optical Coherence Tomography Angiography of a Choroidal Neovascularization in Adult Onset Foveomacular Vitelliform Dystrophy: Pearls and Pitfalls. Investigative Ophthalmology & Visual Science, 56, 13, 7638-7645, 2015.	Condition
Maguire,M.G., Alexander,J., Fine,S.L., Complications of Age-Related Macular Degeneration Prevention Trial (CAPT) Research Group, Characteristics of choroidal neovascularization in the complications of age-related macular degeneration prevention trial.Ophthalmology, 115, 9, 1468-1473, 1473.	Unable to derive diagnostic outcomes of interest
Major,J.C.,Jr., Wykoff,C.C., Mariani,A.F., Chen,E., Croft,D.E., Brown,D.M. Comparison of spectral-domain and time-domain optical coherence tomography in the detection of neovascular age-related macular degeneration activity. Retina, 34, 1, 48-54, 2014.	Monitoring namd (to be included for rq23b)
Marsiglia,M., Boddu,S., Chen,C.Y., Jung,J.J., Mrejen,S., Gallego-Pinazo,R., Freund,K.B. Correlation between neovascular lesion type and clinical characteristics of nonneovascular fellow eyes in patients with unilateral, neovascular age-related macular degeneration. Retina, 35, 5, 966-974, 2015.	Unable to derive diagnostic outcomes of interest
Massacesi,A.L., Sacchi,L., Bergamini,F., Bottoni,F. The prevalence of retinal angiomatous proliferation in age-related macular degeneration with occult choroidal neovascularization. Graefes Archive for Clinical & Experimental Ophthalmology, 246, 1, 89-92, 2008.	Unable to derive diagnostic outcomes of interest
Mathenge,W., Bastawrous,A., Peto,T., Leung,I., Foster,A., Kuper,H. Prevalence of age-related macular degeneration in Nakuru,	Unable to derive diagnostic outcomes of interest

Study	Reason for exclusion
Kenya: a cross-sectional population-based study. PLoS Medicine / Public Library of Science, 10, 2, e1001393-, 2013.	
McBain,V.A., Townend,J., Lois,N. Fundus autofluorescence in exudative age-related macular degeneration. British Journal of Ophthalmology, 91, 4, 491-496, 2007.	Unable to derive diagnostic outcomes of interest
McClintic,S.M., Kim,D.Y., Fingler,J., Garcia,S., Zawadzki,R.J., Morse,L.S., Park,S.S., Fraser,S.E., Werner,J.S., Ruggiero,J.P., Schwartz,D.M. Detection of pigment epithelial detachment vascularization in age-related macular degeneration using phase-variance OCT angiography.Clinical Ophthalmology, 9, , 1299-1305, 2015.	Unable to derive diagnostic outcomes of interest
Mo,Y., Lei,C.-T., Fan,Y.-C., Zeng,Q.-H. Fundus fluorescein angiographic features of patients with age-related macular degeneration.International Journal of OphthalmologyInt, 8, 4, 655-657, 2008.	Unable to derive diagnostic accuracy outcome
Mori,K., Gehlbach,P.L., Nishiyama,Y., Deguchi,T., Yoneya,S. The ultra-late phase of indocyanine green angiography for healthy subjects and patients with age-related macular degeneration. Retina, 22, 3, 309-316, 2002.	Unable to derive diagnostic outcomes of interest
Mori,K., Horie-Inoue,K., Gehlbach,P.L., Takita,H., Kabasawa,S., Kawasaki,I., Ohkubo,T., Kurihara,S., Iizuka,H., Miyashita,Y., Katayama,S., Awata,T., Yoneya,S., Inoue,S. Phenotype and genotype characteristics of age-related macular degeneration in a Japanese population. Ophthalmology, 117, 5, 928-938, 2010.	Unable to derive diagnostic outcomes of interest
Moult,E., Choi,W., Waheed,N.K., Adhi,M., Lee,B., Lu,C.D., Jayaraman,V., Potsaid,B., Rosenfeld,P.J., Duker,J.S., Fujimoto,J.G. Ultrahigh-speed swept-source OCT angiography in exudative AMD.Ophthalmic Surgery, Lasers & Imaging Retina, 45, 6, 496-505, 2014.	Unable to derive diagnostic outcomes of interest
Mrejen,S., Sarraf,D., Mukkamala,S.K., Freund,K.B. Multimodal imaging of pigment epithelial detachment: a guide to evaluation. [Review].Retina, 33, 9, 1735-1762, 2013.	Study type (a review not systematic review)
Mowatt G., Hernandez R. Castillo M, Lois N, Elders A, Fraser C, Aremu O, Amoaku W, Burr J, Lotery A, Ramsay C and Azuara-Blance A. Optical coherence tomography for the diagnosis, monitoring and guiding of treatment for neovascular age-related macular degeneration: a systematic review and economic evaluation. Health Technology Assessment 18; 69. 2014.	No additional new evidence
Ojima,Y., Tsuchida,Y., Mori,S., Shiraga,F., Matsuo,N. Detection of abnormal choroidal vessels by indocyanine green angiography	Unable to derive diagnostic outcomes of interest

Study	Reason for exclusion
using scanning laser ophthalmoscope.Japanese Journal of Clinical Ophthalmology, 47, 5, 999-1003, 1993.	
Olcay,K., Cakir,A., Sonmez,M., Duzgun,E., Yildirim,Y. Analysing the progression rates of macular lesions with autofluorescence imaging modes in dry age-related macular degeneration. Turk Oftalmoloiji Dergisi, 45, 6, 235-238, 2015.	Unable to derive diagnostic outcomes of interest
Pagliarini,S., Barondes,M.J., Chisholm,I.H., Hamilton,A.M., Bird,A.C. Detection of subpigment epithelial neovascularisation in cases of retinal pigment epithelial detachments: a review of the Moorfields treatment trial.British Journal of Ophthalmology, 76, 1, 42651, 1992.	Unable to derive diagnostic outcomes of interest
Palejwala,N.V., Jia,Y., Gao,S.S., Liu,L., Flaxel,C.J., Hwang,T.S., Lauer,A.K., Wilson,D.J., Huang,D., Bailey,S.T. Detection of nonexudative choroidal neovascularization in age-related macular degeneration with optical coherence tomography angiography. Retina, 35, 11, 2204-2211, 2015.	Unable to derive diagnostic outcomes of interest
Park,S.S., Truong,S.N., Zawadzki,R.J., Alam,S., Choi,S.S., Telander,D.G., Werner,J.S., Morse,L.S. High-resolution Fourier-domain optical coherence tomography of choroidal neovascular membranes associated with age-related macular degeneration.Investigative ophthalmology & visual scienceInvest Ophthalmol Vis Sci, 51, 8, 4200-4206, 2010.	Monitoring namd (to be included for rq23b)
Pauleikhoff,D., Loffert,D., Spital,G., Radermacher,M., Dohrmann,J., Lommatzsch,A., Bird,A.C. Pigment epithelial detachment in the elderly. Clinical differentiation, natural course and pathogenetic implications. Graefes Archive for Clinical & Experimental Ophthalmology, 240, 7, 533-538, 2002.	Unable to derive diagnostic outcomes of interest
Pece,A., Introini,U., Bolognesi,G., Brancato,R. Indocyanine green angiography in age-related macular degeneration with occult neovascularization.Ophthalmologica.Journal international d'ophtalmologie.International journal of ophthalmology, 212, 5, 295-300, 1998.	Unable to derive diagnostic outcomes of interest
Pece,A., Sannace,C., Menchini,U., Virgili,G., Galli,L., Isola,V., Brancato,R. Fluorescein angiography and indocyanine green angiography for identifying occult choroidal neovascularization in age-related macular degeneration.European Journal of Ophthalmology, 15, 6, 759-763, 2005.	Monitoring namd (to be included for rq23b)
Peng,Q., Dong,Y., Zhao,P.Q., Fundus autofluorescence in exudative age-related	Unable to derive diagnostic outcomes of interest

Study	Reason for exclusion
macular degeneration. Genetics & Molecular Research, 12, 4, 6140-6148, 2013.	
Petropoulos,I.K., Matter,M.A., Katsimpris,J.M., Desmangles,P.M., The role of spectral-domain optical coherence tomography in the diagnosis of retinal angiomatous proliferation. Klinische Monatsblatter fur AugenheilkundeKlin, 227, 4, 309-311, 2010.	Study type (not diagnostic study)
Pilotto,E., Sportiello,P., Alemany-Rubio,E., Vujosevic,S., Segalina,S., Fregona,I., Midena,E. Confocal scanning laser ophthalmoscope in the retromode imaging modality in exudative age-related macular degeneration. Graefes Archive for Clinical & Experimental Ophthalmology, 251, 1, 27-34, 2013.	Unable to derive diagnostic outcomes of interest
Politoa,A., Napolitano,M.C., Bandello,F., Chiodini,R.G. The role of optical coherence tomography (OCT) in the diagnosis and management of retinal angiomatous proliferation (RAP) in patients with age-related macular degeneration. [Review] [14 refs].Annals of the Academy of Medicine, Singapore, 35, 6, 420-424, 2006.	Unable to derive diagnostic outcomes of interest
Querques,G., Forte,R., Berboucha,E., Martinelli,D., Coscas,G., Soubrane,G., Souied,E.H. Spectral-domain versus time domain optical coherence tomography before and after ranibizumab for age-related macular degeneration.Ophthalmic Research, 46, 3, 152-159, 2011.	Monitoring namd (to be included for rq23b)
Querques,G., Querques,L., Forte,R., Massamba,N., Blanco,R., Souied,E.H., Precursors of type 3 neovascularization: a multimodal imaging analysis. Retina, 33, 6, 1241-1248, 2013.	Unable to derive diagnostic accuracy outcomes
Querques,G., Souied,E.H., Freund,K.B., Multimodal imaging of early stage 1 type 3 neovascularization with simultaneous eye-tracked spectral-domain optical coherence tomography and high-speed real-time angiography. Retina, 33, 9, 1881-1887, 2013.	Unable to derive diagnostic accuracy outcomes
Querques,L., Querques,G., Forte,R., Souied,E.H. Microperimetric correlations of autofluorescence and optical coherence tomography imaging in dry age-related macular degeneration. American Journal of Ophthalmology, 153, 6, 1110-1115, 2012.	Unable to derive diagnostic outcomes of interest
Rahimy,E., Rayess,N., Maguire,J.I., Hsu,J. Radial versus raster spectral-domain optical coherence tomography scan patterns for detection of macular pathology.American Journal of Ophthalmology, 158, 2, 345-353, 2014.	Unable to derive diagnostic accuracy outcomes
Regatieri,C.V., Branchini,L., Duker,J.S. The role of spectral-domain OCT in the diagnosis	Study type

Study	Reason for exclusion
and management of neovascular age-related macular degeneration. [Review].Ophthalmic Surgery, Lasers & Imaging, 42, , Suppl-66, 2011.	
Regillo,C.D., Benson,W.E., Maguire,J.I., Annesley,W.H.,Jr., Indocyanine green angiography and occult choroidal neovascularization. Ophthalmology, 101, 2, 280-288, 1994.	Unable to derive diagnostic outcomes of interest
Reichel,E., Duker,J.S., Puliafito,C.A.. Indocyanine green angiography and choroidal neovascularization obscured by hemorrhage. Ophthalmology, 102, 12, 1871-1876, 1995.	Unable to derive diagnostic accuracy outcomes
Rishi,P., Bhende,M., Sen,P., Rishi,E. Discrepancy between fluorescein angiography and optical coherence tomography in detection of macular disease.Retina (Philadelphia, Pa.)Retina, 29, 1, 121-, 2009.	Letter
Sa,H.S., Cho,H.Y., Kang,S.W. Optical coherence tomography of idiopathic polypoidal choroidal vasculopathy.Korean Journal of Ophthalmology, 19, 4, 275-280, 2005.	Unable to derive diagnostic accuracy outcomes
Saari,J. Diagnostic effectiveness of spectral domain optical coherence tomography. Acta OphthalmologicaACTA OPHTHALMOL., 90, , 74-, 2012.	Conference abstract
Salti H I, Antonios R S, Haddad S S, Hamam R N, Bashshur Z F and Ghazi N G. Combined nonmydriatic spectral-domain optical coherence tomography and nonmydriatic fundus photography for the dectection of age-related macular degeneration changes. Ophthalmic surgery, Lasers & imaging retina46;5, 2015.	Unable to derive diagnostic accuracy outcomes
Sasahara,M., Tsujikawa,A., Musashi,K., Gotoh,N., Otani,A., Mandai,M., Yoshimura,N. Polypoidal choroidal vasculopathy with choroidal vascular hyperpermeability.American Journal of Ophthalmology, 142, 4, 601-607, 2006.	Unable to derive diagnostic outcomes of interest
Sasaki,M., Kawasaki,R., Uchida,A., Koto,T., Shinoda,H., Tsubota,K., Wong,T.Y., Ozawa,Y. Early signs of exudative age-related macular degeneration in Asians. Optometry & Vision Science, 91, 8, 849-853, 2014.	Unable to determine diagnostic outcomes of interest
Sayanagi,K., Gomi,F., Ikuno,Y., Akiba,M., Nishida,K. Comparison of spectral-domain and high-penetration OCT for observing morphologic changes in age-related macular degeneration and polypoidal choroidal vasculopathy. Graefes Archive for Clinical & Experimental Ophthalmology, 252, 1, 42616, 2014.	Unable to derive diagnostic outcomes of interest
Scassellati-Sforzolini,B., Mariotti,C., Bryan,R., Yannuzzi,L.A., Giuliani,M., Giovannini,A. Polypoidal choroidal vasculopathy in Italy.	Unable to derive diagnostic outcomes of interest

Study	Reason for exclusion
Retina (Philadelphia, Pa.)Retina, 21, 2, 121-125, 2001.	
Schachat,A.P., Thompson,J.T. Optical coherence tomography, fluorescein angiography, and the management of neovascular age-related macular degeneration. Ophthalmology, 122, 2, 222-223, 2015.	Study type
Schmitz-Valckenberg,S., Jorzik,J., Roider,J., Weinberger,A., Wolf,S., Holz,F.G. [Analysis of digital fundus autofluorescence photos using scanning laser ophthalmoscopy of geographical atrophies (GA) in AMD (FAM-study)].Ophthalmologe., 98, Suppl 1, S157-S158, 2001.	Unable to derive diagnostic outcomes of interest
Schneider,U., Gelisken,F., Inhoffen,W., Bartz-Schmidt,K.U. Pigment epithelial detachments with retinal vascular anomalous complex in age-related macular degeneration. Ophthalmologica, 219, 5, 303-308, 2005.	Unable to derive diagnostic outcomes of interest
Schneider,U., Gelisken,F., Inhoffen,W., Kreissig,I. Indocyanine green angiographic findings in fellow eyes of patients with unilateral occult neovascular age-related macular degeneration.International ophthalmology, 21, 2, 79-85, 1997.	Unable to derive diagnostic outcomes of interest
Sengupta,S., Surti,R., Vasavada,D. Sensitivity and Specificity of Spectral-Domain Optical Coherence Tomography in Detecting Idiopathic Polypoidal Choroidal Vasculopathy.American Journal of Ophthalmology, 160, 1, 203-204, 2015.	Letter
Sho,K., Takahashi,K., Yamada,H., Wada,M., Nagai,Y., Otsuji,T., Nishikawa,M., Mitsuma,Y., Yamazaki,Y., Matsumura,M., Uyama,M. Polypoidal choroidal vasculopathy: incidence, demographic features, and clinical characteristics.Archives of Ophthalmology, 121, 10, 1392-1396, 2003.	Unable to derive diagnostic outcomes of interest
Singh,S., Agarwal,M., Venkatesh,R., Mayor,R. Diagnosis of subretinal neovascularization associated with idiopathic juxtafoveal retinal telangiectasia - fluorescein angiography versus spectral-domain optical coherence tomography - can we choose?.Graefe's Archive for Clinical and Experimental OphthalmologyGraefe's Arch.Clin.Exp.Ophthalmol., 252, 11, 1861-, 2014.	Letter
Slakter,J.S., Yannuzzi,L.A., Sorenson,J.A., Guyer,D.R., Ho,A.C., Orlock,D.A. A pilot study of indocyanine green videoangiography-guided laser photocoagulation of occult choroidal neovascularization in age-related macular degeneration.Archives of Ophthalmology, 112, 4, 465-472, 1994.	Unable to derive diagnostic outcomes of interest

Study	Reason for exclusion
Sohrab,M.A., Smith,R.T., Fawzi,A.A. Imaging characteristics of dry age-related macular degeneration. [Review].Seminars in Ophthalmology, 26, 3, 156-166, 2011.	Unable to derive diagnostic accuracy outcomes
Somani,R., Tennant,M., Rudnisky,C., Weis,E., Ting,A., Eppler,J., Greve,M., Hinz,B., De,Leon A. Comparison of stereoscopic digital imaging and slide film photography in the identification of macular degeneration.Canadian Journal of Ophthalmology,40, 3, 293-302, 2005.	Unable to derive diagnostic outcomes of interest
Song,S.J., Youm,D.J., Chang,Y., Yu,H.G. Age-related macular degeneration in a screened South Korean population: prevalence, risk factors, and subtypes.[Erratum appears in Ophthalmic Epidemiol. 2010 Jan-Feb;17(1):74] 16, 5, 304-310, 2009.	Unable to derive diagnostic outcomes of interest
Sorenson,J.A., Yannuzzi,L.A., Slakter,J.S., Guyer,D.R., Ho,A.C., Orlock,D.A., A pilot study of digital indocyanine green videoangiography for recurrent occult choroidal neovascularization in age-related macular degeneration.Archives of Ophthalmology, 112, 4, 473-479, 1994.	Unable to derive diagnostic outcomes of interest
Spaide,R.F. Fundus autofluorescence and age-related macular degeneration. Ophthalmology, 110, 2, 392-399, 2003.	Unable to derive diagnostic outcomes of interest
Squirrell,D.M., Bacon,J.F., Brand,C.S. To investigate the prevalence of polypoidal choroidal vasculopathy in presumed age-related peripapillary subretinal neovascular membranes. Clinical & Experimental Ophthalmology, 37, 4, 368-372, 2009.	Unable to derive diagnostic outcomes of interest
Srivastava,S.K., Csaky,K.G. Identification of well-defined intrachoroidal neovascularization by high-speed indocyanine green angiography.Retina, 23, 5, 712-714, 2003.	Study type
Stangos,A.N., Gandhi,J.S., Nair-Sahni,J., Heimann,H., Pournaras,C.J., Harding,S.P. Polypoidal choroidal vasculopathy masquerading as neovascular age-related macular degeneration refractory to ranibizumab.American Journal of Ophthalmology,150, 5, 666-673, 2010.	Unable to derive diagnostic outcomes of interest
Straatsma,B.R., Lewis,H., Foos,R.Y., Evans,R. Fluorescein angiography in reticular degeneration of the pigment epithelium.American Journal of Ophthalmology, 100, 1, 202-208, 1985.	Unable to derive diagnostic accuracy outcomes
Sturzlinger,H., Genser,D., Froschl,B. Evaluation of optical coherence tomography in the diagnosis of age related macula degeneration compared with fluorescence angiography. GMS Health Technology Assessment, 3, , Doc02-, 2007.	Foreign language
Submacular Surgery Trials Research Group, Solomon,S.D., Jefferys,J.L., Hawkins,B.S.,	Unable to derive diagnostic accuracy outcomes

Study	Reason for exclusion
Bressler,N.M. Incident choroidal neovascularization in fellow eyes of patients with unilateral subfoveal choroidal neovascularization secondary to age-related macular degeneration: SST report No. 20 from the Submacular Surgery Trials Research Group.Archives of Ophthalmology., 125, 10, 1323-1330, 2007.	
Tan,C.S., Heussen,F., Sadda,S.R. Peripheral autofluorescence and clinical findings in neovascular and non-neovascular age-related macular degeneration. Ophthalmology, 120, 6, 1271-1277, 2013.	Unable to derive diagnostic accuracy outcomes
Tan,C.S., Lim,L.W., Ngo,W.K., Lim,T.H. Polypoidal choroidal vasculopathy in patients diagnosed with age-related macular degeneration.Acta Opthalmologica, 91, 7, e578-e579, 2013.	Letter
Tang,K.C., Liu,H.A. Scanning laser ophthalmoscopy of choroidal neovascularisation using indocyanine green. Australian and New Zealand Journal of Ophthalmology, 23, 3, 195-202, 1995.	Unable to derive diagnostic accuracy outcomes
Theelen,T., Berendschot,T.T., Hoyng,C.B., Boon,C.J., Klevering,B.J. Near-infrared reflectance imaging of neovascular age-related macular degeneration.Graefes Archive for Clinical & Experimental Ophthalmology, 247, 12, 1625-1633, 2009.	Study type
Tikellis G, Robman L D, Harper A, McNeil J, Taylor H and McCarty C. Methods for detecting age-related maculopathy: a comparison between photographic and clinical assessment. Clinical and Experimental Ophthalmology 28: 367-372; 2000.	Unable to derive diagnostic accuracy outcomes
Ting,T.D., Oh,M., Cox,T.A., Meyer,C.H., Toth,C.A. Decreased visual acuity associated with cystoid macular edema in neovascular age-related macular degeneration.Archives of Ophthalmology,120, 6, 731-737, 2002.	Unable to derive diagnostic outcomes of interest
Ueda-Arakwar N; Ooto S; Tsujikawa A. Sensitivity and specificity of detecting reticular pseudodrusen in multimodal imaging in Japanese patietns. Retina. 33; 3: 490-97. 2013	No reference test
Uyama,M., Matsubara,T., Fukushima,I., Matsunaga,H., Iwashita,K., Nagai,Y., Takahashi,K. Idiopathic polypoidal choroidal vasculopathy in Japanese patients.Archives of Ophthalmology,117, 8, 1035-1042, 1999.	Unable to derive diagnostic accuracy outcomes
Uyama,M., Takahashi,K., Ida,N., Miyashiro,M., Ando,A., Takahashi,A., Yamada,E., Shirasu,J., Nagai,Y., Takeuchi,M. The second eye of Japanese patients with unilateral exudative age related macular degeneration.The British journal of ophthalmology, 84, 9, 1018-1023, 2000.	Unable to derive diagnostic outcomes of interest

Study	Reason for exclusion
Vaclavik,V., Vujosevic,S., Dandekar,S.S., Bunce,C., Peto,T., Bird,A.C., Autofluorescence imaging in age-related macular degeneration complicated by choroidal neovascularization: a prospective study. Ophthalmology, 115, 2, 342-346, 2008.	Unable to derive diagnostic accuracy outcomes
Vujosevic,S., Smolek,M.K., Lebow,K.A., Notaroberto,N., Pallikaris,A., Casciano,M. Detection of macular function changes in early (AREDS 2) and intermediate (AREDS 3) age-related macular degeneration. Ophthalmologica, 225, 3, 155-160, 2011.	Unable to derive diagnostic outcomes of interest
Wald,K.J., Elsner,A.E., Wolf,S., Staurenghi,G., Weiter,J.J. Indocyanine green videoangiography for the imaging of choroidal neovascularization associated with macular degeneration. [Review] [42 refs].International Ophthalmology Clinics., 34, 3, 311-325, 1994.	Study type
Watzke,R.C., Klein,M.L., Hiner,C.J., Chan,B.K., Kraemer,D.F. A comparison of stereoscopic fluorescein angiography with indocyanine green videoangiography in age-related macular degeneration. Ophthalmology, 107, 8, 1601-1606, 2000.	Unable to derive diagnostic outcomes of interest
Webster,M.K., Blodi,B.A., Elledge,J.A., Csaky,K.G. Comparison of oct and fluorescein angiographic features of choroidal neovascularization due to age-related macular degeneration. IOVS, 45, , ARVO-abstract, 2004.	Conference abstract
Wen,F., Chen,C., Wu,D., Li,H., Polypoidal choroidal vasculopathy in elderly Chinese patients.Graefes Archive for Clinical & Experimental Ophthalmology, 242, 8, 625-629, 2004.	Unable to determine diagnostic outcomes of interest
Wolf,S., Remky,A., Elsner,A.E., Arend,O., Reim,M. Indocyanine green video angiography in patients with age-related maculopathy-related retinal pigment epithelial detachments. German Journal of Ophthalmology, 3, 42494, 224-227, 1994.	Unable to derive diagnostic outcomes of interest
Wu,D.Z., Wen,F., Huang,S., Wu,L. Characteristics of indocyanine green angiography in exudative age-related macular degeneration.Yen Ko Hsueh Pao [Eye Science], 15, 3, 156-161, 182.	Unable to derive diagnostic outcomes of interest
Wu,Z., Luu,C.D., Ayton,L.N., Goh,J.K., Lucci,L.M., Hubbard,W.C., Hageman,J.L., Hageman,G.S., Guymer,R.H. Optical coherence tomography-defined changes preceding the development of drusen-associated atrophy in age-related macular degeneration. Ophthalmology, 121, 12, 2415-2422, 2014.	Unable to derive diagnostic outcomes of interest
Wu,Z., Luu,C.D., Ayton,L.N., Goh,J.K., Lucci,L.M., Hubbard,W.C., Hageman,J.L.,	Unable to determine diagnostic outcomes of interest

Study	Reason for exclusion
Hageman,G.S., Guymer,R.H. Fundus autofluorescence characteristics of nascent geographic atrophy in age-related macular degeneration. Investigative Ophthalmology & Visual Science, 56, 3, 1546-1552, 2015.	
Yamagishi,T., Koizumi,H., Yamazaki,T., Kinoshita,S. Fundus autofluorescence in polypoidal choroidal vasculopathy.Ophthalmology, 119, 8, 1650-1657, 2012.	Unable to derive diagnostic outcomes of interest
Yamamoto,M., Kohno,T., Ataka,S., Mini,N., Hishida,E., Hirabayashi,M., Kaida,M., Murasawa,M., Kamaguchi,A., Shiraki,K. Comparison of Fundus Autofluorescence in Age-Related Macular Degeneration Between Fundus Camera and Confocal Scanning Laser Ophthalmoscope Photographs.IOVS, 47, , ARVO-abstract, 2006.	Meeting abstract
Yamamoto,M., Kohno,T., Shiraki,K. Comparison of fundus autofluorescence of age-related macular degeneration between a fundus camera and a confocal scanning laser ophthalmoscope. Osaka City Medical Journal, 55, 1, 19-27, 2009.	Unable to derive diagnostic outcomes of interest
Yannuzzi,L.A., Negrao,S., Iida,T., Carvalho,C., Rodriguez-Coleman,H., Slakter,J., Freund,K.B., Sorenson,J., Orlock,D., Borodoker,N. Retinal angiomatous proliferation in age-related macular degeneration. 2001.Retina, 32, , Suppl-34, 2012.	Unable to derive diagnostic outcomes of interest
Yannuzzi,L.A., Wong,D.W., Sforzolini,B.S., Goldbaum,M., Tang,K.C., Spaide,R.F., Freund,K.B., Slakter,J.S., Guyer,D.R., Sorenson,J.A., Fisher,Y., Maberley,D., Orlock,D.A. Polypoidal choroidal vasculopathy and neovascularized age-related macular degeneration. Archives of OphthalmologyArch.Ophthalmol., 117, 11, 1503-1510, 1999.	Unable to derive diagnostic outcomes of interest
Yasuno,Y., Miura,M., Kawana,K., Makita,S., Sato,M., Okamoto,F., Yamanari,M., Iwasaki,T., Yatagai,T., Oshika,T. Visualization of sub-retinal pigment epithelium morphologies of exudative macular diseases by high-penetration optical coherence tomography.Investigative Ophthalmology & Visual Science, 50, 1, 405-413, 2009.	Unable to derive diagnostic outcomes of interest
Yaylali,S.A., Akcakaya,A.A., Erbil,H.H., Candemir,B., Mesci,C., Acar,H. The relationship between optical coherence tomography patterns, angiographic parameters and visual acuity in age-related macular degeneration.International OphthalmologyINT.OPHTHALMOL., 32, 1, 25-30, 2012.	Unable to derive diagnostic outcomes of interest
Yuzawa,M., Kawamura,A., Matsui,M. Clinical evaluation of indocyanine green video-	Unable to derive diagnostic outcomes of interest

Study	Reason for exclusion
angiography in the diagnosis of choroidal neovascular membrane associated with age-related macular degeneration.European Journal of Ophthalmology2, 3, 115-121, 1992.	
Zacks,D.N., Johnson,M.W., Retinal angiomatous proliferation: optical coherence tomographic confirmation of an intraretinal lesion. Archives of Ophthalmology,122, 6, 932-933, 2004.	Unable to derive diagnostic outcomes of interest
Zarbin,M.A., Casaroli-Marano,R.P., Rosenfeld,P.J. Age-related macular degeneration: clinical findings, histopathology and imaging techniques. [Review].Developments in Ophthalmology, 53, , 11689, 2014.	Unable to derive diagnostic outcomes of interest
Zhao,J., Hu,J., Lu,H., Yang,L. A population-based study of macular choroidal neovascularization using optical coherence tomography in Eastern China.Experimental and Therapeutic MedicineExp.Ther.Med., 8, 2, 371-376, 2014.	Unable to derive diagnostic outcomes of interest
Zweifel,S.A., Imamura,Y., Spaide,T.C., Fujiwara,T., Spaide,R.F. Prevalence and significance of subretinal drusenoid deposits (reticular pseudodrusen) in age-related macular degeneration. Ophthalmology, 117, 9, 1775-1781, 2010.	Unable to derive diagnostic outcomes of interest

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F.4 Referral

F.4.1 Organisational models and referral pathways for triage, diagnosis, ongoing treatment and follow-up of people with suspected and confirmed age-related macular degeneration

RQ5: How do different organisational models and referral pathways for triage, diagnosis, ongoing treatment and follow up influence outcomes for people with suspected AMD (for example correct diagnosis, errors in diagnosis, delays in diagnosis, process outcomes)?

RQ16: How do different organisational models for ongoing treatment and follow up influence outcomes for people with diagnosed neovascular AMD (for example disease progression, time to treatment, non-attendance)?

RQ24: How soon should people with neovascular AMD be diagnosed and treated after becoming symptomatic?

Study	Reason for exclusion
Bats (2014) Age-related macular degeneration screening using a nonmydriatic digital color fundus camera and telemedicine	Intervention: screening tools for AMD
Beare (2012) Referrals from a diabetic retinopathy screening programme (DRSP) for suspected treatable choroidal neovascular membrane (CNVM)	Abstract
Buckle (2014) Oct/photographic clinics screen positive maculopathy patients	Abstract
Callaway (2016) Thinking lean: Improving vitreoretinal clinic efficiency by decentralizing optical coherence tomography	Target group *(*patients receiving vitroretinal injection)
Campbell (2010) Rapid expansion of intravitreal drug injection procedures, 2000 to 2008: a population-based analysis	Intervention (utilisation of anti-VEGF treatment)
Cervantes-Castaneda (2008) Lack of benefit of early awareness to age-related macular degeneration	Outcome (awareness of AMD*)*
Chou (2009) Screening older adults for impaired visual acuity: a review of the evidence for the U.S. Preventive Services Task Force	Ttarget group (older adults for impaired visual acuity)
Crabb (2013) The intravitreal pain score study (IVPSS): A single centre blinded randomised prospective study comparing subjective pain experienced between subconjunctival injections versus pledget anaesthetic techniques	Abstract
Donati (1999) Radiotherapy for isolated occult subfoveal neovascularisation in age related macular degeneration: a pilot study	Intervention (treatment)
Dugel (2014) Treatment patterns of neovascular age-related macular degeneration	Abstract
Eze (2012) Assessing the knowledge and skills in clinical ophthalmology of medical interns: survey results from enugu, South-eastern Nigeria	Target group (medical interns)

Study	Reason for exclusion
Fine (2005) Age-related macular degeneration 1969-2004: A 35-year personal perspective	review not systematic review
Freeman (2003) Is there an association between cataract surgery and age-related macular degeneration? Data from three population-based studies	Outcome (association between cataract and AMD)
Frei (2011)The chronic care for age-related macular degeneration study (CHARMED): study protocol for a randomized controlled trial	Study protocol
Gangwani (2014)The incidental findings of age-related macular degeneration during diabetic retinopathy screening	Outcome (diagnostic accuracy)
Geirsdottir (2012)Practical treatment of exudative age-related macular degeneration in Iceland	Abstract
Germain (2011)No loss of chance of diabetic retinopathy screening by endocrinologists with a digital fundus camera	Condition (diabetic retinopathy)
Giasin (2013)Are diabetic retinopathy virtual clinics safe?	Abstract
Gibson (2014)Eye care availability and access among individuals with diabetes, diabetic retinopathy, or age-related macular degeneration	Outcome (availability and access of eye service)
Goldstein (2007)The impact of a video intervention on the use of low vision assistive devices	Tntervention (low vision assistive devices)
Haddad (2002)Presentation delay in patients affected with exudative age-related macular degeneration	Outcome
Haller (2013)Current anti-vascular endothelial growth factor dosing regimens: Benefits and burden	Intervention (anti-VEGF)
Hammond (1996)Comparison between an ophthalmic optician and an ophthalmologist in screening for diabetic retinopathy	Condition (diabetic retinopathy)
Hernandez (2014)Telemedicine screening of diabetic retinopathy: Our experience	Abstract
Hong (2014)Effectiveness of eccentric viewing training for daily visual activities for individuals with age-related macular degeneration: a systematic review and meta-analysis	Intervention (eccentric viewing training)
Huang (2014)Ophthalmologists practice patterns on performing intravitreal injections in Europe	Abstract
Jamous (2014)Australian optometric and ophthalmologic referral pathways for people with age-related macular degeneration, diabetic retinopathy and glaucoma	Outcome

Study	Reason for exclusion
Johnston (2012)Audit of expedited reports on patients deemed to require urgent referral from a diabetic retinopathy screening programme in a two year period	Abstract
Kanagasingam (2014)Progress on retinal image analysis for age related macular degeneration	Intervention (retinal image)
Karampelas (2015)Missed Hospital Appointments of Patients Receiving Ranibizumab Therapy for Neovascular Age-Related Macular Degeneration	Intervention (anti-VEGF)
Koenekoop (1995)The management of age-related macular degeneration: patterns of referral and compliance in seeking low-vision aids	Intervention (low vision aids)
Kourlaba (2015)Health and economic outcomes related to delay between medical indication and treatment with ranibizumab in age-related macular degeneration in Greece	Abstract
Kroenke (2015)Telemedicine screening for eye disease	review but not systematic review
Lamirel (2012)Quality of nonmydriatic digital fundus photography obtained by nurse practitioners in the emergency department: The FOTO-ED study	Target group (routine ED patient encounters to determine factors associated with diminished photograph quality)
Lawrenson (2015)A pilot study of the feasibility of delivering a brief smoking cessation intervention in community optometric practice	Intervention (smoking cessation)
Leese (1992)Use of mobile screening unit for diabetic retinopathy in rural and urban areas	Condition (diabetic retinopathy)
MacLennan (2013)Medical record validation of self-reported eye diseases and eye care utilization among older adults	Outcome (validation of self-reported eye disease)
Mansberger (2015)Long-term Comparative Effectiveness of Telemedicine in Providing Diabetic Retinopathy Screening Examinations: A Randomized Clinical Trial	Condition (diabetic retinopathy)
Markun (2014)The concordance of care for age related macular degeneration with the chronic care model: a multi-centered cross-sectional study	Outcome
Mash (2007)Screening for diabetic retinopathy in primary care with a mobile fundal camera--evaluation of a South African pilot project	Condition (diabetic retinopathy)
McCabe (2000)Evaluating the effectiveness of a vision rehabilitation intervention using an objective and subjective measure of functional performance	Intervention (vision rehabilitation)
Mehta (2014)Angled transscleral intravitreal injection: A crossover study	Article is unavailable

Study	Reason for exclusion
Morgan (2013)Review of change in referral rates to hospital eye services from a population based diabetic retinopathy screening service during the initial six years of service delivery	Abstract
Newsham (2007)Interdisciplinary allied health education in treating older adults with low vision	Article is not available
Ng (2014)Saving sight and creating capacity: Outpatient diabetic review (OPDR) as part of the English diabetic retinopathy screening programme	Abstract
Nia (2007)Provision and utilization of low-vision rehabilitation services in Toronto	Intervention (low-vision rehabilitation services)
O'Connor (2012)Shared care for chronic eye diseases: perspectives of ophthalmologists, optometrists and patients	Qualitative study
Owsley (2015)Diabetes eye screening in urban settings serving minority populations: Detection of diabetic retinopathy and other ocular findings using telemedicine	Condition (diabetes)
Paudel (2015)Clinical Competency of 1-Year Trained Vision Technicians in Andhra Pradesh, India	Outcome
Peter (2006)Use of real-time telemedicine in the detection of diabetic macular oedema: a pilot study	Condition (diabetic macular oedema)
Piening (2013)The Additional Value of an E-Mail to Inform Healthcare Professionals of a Drug Safety Issue: A Randomized Controlled Trial in the Netherlands	Outcome (healthcare professional communication)
Podbielski (2013)The worse eye is not as bad as it seems to be in AMD cases	Outcome (residual vision)
Reeves (2004)Enhanced low vision rehabilitation for people with age related macular degeneration: a randomised controlled trial	Intervention (enhanced low vision rehabilitation)
Roessler (2009)Implantation and explantation of a wireless epiretinal retina implant device: Observations during the EPIRET3 prospective clinical trial	Target group [patients with retinitis pigmentosa (RP)]
Russell (1997)Randomised controlled trial of an integrated versus an optometric low vision rehabilitation service for patients with age-related macular degeneration	Not available
Russell (2001)Randomised controlled trial of an integrated versus an optometric low vision rehabilitation service for patients with age-related macular degeneration: study design and methodology	Study protocol

Study	Reason for exclusion
Shah (2012)Same-day consecutive bilateral intravitreal injections of ranibizumab for the treatment of bilateral active choroidal neovascularization in age-related macular degeneration	Intervention (anti-VEGF treatment)
Sickenberg (2001)Early detection, diagnosis and management of choroidal neovascularization in age-related macular degeneration: the role of ophthalmologists	Study type
Silva (2016)Comparison of nondiabetic retinal findings identified with nonmydriatic fundus photography vs ultrawide field imaging in an ocular telehealth program	Condition (diabetic patients)
Sunness (2009)Patterns of referral of retinal patients for low vision intervention in the anti-VEGF era	Intervention (refer to low vision services)
Sutter (2008)Towards an Optimized Treatment Scheme of Ranibizumab in Patients With Subfoveal Choroidal Neovascularization Secondary to Age-Related Macular Degeneration: Subanalysis of Clinical Trial Data and Clinical Routine Use	Abstract
Tan (2013)A pilot trial of tele-ophthalmology for diagnosis of chronic blurred vision	Target group (people with chronic blurred vision)
Tasman (2005)Age-related macular degeneration: treating the whole patient	Study type
Taylor (2016)The design and implementation of a study to investigate the effectiveness of community vs hospital eye service follow-up for patients with neovascular age-related macular degeneration with quiescent disease	Outcome
Verma (2014)Northern Alberta remote teleglaucoma program: Clinical outcomes and patient disposition	Condition (glaucoma)
Wang (2010)Delay in ranibizumab injections for exudative age-related macular degeneration	Abstract
Wang (2013)Handheld shape discrimination hyperacuity test on a mobile device for remote monitoring of visual function in maculopathy	Article is not available
Weaver (2015)The effect of intensive education on concordance with the Age-Related Eye Disease Study (AREDS) recommendations in a tertiary referral practice	Outcome (compliance to supplementation)
Xing (2014)Survey of intravitreal injection techniques and treatment protocols among retina specialists in Canada	Intervention (injection techniques)

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F.5 Pharmacological management

F.5.1 Anti-angiogenic therapies and frequency of administration

RQ12: What is the effectiveness of different anti-angiogenic therapies (including photodynamic therapy) for the treatment of late age-related macular degeneration (wet active)?

RQ18: What is the effectiveness of different frequencies of administration of antiangiogenic therapies for the treatment of late age-related macular degeneration (wet active)?

This review was undertaken as a collaboration between the NICE Internal Clinical Guidelines Team and the Cochrane Eyes and Vision Group.

Excluded studies for photodynamic therapy

Study	Reason for exclusion
ADD-V Southeastern Retina Associates. Currently enrolling clinical trials. www.tennesseeretina.com/news (accessed 22 May 2007).	No detailed publication ever found but was a study looking at the effect of combining photodynamic therapy with an anti-inflammatory agent so falls outside the remit of this review
Japan 2003 The Japanese Age-Related Macular Degeneration Trial (JAT) Study Group. Japanese age-related macular degeneration trial: 1-year results of photodynamic therapy with verteporfin in Japanese patients with subfoveal choroidal neovascularization secondary to age-related macular degeneration. American Journal of Ophthalmology 2003;136(6):1049-61.	Non-randomised open label case series
Schmidt-Erfurth U, Miller JW, Sickenberg M, Laqua H, Barbazetto I, Gragoudas ES, et al. 1999 Photodynamic therapy with verteporfin for choroidal neovascularisation caused by age-related macular degeneration. Results of retreatment in a phase 1 and 2 study. Archives of Ophthalmology 117(9):1177-87.	Non-randomised open-label phase I and II trial
Schmidt-Erfurth U, Sacu S, the Early Retreatment Study Group. 2008 Randomized multicenter trial of more intense and standard early verteporfin treatment of neovascular age-related macular degeneration. Ophthalmology 115(1):134-40	Comparison between PDTs with different intensity
Valio 2007Rosenfeld PJ, Boyer DS, Bressler NM, Fish G, Sanderson Grizzard W, Hao Y, et al. The VALIO Study Group. Verteporfin therapy of subfoveal occult choroidal neovascularization in AMD using delayed light application: one-year results of the VALIO Study. American Journal of Ophthalmology 2007;144(6):970-2.	Comparison between PDTs (with standard or delayed light application)

Excluded studies for anti-VEGF

Study	Reason for exclusion
Bashshur ZF, Schakal A, Hamam RN, El Haibi CP, Jaafar R, Noureddin BN. 2007 Intravitreal bevacizumab vs verteporfin	Follow-up less than 1 year

Study	Reason for exclusion
photodynamic therapy for neovascular age-related macular degeneration. Archives of Ophthalmology 125(10):1357-61.	
BEAT-AMD 2009 Schmid-Kubista KE, Krebs I, Gruenberger B, Zeiler F, Schueller J, Binder S. Systemic bevacizumab (Avastin®) therapy for exudative neovascular age-related macular degeneration. The BEAT-AMD-Study. British Journal of Ophthalmology 2009;93(7):914-9.	Follow-up less than 1 year
Bolz M, Pruente C, Benesch T, Ritter M, Deak G, Golbaz I, et al. 2008 The relevance of measuring central retinal thickness during intra-vitreal therapy with ranibizumab: analyzing a multi-center clinical trial. Investigative Ophthalmology and Visual Science 49:ARVO E-abstract 5576.	Intervention (dosing study); method of allocation not clear
CLEAR-AMD1 Nguyen QD, Shah SM, Hafiz G, Quinlan E, Sung J, Chu K, et al. A phase I trial of an IV-administered vascular endothelial growth factor trap for treatment in patients with choroidal neovascularization due to age-related macular degeneration. Ophthalmology 2006;113(9):1522.e1-14.	Study administered aflibercept and placebo via an intravenous injection. This method of administration is not used in clinical practice
Cohen SY, Bremond-Gignac D, Quentel G, Mimoun G, Citterio T, Bisot-Locard S, et al. 2008 Cost-effectiveness sequential modeling of ranibizumab versus usual care in age-related macular degeneration. Graefe's Archive for Clinical and Experimental Ophthalmology 246(11):1527-34.	Not a RCT
Costagliola C, Romano MR, Rinaldi M, dell'Omo R, Chiosi F, Menzione M, Semeraro F. 2010 Low fluence rate photodynamic therapy combined with intravitreal bevacizumab for neovascular age-related macular degeneration. British Journal of Ophthalmology 94(2):180-4.	Combination therapy
Earnshaw SR, Moride Y, Rochon S. 2007 Cost-effectiveness of pegaptanib compared to photodynamic therapy with verteporfin and to standard care in the treatment of subfoveal wet age-related macular degeneration in Canada. Clinical Therapeutics 29(9):2096-106.	Not a RCT
Elshout M, van de Reis MI, Webers CA, Schouten JS. 2014 The cost-utility of aflibercept for the treatment of age-related macular degeneration compared to bevacizumab and ranibizumab and the influence of model parameters. Graefe's Archive for Clinical and Experimental Ophthalmology;252(12):1911-20.	Not a randomized controlled trial; uses data from other trials to create a cost-utility model comparing aflibercept vs other AMD drugs
Erdokur O, Tetikoglu M, Ozturk M, Elcioglu M. 2009 Results of comparison in use to alternative therapy methods for subfoveal	Not a RCT

Study	Reason for exclusion
choroidal neovascularization secondary to age-related macular degeneration. Retina-Vitreus 17(4):245-50.	
EXTEND-I 2009Tano Y. The safety and efficacy of ranibizumab in Japanese patients with subfoveal choroidal neovascularization secondary to age-related macular degeneration: 12-month results from the phase I/II EXTEND-I study. Investigative Ophthalmology and Visual Science 2008;49	Intervention (dosing)
Eyetech study 2003 Eyetech Study Group. Anti-vascular endothelial growth factor therapy for subfoveal choroidal neovascularization secondary to age-related macular degeneration: phase II study results. Ophthalmology 110(5):979-86.	Not a RCT
Falkenstein IA, Cheng L, Morrison VL, Kozak I, Tammewar AM, Freeman WR. 2007 Standardized visual acuity results associated with primary versus secondary bevacizumab (Avastin®) treatment for choroidal neovascularization in age-related macular degeneration. Retina 27(6):701-6.	Not a RCT
Fletcher EC, Lade RJ, Adewoyin T, Chong NV. 2008 Computerized model of cost-utility analysis for treatment of age-related macular degeneration. Ophthalmology 115(12):2192-8.	Not a RCT
FOCUS 2006 Heier JS, Boyer DS, Ciulla TA, Ferrone PJ, Jumber MJ, Gentile RC, et al. Ranibizumab combined with verteporfin photodynamic therapy in neovascular age-related macular degeneration: year 1 results of the FOCUS study. Archives of Ophthalmology 2006;124(11):1532-42.	Combination therapy
Hahn R, Sacu S, Michels S, Varga A, Weigert G, Geitzenauer W, et al. 2007 Intravitreal bevacizumab versus verteporfin and intravitreal triamcinolone acetonide in patients with neovascular age-related macula degeneration. Der Ophthalmologe 104(7):588-93.	Follow-up less than 1 year
Hatta Y, Ishikawa K, Nishihara H, Ozawa S, Ito Y, Terasaki H. 2010 Effect of photodynamic therapy alone or combined with posterior subtenon triamcinolone acetonide or intravitreal bevacizumab on choroidal hypofluorescence by indocyanine green angiography. Retina 30(3):495-502.	Not a RCT
Heier JS, Antoszyk AN, Pavan PR, Leff SR, Rosenfeld PJ, Ciulla TA, et al. 2006 Ranibizumab for treatment of neovascular age-related macular degeneration: a phase I/II multicenter, controlled, multidose study. Ophthalmology 113(4):642. e1-4	Follow-up less than 1 year

Study	Reason for exclusion
Hernandez-Pastor LJ, Ortega A, Garcia-Layana A, Giraldez J. 2008 Cost-effectiveness of ranibizumab compared with photodynamic treatment of neovascular age-related macular degeneration. Clinical Therapeutics 30(12):2436-51.	Not a RCT
Hernandez-Pastor LJ, Ortega A, Garcia-Layana A, Giraldez J. 2010 Cost-effectiveness of ranibizumab compared with pegaptanib in neovascular age-related macular degeneration. Investigative Ophthalmology and Visual Science 248(4):467-76.	Not a RCT
Javitt JC, Zlateva GP, Earnshaw SR, Pleil AM, Graham CN, Brogan AJ, et al. 2008 Cost-effectiveness model for neovascular age-related macular degeneration: comparing early and late treatment with pegaptanib sodium based on visual acuity. Value in Health 11(4):563-74.	Not a RCT
Lai TY, Liu DT, Chan KP, Luk FO, Pang CP, Lam DS. 2009 Visual outcomes and growth factor changes of two dosages of intravitreal bevacizumab for neovascular age-related macular degeneration: a randomized, controlled trial. Retina 29(9):1218-26.	Intervention (dosing)
Lazic R, Gabric N. 2007 Verteporfin therapy and intravitreal bevacizumab combined and alone in choroidal neovascularization due to age-related macular degeneration. Ophthalmology 114(6):1179-85.	Follow-up less than 1 year
Li X, Hu Y, Sun X, Zhang J, Zhang M, 2012 Neovascular Age-Related Macular Degeneration Treatment Trial Using Bevacizumab (NATTB). Bevacizumab for neovascular age-related macular degeneration in China. Ophthalmology 119(10):2087-93.	Intervention (doing)
Li J, Zhang H, Sun P, Gu F, Liu ZL. 2013 Bevacizumab vs ranibizumab for neovascular age-related macular degeneration in Chinese patients. International Journal of Ophthalmology 6(2):169-73.	Not a RCT
Matthe E, Sandner D. 2011 Monotherapy of exudative age-related macular degeneration with ranibizumab in patients at cardiovascular risk. Advantages of ranibizumab compared to a combination with pegaptanib. Der Ophthalmologe 108(4):337-41.	Not a RCT
MIRA-1 2005Pulido JS, Sanders D, Klingel R. Rheopheresis for age-related macular degeneration: clinical results and putative mechanism of action. Canadian Journal of Ophthalmology 2005;40(3):332-40	Study population (not people with neovascular AMD)
Modarres M, Naseripour M, Falavarjani KG, Nikeghbali A, Hashemi M, Parvaresh MM.	Intervention (dosing)

Study	Reason for exclusion
2009 Intravitreal injection of 2.5 mg versus 1.25 mg bevacizumab (Avastin®) for treatment of CNV associated with AMD. Retina 29(3):319-24.	
Neubauer AS, Holz FG, Schrader W, Back EI, Kuhn T, Hirneiss C, et al.2007 Cost-utility analysis of ranibizumab (Lucentis®) in neovascular macular degeneration. Klinische Monatsblatter fur Augenheilkunde 224(9):727-32.	Not a RCT
Nguyen QD, Shah SM, Hafiz G, Quinlan E, Sung J, Chu K, et al. 2006 A phase I trial of an IV-administered vascular endothelial growth factor trap for treatment in patients with choroidal neovascularization due to age-related macular degeneration. Ophthalmology 113(9):1522.	Follow-up less than 1 year
Nowak MS, Jurowski P, Grzybowski A, Goś R, Pastuszka M, Kapica A, et al. 2012 A prospective study on different methods for the treatment of choroidal neovascularization. The efficacy of verteporfin photodynamic therapy, intravitreal bevacizumab and transpupillary thermotherapy in patients with neovascular age-related macular degeneration. Medical Science Monitor 18(6):CR374-80.	Not a RCT
Parodi MB, Cascavilla M, Papayannis A, Kontadakis DS, Bandello F, Iacono P. 2012 Intravitreal bevacizumab in advanced-stage neovascular age-related macular degeneration with visual acuity lower than 20/200. Archives of Ophthalmology 130(7):934-5.	Follow-up less than 1 year
PERSPECTIVES 2012 Chakravarthy U, Staurenghi G, Kwok K, Tressler CS, Buggage R; PERSPECTIVES Study Group. Treating early choroidal neovascularisation with pegaptanib sodium in patients with neovascular age-related macular degeneration: findings of the PERSPECTIVES study. British Journal of Ophthalmology 2012;96(10):1351-4.	Not a RCT
Raftery J, Clegg A, Jones J, Tan SC, Lotery A. 2007 Ranibizumab (Lucentis®) versus bevacizumab (Avastin®): modelling cost effectiveness. British Journal of Ophthalmology 91(9):1244-6.	Not a RCT
SAILOR 2009 Boyer DS, Heier JS, Brown DM, Francom SF, Ianchulev T, Rubio RG. A Phase IIIb study to evaluate the safety of ranibizumab in subjects with neovascular age-related macular degeneration. Ophthalmology 2009;116(9):1731-9.	Intervention (dosing)
Schmid-Kubista KE, Krebs I, Ansari-Shahrezaei S, Haas P, Hagen S, Binder S.	Follow-up less than 1 year

Study	Reason for exclusion
2011 Comparing treatment of neovascular age-related macular degeneration with sequential intravitreal Avastin and Macugen versus intravitreal mono-therapy-a pilot study. Current Eye Research 36(10):958-63.	
SUMMIT 2007 Slakter JS; DENALI Study Group. Combination therapy with verteporfin PDT and ranibizumab for subfoveal choroidal neovascularization due to AMD. Investigative Ophthalmology and Visual Science 2007;48:E-Abstract 1817.	Combination therapy
Suñer IJ, Kokame GT, Yu E, Ward J, Dolan C, Bressler NM. 2009 Responsiveness of NEI VFQ-25 to changes in visual acuity in neovascular AMD: validation studies from two phase 3 clinical trials. Investigative Ophthalmology and Visual Science50(8):3629-35.	Not a RCT
Tano Y, 2008 Pegaptanib Sodium Multi-center Study Group. Pegaptanib sodium one-year treatment study for neovascular age-related macular degeneration. Nippon Ganka Gakkai Zasshi 112(7):590-600.	Intervention (doing)
Vallance JH, Johnson B, Majid MA, Banerjee S, Mandal K, Bailey CC. 2010 A randomised prospective double-masked exploratory study comparing combination photodynamic treatment and intravitreal ranibizumab vs intravitreal ranibizumab monotherapy in the treatment of neovascular age-related macular degeneration. Eye 24(10):1561-7.	Combination therapy
VERITAS 2006 Mieler WF; The VERITAS trial. VERITAS - The rationale and design of a combination therapy trial for wet AMD. Investigative Ophthalmology & Visual Science 2006;47:E-Abstract 5232.	Combination therapy
ViSION 2014 Jackson T L Goldbaum M. 2014 retinal vascular abnormalities in neovascular age-related macular degeneration. Retina 34(3): 568-75.	Pegaptanib
Wolowacz SE, Roskell N, Kelly S, Maciver FM, Brand CS. 2007 Cost effectiveness of pegaptanib for the treatment of age-related macular degeneration in the UK. Pharmacoeconomics 25(10):863-79.	Not a RCT
Yoshida I, Shiba T, Taniquchi H, Takahashi M, Murano T, Hiruta N, et al. 2014 Evaluation of plasma vascular endothelial growth factor levels after intravitreal injection of ranibizumab and aflibercept for exudative age-related macular degeneration. Graefe's Archive for Clinical and Experimental Ophthalmology 252(9):1483-9.	Not a RCT

Study	Reason for exclusion
Zehetner C, Kirchmair R, Huber S, Kralinger MT, Kieselbach GF. 2013 Plasma levels of vascular endothelial growth factor before and after intravitreal injection of bevacizumab, ranibizumab and pegaptanib in patients with age-related macular degeneration, and in patients with diabetic macular oedema. British Journal of Ophthalmology 97(4):454-9.	Follow-up less than 1 year
Zehetner C, Kralinger MT, Modi YS, Waltl I, Ulmer H, Kirchmair R, et al. 2015 Systemic levels of vascular endothelial growth factor before and after intravitreal injection of aflibercept or ranibizumab in patients with age-related macular degeneration: a randomised, prospective trial. Acta Ophthalmologica 93(2):e154-9.	Included participants who had been previously treated with other anti-VEGF medications (not treatment-naive); reported only outcomes for 4 weeks
Zinkernagel MS, Schorno P, Ebneter A, Wolf S. 2015 Scleral thinning after repeated intravitreal injections of antivascular endothelial growth factor agents in the same quadrant. Investigative Ophthalmology & Visual Science 56(3):1894-900.	Not a RCT

1 **Excluded studies for treatment frequency**

Study	Reason for exclusion
Sarraf D, Chan C, Rahimy E, Abraham P. 2013 Prospective evaluation of the incidence and risk factors for the Development of RPE after High- and Low-dse rainibizumab therapy. Retina 33 (8): 1551-1557.	Outcome (the incidence and risk factors for retinal pigment epithelial (RPE) tears in eyes with vascularized pigment epithelial detachments (PED) and exudative age-related macular degeneration receiving antivascular endothelial growth factor therapy)
SAVE 2013 Wykoff C, Brown D et al SAVE (super-dose anti-VEGF) trial: 2.0mg ranibizumab for recalcitrant neovascular age-related macular degeneration: 1-year results. Ophthalmic Surg Lasers Imaging Retina 44: 121-26.	Study population (not treatment naïve)

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F.5.2 Treatment in people presenting with visual acuity better than 6/12 or people presenting with visual acuity worse than 6/96

RQ10: What is the effectiveness of treatment of neovascular AMD in people presenting with visual acuity better than 6/12?

RQ25: What is the effectiveness of treatment of neovascular AMD in people presenting with visual acuity worse than 6/96?

Study	Reason for exclusion
Axer-Siegel (2012) Intravitreal bevacizumab treatment for exudative age-related macular degeneration with good visual acuity	No comparison data
Bloch (2013) Predictors of 1-year visual outcome in neovascular age-related macular degeneration following intravitreal ranibizumab treatment	Predictor factor for VA following ranibizumab
Boyer (2007) Subgroup analysis of the MARINA study of ranibizumab in neovascular age-related macular degeneration	Visual acuity threshold VA 20/50 or better (6/15) 20/160 or worse (6/48)
Brown (2006)Subgroup Analysis of First-Year Results of ANCHOR: A Phase III, Double-Masked, Randomized Comparison of Ranibizumab and Verteporfin Photodynamic Therapy for Predominantly Classic Choroidal Neovascularization Related to Age-Related Macular Degeneration	Abstract
Chae (2015)Baseline predictors for good versus poor visual outcomes in the treatment of neovascular age-related macular degeneration with intravitreal anti-VEGF therapy	Visual acuity threshold VA 6/18 or better VA 6/60 or worse
Chang (2014)Intravitreal anti-vascular endothelial growth factor for typical exudative age-related macular degeneration in eyes with good baseline visual acuity	No comparison
Chhablani (2013)Predictors of visual outcome in eyes with choroidal neovascularization secondary to age related macular degeneration treated with intravitreal bevacizumab monotherapy	VA of study population were 20/200 or worse
Cimbalas (2012)Simultaneous and separate time bilateral intravitreal injection for patients with neovascular AMD and poor baseline visual acuity	Abstract
Comparison (2016)Five-Year Outcomes with Anti-Vascular Endothelial Growth Factor Treatment of Neovascular Age-Related Macular Degeneration: The Comparison of Age-Related Macular Degeneration Treatments Trials	VA threshold Inclusion criteria: VA 20/25 and 20/320
Cvetkova (2016)Ranibizumab in neovascular age-related macular degeneration: a 5-year follow-up	VA threshold no defined VA for study population
Ehrlich (2008)Outcome of bevacizumab (Avastin) injection in patients with age-related macular degeneration and low visual acuity	Study population (67% had previous PDT treatment)
El Matri (2012)Bevacizumab injection in patients with age-related macular degeneration associated with poor initial visual acuity	VA threshold VA 20/200 or worse (6/60)
Finger (2014)Predictors of anti-VEGF treatment response in neovascular age-related macular degeneration	Not systematic review

Study	Reason for exclusion
Galbinur (2009)Intravitreal bevacizumab therapy for neovascular age-related macular degeneration associated with poor initial visual acuity	VA threshold VA 6/60-6/96
Gupta (2008)Ranibizumab for predominantly classic neovascular age-related macular degeneration: Subgroup analysis of first-year anchor results	VA threshold no VA threshold
Hikichi (2013)Factors predictive of outcomes 1 year after 3 monthly ranibizumab injections and as-needed reinjections for polypoidal choroidal vasculopathy in Japanese patients	VA threshold no VA threshold
Hikichi (2015)Prognostic factors of 2-year outcomes of ranibizumab therapy for polypoidal choroidal vasculopathy	VA threshold no defined VA for study population
Holz (2016)Determinants of visual acuity outcomes in eyes with neovascular AMD treated with anti-VEGF agents: an instrumental variable analysis of the AURA study	VA threshold no defined VA for study population
Jonas (2011)Bilateral intravitreal bevacizumab injection for exudative age-related macular degeneration: effect of baseline visual acuity	VA threshold no VA threshold (within 6/12 to 6/69)
Kaiser (2006)Subgroups Analyses of One-Year Results of the PIER Study of Ranibizumab in Neovascular AMD	Data are pending
Kaiser (2007)Ranibizumab for predominantly classic neovascular age-related macular degeneration: subgroup analysis of first-year ANCHOR results	VA threshold VA within 20/63 and 20/250 (6/19 and 6/100)
Kang (2009)One-year results of intravitreal ranibizumab for neovascular age-related macular degeneration and clinical responses of various subgroups	VA threshold VA threshold out-with 6/12 and 6/96
Kato (2015)Intravitreal ranibizumab for patients with neovascular age-related macular degeneration with good baseline visual acuity	Non-comparator
Keenan (2013)Incidence and baseline clinical characteristics of treated neovascular age-related macular degeneration in a well-defined region of the UK	Incidence and baseline clinical characteristics of patients with neovascular age-related macular degeneration (namd) treated with intravitreal anti-vascular endothelial growth factor (VEGF) injections
Kikushima (2016)Factors Predictive of Visual Outcome 1 Year After Intravitreal Aflibercept Injection for Typical Neovascular Age-Related Macular Degeneration	VA threshold no defined VA for study population
Kim (2015)Treatment outcomes in eyes with polypoidal choroidal vasculopathy with poor baseline visual acuity	VA threshold VA inclusion (VA 6/60 or worse)
Koch (2015)Intravitreal treatment in patients with exudative age-related macular degeneration and visual acuity<0.05	VA threshold VA <0.05 (6/7)
Krebs (2013)Non-responders to treatment with antagonists of vascular endothelial growth factor in age-related macular degeneration	The frequency of non-responders to anti-vascular endothelial growth factor (anti-VEGF) treatment

Study	Reason for exclusion
Lee A (2016) UK AMD EMR USERS GROUP REPORT V: benefits of initiating ranibizumab therapy for neovascular AMD in eyes with vision better than 6/12	No data reported on VA outcomes or VA changes
Ma (2015)Predictors of visual and anatomical outcomes for neovascular age-related macular degeneration treated with bevacizumab	VA threshold baseline VA 6/60
Menghini (2010)Response to ranibizumab therapy in neovascular AMD - an evaluation of good and bad responders	VA threshold VA 25 letter or more VA 70 letters or worse
Mones (2012)FUSION regimen: ranibizumab in treatment-naive patients with exudative age-related macular degeneration and relatively good baseline visual acuity	No comparison
Mori (2013)Treatment results at 1 year of ranibizumab therapy for polypoidal choroidal vasculopathy in eyes with good visual acuity	Non-comparison
Ozkaya (2014)Intravitreal ranibizumab for neovascular age-related macular degeneration patients with good baseline visual acuity and the predictive factors for visual outcomes	Case series (no comparator other VA group)
Parodi (2012)Intravitreal bevacizumab in advanced-stage neovascular age-related macular degeneration with visual acuity lower than 20/200	VA threshold visual acuity lower than 20/200
Rahimy (2016)Treatment Outcomes for Neovascular Age-Related Macular Degeneration Patients with Initial Vision Better Than 20/40 Using a Treat-and-Extend Regimen	Non-comparison
Raja (2010)Ranibizumab treatment for neovascular age-related macular degeneration in patients with good baseline visual acuity (better than 6/12): 12-month outcomes	Non-comparison (retrospective case)
Rasmussen (2013)A 4-year longitudinal study of 555 patients treated with ranibizumab for neovascular age-related macular degeneration	Outcomes not reported stratified by baseline VA
Razi (2016)Three-year follow-up of ranibizumab treatment of wet age-related macular degeneration: influence of baseline visual acuity and injection frequency on visual outcomes	Target group with VA 35 letter or less (6/60) VA 55 or more (6/24)
Reichel (2006)Subgroup Analyses of Two-Year Results of MARINA Study of Ranibizumab in Neovascular AMD	Target group with VA not met inclusion criteria
Rush (2014)Treat-and-extend bevacizumab for neovascular age-related macular degeneration: the importance of baseline characteristics	VA threshold 6/7.5 to 6/60
Saito (2012)Intravitreal ranibizumab for exudative age-related macular degeneration with good baseline visual acuity	Non-comparison
Sarensen (2011)Ranibizumab treatment in patients with neovascular age-related macular degeneration and very low vision	VA threshold VA 20/230 or worse (6/70)
Shona (2011)Visual acuity outcomes in ranibizumab-treated neovascular age-related macular degeneration; stratified by baseline vision	Target group with VA outside inclusion crtieria

Study	Reason for exclusion
Singh (2009)Predictive factors of visual and anatomical outcome after intravitreal bevacizumab treatment of neovascular age-related macular degeneration: an optical coherence tomography study	VA threshold VA 6/55 at baseline (average) divided based on 6/30 threshold
Takahashi (2010)Intravitreal bevacizumab for age-related macular degeneration with good visual acuity	Target group with VA 6/24 or better
Talks (2016) First-Year Visual Acuity Outcomes of Providing Aflibercept According to the VIEW Study Protocol for Age-Related Macular Degeneration	No measures of dispersion (e.g. standard deviation) reported for VA changes.
Wells (2016)Association of Baseline Visual Acuity and Retinal Thickness With 1-Year Efficacy of Aflibercept, Bevacizumab, and Ranibizumab for Diabetic Macular Edema	Diabetic macular edema
Wolf (2011)Outcomes following three-line vision loss during treatment of neovascular age-related macular degeneration: subgroup analyses from MARINA and ANCHOR	Target group with no defined for study population
Ying (2015)Association of Baseline Characteristics and Early Vision Response with 2-Year Vision Outcomes in the Comparison of AMD Treatments Trials (CATT)	Treatment response
Zweifel (2012)The effect of fellow eye visual acuity on visual acuity of study eyes receiving ranibizumab for age-related macular degeneration	Extremes in visual acuity (very good or very poor) of the fellow eye (FE) influence visual acuity of the study eye

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F.5.31 Adjunctive therapies

2 RQ13: What is the effectiveness of adjunctive therapies for the treatment of late AMD (wet
3 active)?

Study	Reason for exclusion
Ahmadieh H, Homayouni M, and Taei R. 2007. Combined Photodynamic Therapy and Intravitreal Bevacizumab With or Without Triamcinolone for Retinal Angiomatous Proliferation. American Academy of Ophthalmology :261	Reference not available
Ahmadieh H, Taei R, Soheilian M, Esfahani M R, Karkhaneh R, Lashay A R. R, and Yaseri M. 2007. Combined Single-Session Photodynamic Therapy and Intravitreal Bevacizumab With or Without Triamcinolone in Neovascular AMD: A Randomized Clinical Trial. American Academy of Ophthalmology: 261.	Reference not available
Antoszyk A N, Tuomi L, Chung C Y, Singh A, and Group Focus Study. 2008. Ranibizumab combined with verteporfin photodynamic therapy in neovascular age-related macular degeneration (FOCUS): year 2 results. American Journal of Ophthalmology 145:862-74.	Comparator (PDT alone)
Arias L, Garcia-Arumi J, Ramon J M, Badia M, Rubio M, and Pujol O. 2006. "Photodynamic therapy with intravitreal triamcinolone in predominantly classic choroidal neovascularization: one-year results of a randomized study. Ophthalmology 113:2243-50.	Comparator (PDT alone)
Arias L, Garcia-Arumi J, Ramon J M, Badia M, Rubio M, and Pujol O. 2008. Optical coherence tomography analysis of a randomized study combining photodynamic therapy with intravitreal triamcinolone. Graefes Archive for Clinical & Experimental Ophthalmology 246:245-54.	Comparator (PDT alone)
Arnold Jennifer J. 2016. Age-related macular degeneration: anti-vascular endothelial growth factor treatment. Clinical Evidence.	Reference not available
Augustin A J, and Offermann I. 2007. "Combination therapy for choroidal neovascularisation". Drugs & Aging 24:979-90.	non-systematic review
Autrata R, Krejcírová I, Senková K, Holouová M, Dole?el Z, and Borek I. 2012. Intravitreal pegaptanib combined with diode laser therapy for stage 3+ retinopathy of prematurity in zone I and posterior zone II. European journal of ophthalmology 22:687-94.	Study population aged under 18 years
Ba J, Peng R S, Xu D, Li Y H, Shi H, Wang Q, and Yu J. 2015. "Intravitreal anti-VEGF injections for treating wet age-related macular degeneration: A systematic review and meta-analysis". Drug Design, and Development and Therapy 9:5397-5405.	No new addition evidence
Bradley J, Ju M, and Robinson G S. 2007. Combination therapy for the treatment of ocular neovascularization. Angiogenesis 10:141-8.	Not RCT

Study	Reason for exclusion
Braun B C, Schneider U, Henrich B, Hatz K, Fuchsjäger-Mayrl G, and Pruente C. 2008. Evaluation of Re-Treatment Indications in a Randomized, Double-masked, Phase IIIb-Study Comparing Lucentis® Monotherapy versus PDT Combined With Lucentis® in Patients With Subfoveal Choroidal Neovascularisation. Iovs: ARVO E- abstract 1172.	Abstract
Bunse A, Frimpong-Boateng A, and Roider J. 2005. "Photodynamic Therapy Combined With Intravitreal Triamcinolone: A Comparison of Triamcinolone-Application Before and After PDT". Iovs 46:ARVO E-abstract 3569.	Abstract
Chan W M, Lai T Y, Wong A L, Tong J P, Liu D T, and Lam D S. 2006. "Combined photodynamic therapy and intravitreal triamcinolone injection for the treatment of subfoveal choroidal neovascularisation in age related macular degeneration: a comparative study". British Journal of Ophthalmology 90:337-41.	Not RCT
Chaudhary V, Mao A, Hooper P L, and Sheidow T. 2005. The Effect of Triamcinolone Acetonide as an Adjunctive Treatment to Verteporfin Therapy in Neovascular Age-Related Macular Degeneration: A Prospective, Randomized, Placebo Controlled Pilot Clinical Trial. Iovs 46:ARVO E-abstract 2308.	Abstract
Chaudhary V, Mao A, Hooper P L, and Sheidow T G. 2007. Triamcinolone acetonide as adjunctive treatment to verteporfin in neovascular age-related macular degeneration: a prospective randomized trial. Ophthalmology 114:2183-9.	Comparator (PDT alone)
Chen Y X, Tian R, Wang E Q, and Wang J. 2013. Efficacy evaluation of photodynamic therapy and intravitreal anti-vegf injection for polypoidal choroidal vasculopathy: systematic review (Provisional abstract). Database of Abstracts of Reviews of Effects:1094-1103.	Language (Chinese)
Costa R A, Jorge R, Calucci D, Melo L A, Jr , Cardillo J A, and Scott I U. 2007. "Intravitreal bevacizumab (Avastin) in combination with verteporfin photodynamic therapy for choroidal neovascularization associated with age-related macular degeneration (IBeVe Study)". Graefes Archive for Clinical & Experimental Ophthalmology 245:1273-80.	Not RCT
Costagliola C, Romano M R, Rinaldi M, dell'Omo R, Chiosi F, Menzione M, and Semeraro F. 2010. "Low fluence rate photodynamic therapy combined with intravitreal bevacizumab for neovascular age-related macular degeneration". British Journal of Ophthalmology 94:180-4.	Comparator (different fluence rate PDT)
Das R A, Romano A, Chiosi F, Menzione M, and Rinaldi M. 2011. Combined treatment modalities for age related macular degeneration". Current Drug Targets 12:182-9.	Not RCT

Study	Reason for exclusion
Dunavoelgyi R, Sacu S, Weigert G, Pruente C, and Schmidt-Erfurth U. 2008. "Long-Term Results of Reduced Fluence versus Standard Fluence Photodynamic Therapy in Combination With Intravitreal Triamcinolone Acetonide". Iovs:ARVO E- abstract 554.	Abstract
Dunavoelgyi R, Sacu S, Simader C, Pruente C, and Schmidt-Erfurth U. 2011. "Changes in macular sensitivity after reduced fluence photodynamic therapy combined with intravitreal triamcinolone". Acta Opthalmologica 89:166-71.	Comparator (different fluence rate PDT)
Euctr H U. 2014. A randomized, double-masked, sham-controlled phase 3b/4 study of the efficacy, safety, and tolerability of intravitreal aflibercept monotherapy compared to aflibercept with adjunctive photodynamic therapy as indicated in subjects with polypoidal choroidal vasculopathy (PLANET)- Aflibercept in polypoidal choroidal vasculopathy. EUCTR [www.clinicaltrialsregister.eu].	On-going trial
Gamulescu M A, Schubert K, Thormann S, Attaran M, Dueck N, Wiechens B, Spital G, Stroux A, and Wachtlin J. 2009. "ITAP 6-month results of a prospective, randomised phase 3 study for evaluation of the combination therapy of PDT and intravitreal triamcinolone in exudative AMD. [German]". Klinische Monatsblatter fur Augenheilkunde 226:60-5.	Language (German)
Hahn R, Sacu S, Michels S, Varga A, Weigert G, Geitzenauer W, Vécsei-Marlovits P, and Schmidt-Erfurth U. 2007. "[Intravitreal bevacizumab versus verteporfin and intravitreal triamcinolone acetonide in patients with neovascular age-related macula degeneration]". Der Ophthalmologe: Zeitschrift der Deutschen Ophthalmologischen Gesellschaft 104:588-93.	Language (German)
Hatta Y, Ishikawa K, Nishihara H, Ozawa S, Ito Y, and Terasaki H. 2010. "Effect of photodynamic therapy alone or combined with posterior subtenon triamcinolone acetonide or intravitreal bevacizumab on choroidal hypofluorescence by indocyanine green angiography". Retina 30:495-502.	Comparator (PDT alone)
Hatz K B, Schneider U, Sacu S, Henrich B, Braun B, Fuchsjaeger G, and Pruente C F. 2008. "Randomized Double-Masked Study Comparing Ranibzumab Monotherapy and PDT Combined With Ranibizumab in Patients With Exudative AMD: BCVA and Morphological Results". Iovs: ARVO E-abstract 1170.	Abstract
Heier J S, Boyer D S, Ciulla T A, Ferrone P J, Jumper J M, Gentile R C, Kotlovker D, Chung C Y, and Kim R Y. 2006. "Ranibizumab combined with verteporfin photodynamic therapy in neovascular age-related macular degeneration: Year 1 results of the FOCUS study". Archives of Ophthalmology 124:1532-1542.	Comparator (PDT alone)

Study	Reason for exclusion
Hussain N, Das T, Rawal H, Kallukuri S B, Ram L S. M, and Khanna R. 2006. "Combination therapy of intravitreal triamcinolone and photodynamic therapy with verteporfin for subfoveal choroidal neovascularization". Indian journal of ophthalmology 54:247-50.	Comparator (PDT alone)
Jabbour N M, and Odom J V. 2008. "Comparison of Treatment Using Intravitreal Ranibizumab Alone With Combination Treatment Using Intravitreal Ranibizumab and Verteporfin Photodynamic Therapy in Neovascular Age-Related Macular Degeneration". Iovs; ARVO E- abstract 560.	Abstract
Kaiser P K. 2007. "Verteporfin photodynamic therapy and anti-angiogenic drugs: potential for combination therapy in exudative age-related macular degeneration". Current Medical Research & Opinion 23:477-87.	Non-systematic review
Kaiser P K. 2007. "Verteporfin Therapy in Combination With Pegaptanib or Triamcinolone for Wet AMD: 6-Month Results of the VERITAS Trial". Iovs 48:ARVO E-Abstract 2870.	Abstract
Lai T Y. Y, Lee G K. Y, Luk F O. J, and Lam D S. C. 2011. "Intravitreal ranibizumab with or without photodynamic therapy for the treatment of symptomatic polypoidal choroidal vasculopathy". Retina (Philadelphia, and Pa.) 31:1581-8.	Not RCT
Lanzetta P. 2007. "Combination Intravitreal Ranibizumab 0.5mg and Verteporfin PDT versus Verteporfin PDT Alone in the FOCUS Study of Neovascular Age-Related Macular Degeneration (AMD)". Iovs 48:ARVO E-Abstract 2869.	Abstract
Lee M Y, Lee W K, Baek J, Kwon O W, and Lee J H. 2013. "Photodynamic therapy versus combination therapy in polypoidal choroidal vasculopathy: changes of aqueous vascular endothelial growth factor". American Journal of Ophthalmology 156:343-8.	Comparator (PDT alone)
Lee M Y, and Lee W K. 2014. "Photodynamic therapy versus combination therapy in polypoidal choroidal vasculopathy: Changes of aqueous vascular endothelial growth factor". Ophthalmologica 232:1.	Comparator (PDT alone)
Maberley D, Canadian Retinal Trials, and Group. 2009. "Photodynamic therapy and intravitreal triamcinolone for neovascular age-related macular degeneration: a randomized clinical trial". Ophthalmology 116:2149-57.e1.	Comparator (PDT alone)
Michels S M, Weigert G, Geitzenauer W, Sacu S, Alina V, and Schmidt-Erfurth U. 2007. "Intravitreal Bevacizumab (Avastin®) Therapy versus Verteporfin Therapy and Intravitreal Triamcinolone for Neovascular Age-Related Macular Degeneration". Iovs 48:ARVO E-Abstract 1820.	Abstract

Study	Reason for exclusion
Mieler W F. 2006. "VERITAS - The Rationale and Design of a Combination Therapy Trial For Wet AMD". Iovs 47:ARVO E-abstract 5232.	Abstract
Mitamura Y, Kitahashi M, Okada K, Baba T, Kubota-Taniai M, and Yamamoto S. 2008. "Comparison of Intravitreal Bevacizumab to Photodynamic Therapy for Polypoidal Choroidal Vasculopathy". Iovs :ARVO E- abstract 303.	Abstract
Pachydaki S, Sobrin L, and Miller J W. 2007. "Photodynamic therapy and combination treatments". International Ophthalmology Clinics 47:95-115.	Not RCT
Piermarocchi S, Sartore M, Lo Giudice, G , Maritan V, Midena E, and Segato T. 2008. "Combination of photodynamic therapy and intraocular triamcinolone for exudative age-related macular degeneration and long-term chorioretinal macular atrophy". Archives of Ophthalmology 126:1367-74.	Comparator (PDT alone)
Potter M J, Claudio C C, and Gillies D. 2008. "Combination Photodynamic Therapy and Bevacizumab Reduces the Retreatment Rate in a Randomized, Controlled, Double-Masked Study of Low and Very Low Fluence Laser in Age-Related Macular Degeneration". Iovs :ARVO E- abstract 1169.	Abstract
Prager F, Michels S, Sacu S, Weigert G, Dunavölgyi R, Geitzenauer W, and Schmidt-Erfurth U. 2008. "Intravitreal Bevacizumab (Avastin®) Monotherapy versus Photodynamic Therapy Plus Intravitreal Triamcinolone for Neovascular Age-Related Macular Degeneration:12 Months Results of a Prospective, Randomized, Controlled Clinical Trial". Iovs :ARVO E- abstract 1168.	Abstract
Rabena M, Pieramici D, Nasir M, Castellarin A, See R, Basefsky J, and Avery R. 2008. "Standard and Low Fluence PDT in Combination With Bevacizumab in the Treatment of CNV Associated With AMD". Iovs :ARVO E- abstract 562.	Abstract
Riazi-Esfahani Mohammad, Ahmadieh Hamid, Faghihi Hooshang, Piri Niloofar, Taei Ramin, Karkhaneh Reza, Alami-Harandi Zahra, Lashay Alireza, Mirshahi Ahmad, Nili-Ahmadabadi Mehdi, Soheilian Masoud, and Sanagou Masoumeh. 2008. "Intravitreal Bevacizumab versus Combined Bevacizumab and Triamcinolone Acetonide for Neovascular Age-Related Macular Degeneration". Journal of Ophthalmic & Vision Research 3:95-101.	Unclear whether people were treatment naive
Romero R M, Monares G, Luz J C, Morales A, Padillla G, Nino-Pecina A, and Quiroz-Mercado H. 2007. "Randomized, Double Blind, Controlled Study With Verteporfin Photodynamic Therapy and Intravitreal Triamcinolone(IVTA) vs Triple Theraphy With Verteporfin Photodynamic Therapy, Intravitreal Triamcinolone and Intravitreal Ranibizumab in Patients With Subfoveal Choroidal Neovascularization(CNV) Secondary to Age-	Abstract

Study	Reason for exclusion
Related Macular Degeneration(AMD)". Iovs 48:ARVO E-Abstract 72.	
Sacu S, Varga A, Weigert G, Michels S, and Vecsei-Marlovits P. 2007. "Comparison of Reduced Fluence versus Standard Fluence Verteporfin Therapy in Combination With Intravitreal Triamcinolone Acetonide: A Prospective, Randomized, Controlled Clinical Trial". Iovs 48:ARVO E-Abstract 1831.	Abstract
Sacu S, Varga A, Michels S, Weigert G, Polak K, Vecsei-Marlovits P V, and Schmidt-Erfurth U. 2008. "Reduced fluence versus standard photodynamic therapy in combination with intravitreal triamcinolone: short-term results of a randomised study". British Journal of Ophthalmology 92:1347-51.	Comparator (different fluence rate PDT)
Sacu S, Michels S, Prager F, Weigert G, Dunavoelgyi R, Geitzenauer W, Pruente C, and Schmidt-Erfurth U. 2009. "Randomised clinical trial of intravitreal Avastin vs photodynamic therapy and intravitreal triamcinolone: long-term results". Eye 23:2223-7.	Comparator (PDT combined with steroids)
Sertoz Ayzin Deniz, Ates Orhan, Keles Sadullah, Kocer Ibrahim, Kulacoglu Destan Nil, and Baykal Orhan. 2008. "Effect of photodynamic therapy with posterior sub-tenon triamcinolone acetonide on predominantly classic choroidal neovascularization: one-year results". The Eurasian Journal of Medicine 40:103-8.	Comparator (PDT alone)
Shah A K, Mandava N, and Olson J. 2006. "Three-Way Comparison of Photodynamic Therapy With and Without Adjunctive Subtenon's or Intravitreal Triamcinolone Acetonide in the Treatment of Choroidal Neovascularization Associated With Age-Related Macular Degeneration". Iovs 47:ARVO E-abstract 362.	Abstract
Si Jun-Kang, Tang Kai, Bi Hong-Sheng, Guo Da-Dong, Guo Jun-Guo, Du Yu-Xiang, Cui Yan, Pan Xue-Mei, Wen Ying, and Wang Xing-Rong. 2014. "Combination of ranibizumab with photodynamic therapy vs ranibizumab monotherapy in the treatment of age-related macular degeneration: a systematic review and meta-analysis of randomized controlled trials". International Journal of Ophthalmology 7:541-9.	No new additional evidence
Sivaprasad S, Patra S, DaCosta J, Adewoyin T, Shona O, Pearce E, and Chong N V. 2011. "A pilot study on the combination treatment of reduced-fluence photodynamic therapy, intravitreal ranibizumab, intravitreal dexamethasone and oral minocycline for neovascular age-related macular degeneration". Ophthalmologica 225:200-6.	Comparator (combined therapies)
Slakter J S, Sorenson J A, Spaide R F, and Freund K B. 2004. "Evaluation of the safety and efficacy of Anecortave Acetate 15 mg for Depot Suspension and triamcinolone acetate 4mg or a combination of both in patients with exudative age-related macular	Abstract

Study	Reason for exclusion
degeneration (AMD)". Iovs 45:ARVO E-abstract 1927.	
Spielberg L, and Leys A. 2010. "Treatment of neovascular age-related macular degeneration with a variable ranibizumab dosing regimen and one-time reduced-fluence photodynamic therapy: the TORPEDO trial at 2 years". Graefes Archive for Clinical & Experimental Ophthalmology 248:943-56.	Comparator (variable anti-VEGF dosing)
Tang Kai, Si Jun-Kang, Guo Da-Dong, Cui Yan, Du Yu-Xiang, Pan Xue-Mei, and Bi Hong-Sheng. 2015. "Ranibizumab alone or in combination with photodynamic therapy vs photodynamic therapy for polypoidal choroidal vasculopathy: a systematic review and Meta-analysis". International Journal of Ophthalmology 8:1056-66.	Comparator (PDT alone)
Tsuchiya D, Yamamoto T, Saito K, and Yamashita H. 2008. "Comparison of Photodynamic Therapy With Verteporfin Combined With Posterior Juxtascleral Triamcinolone Acetonide and Photodynamic Therapy Alone for Age-Related Macular Degeneration". Iovs :ARVO E- abstract 270.	Abstract
Wang W, He M, and Zhang X. 2014. "Combined intravitreal anti-VEGF and photodynamic therapy versus photodynamic monotherapy for polypoidal choroidal vasculopathy: a systematic review and meta-analysis of comparative studies". PLoS ONE [Electronic Resource] 9:e110667.	Comparator (PDT alone)
Weigert G, Michels S, Sacu S, Varga A, Prager F, Geitzenauer W, and Schmidt-Erfurth U. 2008. "Intravitreal bevacizumab (Avastin) therapy versus photodynamic therapy plus intravitreal triamcinolone for neovascular age-related macular degeneration: 6-month results of a prospective, randomised, controlled clinical study". British Journal of Ophthalmology 92:356-60.	Comparator (PDT with steroids)

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F.5.41 Switching and stopping antiangiogenic treatment for late AMD (wet)

2 RQ11: What are the indicators for treatment failing and switching?

3 RQ14: What factors indicate that treatment for neovascular AMD should be stopped?

4 RQ15: What is the effectiveness of switching therapies for neovascular AMD if the first-line
5 therapy is contraindicated or has failed?

6 This review was undertaken by the National Clinical Guideline team.

Reference	Exclusion reason
Aslankurt M, Aslan L, Aksoy A, Erden B, Cekic O. The results of switching between 2 anti-VEGF drugs, bevacizumab and ranibizumab, in the treatment of neovascular age-related macular degeneration. European Journal of Ophthalmology. 2013; 23(4):553-557	Not review population
Broadhead GK, Hong T, Wijeyakumar W, Li H, Schlub T, Zhu M et al. Changes in retinal morphology following intravitreal aflibercept for treatment resistant age-related macular degeneration. Clinical and Experimental Ophthalmology. 2013; 41:49-50	Conference abstract
Broadhead GK, Hong T, Zhu M, Li H, Schlub TE, Wijeyakumar W et al. Response of pigment epithelial detachments to intravitreal aflibercept among patients with treatment-resistant neovascular age-related macular degeneration. Retina. 2015; 35(5):975-981	Incorrect study design
Castro V, Montero J, Cervera E. Aflibercept in refractory wet age-related macular degeneration: Anatomical and functional outcomes after one year of follow-up. Ophthalmologica. 2014; 232:2-3	Conference abstract
Cho H, Weber ML, Shah CP, Heier JS. Initial utilization of aflibercept in exudative age-related macular degeneration. European Journal of Ophthalmology. 2014; 24(4):576-581	Not review population, incorrect reason for switching
Ferrone PJ, Anwar F, Naysan J, Chaudhary K, Fastenberg D, Graham K et al. Early initial clinical experience with intravitreal aflibercept for wet age-related macular degeneration. British Journal of Ophthalmology. 2014; 98 Suppl 1:i17-21	Not guideline condition
Fujii A, Imai H, Kanai M, Azumi A. Effect of intravitreal aflibercept injection for age-related macular degeneration with a retinal pigment epithelial tear refractory to intravitreal ranibizumab injection. Clinical Ophthalmology. 2014; 8:1199-1202	Incorrect study design
Fung AT, Kumar N, Marsiglia M, Mrejen S, Slakter J, Sorenson J et al. Visual and anatomic outcomes of intravitreal aflibercept in eyes with persistent subfoveal fluid despite previous treatments with ranibizumab in patients with neovascular age-related macular degeneration. Clinical and Experimental Ophthalmology. 2013; 41:51	Conference abstract
Hall LB, Zebardast N, Huang JJ, Adelman RA. Aflibercept in the treatment of neovascular age-related macular degeneration in previously treated	Not review population

Reference	Exclusion reason
patients. Journal of Ocular Pharmacology and Therapeutics. 2014; 30(4):346-352	
Jorstad OK, Qvale GA, Moe MC. Initial improvement after converting to aflibercept is substantially diminished when increasing control intervals from 4 to 8 weeks. Acta Ophthalmologica. 2014; 92:9	Conference abstract
Karagiannis DA, Ladas ID, Parikakis E, Georgalas I, Kotsolis A, Amariotakis G et al. Changing from bevacizumab to ranibizumab in age-related macular degeneration. Is it safe? Clinical Interventions in Aging. 2009; 4:457-461	Not review population, incorrect reason for switching
Kaur A, English D, Jenkins M, Jaross N, Jao K, Singh Kalsi M. Intravitreal aflibercept for recurrent or refractory neovasculer age-related macular degeneration. Clinical and Experimental Ophthalmology. 2014; 42:115	Conference abstract
Kent JS, Iordanous Y, Mao A, Powell AM, Kent SS, Sheidow TG. Comparison of outcomes after switching treatment from intravitreal bevacizumab to ranibizumab in neovascular age-related macular degeneration. Canadian Journal of Ophthalmology. 2012; 47(2):159-164	Not review population, incorrect reason for switching
Major JC, Jr., Wykoff CC, Croft DE, Wang R, Mariani AF, Lehmann AE et al. Aflibercept for pigment epithelial detachment for previously treated neovascular age-related macular degeneration. Canadian Journal of Ophthalmology. 2015; 50(5):373-377	Not review population
Messenger WB, Campbell JP, Faridi A, Shippey L, Bailey ST, Lauer AK et al. Injection frequency and anatomic outcomes 1 year following conversion to aflibercept in patients with neovascular age-related macular degeneration. British Journal of Ophthalmology. 2014; 98(9):1205-1207	No relevant outcomes measures reported
Moon DRC, Lee DK, Kim SH, You YS, Kwon OW. Aflibercept Treatment for Neovascular Age-related Macular Degeneration and Polypoidal Choroidal Vasculopathy Refractory to Anti-vascular Endothelial Growth Factor. Korean Journal of Ophthalmology. 2015; 29(4):226-232	Not review population
Nixon DR, Flinn NA. Evaluation of contrast sensitivity and other visual function outcomes in neovascular age-related macular degeneration patients after treatment switch to aflibercept from ranibizumab. Clin Ophthalmol 2017; 11:715-721	No measures of dispersion (such as standard deviations) reported
Ozdek S, Doguizi S. Ranibizumab followed by bevacizumab for neovascular age-related macular degeneration: Can visual acuity be maintained? Retina-Vitreus. 2014; 22(1):10-14	Not review population
Patel KH, Chow CC, Rathod R, Mieler WF, Lim JI, Ulanski LJ, 2nd et al. Rapid response of retinal pigment epithelial detachments to intravitreal aflibercept in neovascular age-related macular degeneration refractory to bevacizumab and ranibizumab. Eye. 2013; 27(5):663-667; quiz 668	Incorrect study design

Reference	Exclusion reason
Pfau M, Fassnacht-Riederle HM, Freiberg FJ, Wons JB, Wirth M, Becker MD et al. [Switching Therapy from Ranibizumab and/or Bevacizumab to Aflibercept in Neovascular Age-Related Macular Degeneration (AMD): One-Year Results]. Klin Monbl Augenheilkd 2016; 233(8):945-950	Study not reported in English
Pinheiro-Costa J, Freitas-da-Costa P, Falcao MS, Brandao EM, Falcao-Reis F, Carneiro AM. Switch from intravitreal ranibizumab to bevacizumab for the treatment of neovascular age-related macular degeneration: clinical comparison. Ophthalmologica. 2014; 232(3):149-155	Not review population
Ruiz RJ, Pascual-Camps I, Cuellar-Monreal MJ, Dolz-Marco R, Fenoll MA, Font-Noguera I et al. Aflibercept in exudative age related macular degeneration refractory to ranibizumab. Arch Soc Esp Oftalmol 2015; 90(12):566-571.	No relevant outcome measures reported
Rusu IM, Deobhakta A, Yoon D, Lee M, Slakter JS, Klancnik JM et al. Intraocular pressure in patients with neovascular age-related macular degeneration switched to aflibercept injection after previous anti-vascular endothelial growth factor treatments. Retina. 2014; 34(11):2161-2166	Not review population
Singh RP, Srivastava S, Ehlers JP, Bedi R, Schachat AP, Kaiser PK. A single-arm, investigator-initiated study of the efficacy, safety and tolerability of intravitreal aflibercept injection in subjects with exudative age-related macular degeneration, previously treated with ranibizumab or bevacizumab: 6-month interim analysis. British Journal of Ophthalmology. 2014; 98 Suppl 1:i22-27	Not review population
Stepien KE, Rosenfeld PJ, Puliafito CA, Feuer W, Shi W, Al-Attar L et al. Comparison of intravitreal bevacizumab followed by ranibizumab for the treatment of neovascular age-related macular degeneration. Retina. 2009; 29(8):1067-1073	Not first line treatment: anti-VEGF agent monotherapy
Verma N, Hewitt A, Traill A, Jones A, Curry B. The effects of switching from stable monthly intravitreal ranibizumab to aflibercept for patients with CNV secondary to AMD: The R-A switch study. Clinical and Experimental Ophthalmology. 2014; 42:15	Conference abstract
Wijeyakumar W, Syed A, Hong T, G KB, Zhu M, Chang AA. Neovascular age related macular degeneration (NAMD): The effect of aflibercept treatment on choroidal thickness in refractory namd patients. Clinical and Experimental Ophthalmology. 2014; 42:124-125	Conference abstract
Yamada K, Kimoto K, Kono H, Kubota T. Switching from intravitreal ranibizumab to bevacizumab for age-related macular degeneration. Isrn Ophthalmology Print. 2011; 2011:916789	Not review population

1 Excluded studies for the review of factors for treatment switching or stopping

Reference	Reason for exclusion
Altaweel MM. Effects of Intravitreal Injection of Pegaptanib on the Retinal Pigment Epithelium and Optic Nerve. Iovs 2007, Issue Art. No.: CN-00746029.	Abstract
Amoaku W. Ranibizumab: The clinician's guide to commencing, continuing, and discontinuing treatment. Eye (Lond). 2009; 23(11):2140-2142	Summary of recommendations made by RCOphth 2013.
D'Amico DJ. VEGF Inhibition Study in Ocular Neovascularization (VISION): Second Year Efficacy Data. Iovs 2005, Issue Art. No.: CN-00598759.	Abstract
Fung AE, Lalwani GA, Rosenfeld PJ, Dubovy SR, Michels S, Feuer WJ et al. An optical coherence tomography-guided, variable dosing regimen with intravitreal ranibizumab (Lucentis) for neovascular age-related macular degeneration. American Journal of Ophthalmology. 2007; 143(4):566-583	Cut offs for clinical criteria not compared. Specific cut off used.
Gaudric A, Cohen SY. When should anti-vascular endothelial growth factor treatment be stopped in age-related macular degeneration? American Journal of Ophthalmology. 2010; 149(1):4-6	Review
Kuppermann BD. The V.I.S.I.O.N Study: Results With Two Years of Macugen and Outcomes of Earlier Treatment in Early Disease. American Academy of Ophthalmology 2005, Issue Art. No.: CN-00634903.	Abstract
Lalwani GA, Rosenfeld PJ, Fung AE, Dubovy SR, Michels S, Feuer W et al. A variable-dosing regimen with intravitreal ranibizumab for neovascular age-related macular degeneration: year 2 of the PrONTO Study. American Journal of Ophthalmology. 2009; 148(1):43-58.e41	Cut offs for clinical criteria not compared. Specific cut off used.
Mills E, Heels-Ansdell D, Kelly S, Guyatt G. A randomized trial of Pegaptanib sodium for age-related macular degeneration used an innovative design to explore disease-modifying effects. Journal of Clinical Epidemiology. 2007; 60(5):456-460	Different criteria for switching/stopping/continuing treatment were not reviewed. Pooled analysis.
Pauleikhoff D, Kirchhof B. Retreatment criteria in anti-VEGF therapy of exudative AMD: critical analysis of present regimes and new morphological definition of "lesion activity". Graefes Archive for Clinical and Experimental Ophthalmology. 2011; 249(5):631-632	Editorial
Schachat AP. Switching anti-vascular endothelial growth factor therapy for neovascular age-related macular degeneration. American Journal of Ophthalmology. 2013; 156(1):1-2.e1	Editorial
Spaide RF. The as-needed treatment strategy for choroidal neovascularization: a feedback-based treatment system. American Journal of Ophthalmology. 2009; 148(1):1-3	Editorial
Group VISiONCT, Chakravarthy U, Adamis AP, Cunningham ET, Jr., Goldbaum M, Guyer DR et al. Year 2 efficacy results of 2 randomized controlled clinical trials of pegaptanib for neovascular age-	Different criteria for switching/stopping/continuing treatment were not reviewed. Patients were randomised to

Reference	Reason for exclusion
related macular degeneration. Ophthalmology. 2006; 113(9):1508.e1501-1525	treatment irrespective of their clinical features.
Group VISiONCT, D'Amico DJ, Masonson HN, Patel M, Adamis AP, Cunningham ET, Jr. et al. Pegaptanib sodium for neovascular age-related macular degeneration: two-year safety results of the two prospective, multicenter, controlled clinical trials. Ophthalmology. 2006; 113(6):992-1001.e1006	Different criteria for switching/stopping/continuing treatment were not reviewed. Patients were randomised to treatment irrespective of their clinical features.
Ying G-s, Maguire MG, Daniel E, Ferris FL, Jaffe GJ, Grunwald JE et al. Association of Baseline Characteristics and Early Vision Response with 2-Year Vision Outcomes in the Comparison of AMD Treatments Trials (CATT). Ophthalmology. 2015; 122(12):2523-2531.e2521	No comparator group. Patients eligible for the switch continued on with current treatment.

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F.62 Non-pharmacological management

F.6.13 Psychological therapies

4 RQ8: What is the effectiveness of psychological therapies for AMD?

Study	Reason for Exclusion
20050913, Program helps relieve distress of age-related eye disease, Harvard Women's Health Watch, 12, 7-, 2005	Abstract
Baldwin,R. C., 20110209, Preventing late-life depression: a clinical update. [Review], International PsychogeriatricsInt.Psychogeriatr., 22, 1216-1224, 2010	Non-systematic review
Birk,T., Hickl,S., Wahl,H.W., Kämmerer,A., Miller,D., Holz,F., Becker,S., [A psychosocial training program for elderly patients with age-related macular degeneration: findings of a pilot evaluation study], Zeitschrift für Gerontologie und Geriatrie, 37, 363-365, 2004	Foreign language
Brody,B.L., Williams,R.A., Thomas,R.G., Kaplan,R.M., Chu,R.M., Brown,S.I., 20000412, Age-related macular degeneration: a randomized clinical trial of a self-management intervention, Annals of Behavioral MedicineAnn.Behav.Med., 21, 322-329, 1999	Unable to estimate measure of variance from the outcomes recorded
Brody,B.L., Roch-Levecq,A.C., Thomas,R.G., Maclean,K.K., Kaplan,R.M., Brown,S.I., Self-Management of Age-Related Macular Degeneration and Quality of Life at 6 Months Follow-Up: A Randomized Controlled Trial, IOVS, ARVO-abstract, 2003	Meeting abstract
Dahlin-Ivanoff,S., Klepp,K.I., Sjostrand,J., 19990422, Development of a health education programme for elderly with age-related macular degeneration: a focus group study, Patient Education & Counseling, 34, 63-73, 1998	Qualitative study
Harvard mental health letter. Preventing depression in people with age-related macular degeneration, 2007	Letter
Ivanoff S.D. Development and evaluation of a health education programme for elderly persons with age-related macular degeneration., Scandinavian Journal of Occupational TherapyScand.J.Occup.Ther., 8, 105-, 2001	No outcomes of interest
Ivanoff,S.D., Health education for people with macular degeneration: Learning experiences and the effect on daily occupations Eklund K, Canadian Journal of Occupational TherapyCan.J.Occup.Ther., 73, 272-280, 2006	Qualitative study
Kammerer,A., Holz,F., Miller,D., Becker,S., Kaspar,R., Himmelsbach,I., Psychosocial intervention for age-related macular degeneration: A pilot project Wahl H.-W, Journal of Visual Impairment and	Unable to estimate measure of variance from the outcomes recorded

Study	Reason for Exclusion
BlindnessJ.VIS.IMPAIRM.BLINDN., 100, 533-544, 2006	
Lee,L., Packer,T.L., Tang,S.H., Girdler,S., 20090227, Self-management education programs for age-related macular degeneration: a systematic review. [Review] [30 refs], Australasian Journal on Ageing, 27, 170-176, 2008	Systematic review
Miller,D.W., Birk,T., Hickl,S., Becker,S., Rohrschneider,K., Kaemmerer,A., Wahl,H., Holz,F.G., Evaluation of an Adaptive Skills Training Program for Patients with Advanced Bilateral Age-Related Macular Degeneration: A Prospective Randomized Trial, SO: IOVS, ARVO-abstract, 2003	Meeting abstract
Peli,E., Goldstein,R., Tennstedt,S., Braun,S., Dugan,E., Design, production, and evaluation of a rehabilitation video for patients with bilateral amd, American Academy of Optometry, -, 2002	Poster
Roch-Levecq,A.C., Gamst,A.C., Brown,S.I., Baxter,S., Sharma,S., Self-management of age-related macular degeneration and quality of life Brody B.L, Evidence-Based Eye CareEvid.-Based Eye Care, 4, 108-109, 2003	Abstract
Rollins,G., 20030530, Self-management improves functioning for age-related macular degeneration patients, Report on Medical Guidelines & Outcomes Research, 14, 9-10, 2003	Abstract/summary
Rovner,B.W., Casten,R.J., Hegel,M.T., Massof,R.W., Leiby,B.E., Tasman,W.S., 20110601, Improving function in age-related macular degeneration: design and methods of a randomized clinical trial, Contemporary Clinical TrialsContemp.Clin.Trials, 32, 196-203, 2011	Trial protocol
Rovner,B.W., Casten,R.J., 20080807, Preventing late-life depression in age-related macular degeneration, American Journal of Geriatric PsychiatryAm.J.Geriatr.Psychiatry, 16, 454-459, 2008	Duplicate reference
White,K., Mak,W., Zanibbi,K., Tang,W., O'Hearn,A., Hegel,M.T., The macular degeneration and aging study: Design and research protocol of a randomized trial for a psychosocial intervention with macular degeneration patients Sorensen S, Contemporary Clinical TrialsContemp.Clin.Trials, 42, 68-77, 2015	Research protocol

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F.6.2 The effectiveness of support strategies for people with impairment and age-related macular degeneration (AMD)

RQ9: What is the effectiveness of support strategies for people with visual impairment and AMD (for example reablement services and strategies for optimising existing visual performance)?

Study	Reason for exclusion
Amore (2013) Biofeedback stimulation in patients with age-related macular degeneration: comparison between 2 different methods	Before-after study
Ballinger (1996) Veterans affairs multicenter low vision enhancement system (lves) study. Clinical results	Not RCT
Ballinger (2000) Veterans Affairs Multicenter Low Vision Enhancement System (LVES) study: clinical results. Report 1: effects of manual-focus LVES on visual acuity and contrast sensitivity	Not RCT
Chen (2009) Rehabilitation regimes based upon psychophysical studies of prosthetic vision	Not RCT
Cheong (2003) The effect of reading practice on reading performance with stand magnifiers for people with AMD	Abstract
Cheong (2009) Does a line guide improve reading performance with stand magnifiers?	Before-after study
Christy (2010) A randomized controlled trial assessing the effectiveness of strategies delivering low vision rehabilitation: Design and baseline characteristics of study participants	No results
Chun (2005) Visual prosthetic device for bilateral end-stage macular degeneration	No comparison
Coco-Martin (2013) Design and evaluation of a customized reading rehabilitation program for patients with age-related macular degeneration	Not RCT
Colenbrander (2007) Vision rehabilitation and AMD	Not RCT
Development and evaluation of a health education programme for elderly persons with age-related macular degeneration	Thesis
Dahlin (2002) A health education program for elderly persons with visual impairments and perceived security in the performance of daily occupations: a randomized study	4 months RCT (28 months results were included)
Demers-Turco (2001) Comparison of three lox low vision reading devices	Abstract
Eklund (2006) Health education for people with macular degeneration: learning experiences and the effect on daily occupations	Qualitative study
Eperjesi (2007) Reading performance with various lamps in age-related macular degeneration	Different types of lamps (no control)
Fitz (2000) Effects of a user controlled highlighter on reading rates and eye movements in armd patients	Abstract
Fitzmaurice (2005) Effect of Lens Filter Colour on Visual Performance in Patients with AMD or Glaucoma	Abstract
Gaffney (2014) How effective is eccentric viewing training? A systematic literature review	No new evidence
Gill (2013) Digital reader vs print media: The role of digital technology in reading accuracy in age-related macular degeneration	Not RCT
Globerson (2007) Visual performance of patients with amd using wavefront-guided lenses	Abstract

Study	Reason for exclusion
Goodrich (2001) A comparison of patient reading performance and preference: optical devices, handheld CCTV (Innoventions Magni-Cam), or stand-mounted CCTV (Optelec Clearview or TSI Genie)	Not RCT
Hamade (2016) The Effects of Low-Vision Rehabilitation on Reading Speed and Depression in Age Related Macular Degeneration: A Meta-Analysis	No new evidence
Haymes (2006) Effects of task lighting on visual function in age-related macular degeneration	Non-randomised
Hong (2014) Effectiveness of eccentric viewing training for daily visual activities for individuals with age-related macular degeneration: a systematic review and meta-analysis	No RCT included in the review
Hooper (2008) Age-related macular degeneration and low-vision rehabilitation: a systematic review	No new evidence
Mancil (1997) Design and evaluation of liquid crystal (lc) dark-adapting eyeglasses for persons with low vision	Abstract
McCabe (2000) Evaluating the effectiveness of a vision rehabilitation intervention using an objective and subjective measure of functional performance	Not RCT (before-after)
Mielke (2013) [The influence of visual rehabilitation on secondary depressive disorders due to age-related macular degeneration. A randomized controlled pilot study]	Full text in German
Mishra (2016) Translational vision rehabilitation: From eccentric fixation to reading rehabilitation	Not RCT
Newsham (2007) Interdisciplinary allied health education in treating older adults with low vision	Not RCT
Nguyen (2009) Improvement of reading speed after providing of low vision aids in patients with age-related macular degeneration	Not RCT
Nilsson (1986) Rehabilitation of the visually handicapped with advanced macular degeneration. A follow-up study at the Low Vision Clinic, Department of Ophthalmology, University of Linkoping	Before-after study design
Nilsson (1990) Visual rehabilitation with and without educational training in the use of optical aids and residual vision. A prospective study of patients with advanced age-related macular degeneration	Non-randomised
Palmer (2010) Effective rehabilitation of reading by training in the technique of eccentric viewing: evaluation of a 4-year programme of service delivery	Before-after study
Pijnacker (2011) Rehabilitation of reading in older individuals with macular degeneration: a review of effective training programs	No new evidence
Puell (2007) Effects of Yellow Lenses on Photopic and Mesopic Visual Performance in Age-Related Macular Degeneration	Abstract
Rees (2006) Evaluation of Low Cost Low Vision Devices	Abstract
Russell (1997) Randomised controlled trial of an integrated versus an optometric low vision rehabilitation service for patients with age-related macular degeneration	Article not availability
Sanderson (1986) A hospital rental system for low vision aids	Not RCT
Scott (2002) Impact of visual function on computer task accuracy and reaction time in a cohort of patient with age-related macular degeneration	Not RCT
Scott (2002) Impact of visual function on computer task accuracy and reaction time in a cohort of patients with age-related macular degeneration	Case control study

Study	Reason for exclusion
Scott (2002) Impact of graphical user interface screen features on computer task accuracy and speed in a cohort of patients with age-related macular degeneration	Not RCT
Seiple (2011) Reading rehabilitation of individuals with AMD: Relative effectiveness of training approaches	Non-comparative resuts
Sonsino (2000) Reading performance of a new portable head-mounted closed circuit television for low vision patients: powervision	Abstract
Verezen (1996) Eccentric viewing spectacles in everyday life, for the optimum use of residual functional retinal areas, in patients with age-related macular degeneration	Not RCT
Vingolo (2013) MP-1 biofeedback: luminous pattern stimulus versus acoustic biofeedback in age related macular degeneration (AMD)	No control group
Virgili (2013) Reading aids for adults with low vision	Not systematic review
Watson (2005) Comparison of low-vision reading with spectacle-mounted magnifiers	Not randomised
Wolffsohn (2002) Benefit of coloured lenses for age-related macular degeneration	Not randomised
Young (2008) Age-related eye diseases: a review of current treatment and recommendations for low-vision aids	Not systematic review

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F.7 Monitoring

F.7.1 Frequency of monitoring

RQ19: How often should people with early age-related macular degeneration (AMD), indeterminate AMD, or advanced geographic atrophy be reviewed?

RQ20: How often should people with early AMD, indeterminate AMD, or advanced geographic atrophy have their non-affected eye reviewed?

RQ21: In people with neovascular AMD who are not being actively treated, how often should they be reviewed?

RQ22: How often should people with neovascular AMD have their non-affected eye reviewed?

Study	Reason for exclusion
The Central Vein Occlusion Study. Baseline and early natural history report. Archives of ophthalmology (Chicago, and Ill. : 1960)111, 1087-95, 1993	No outcomes of interest considered
Bressler S B, Bressler N M, and Fine S L. Subfoveal neovascular membranes in senile macular degeneration. Relationship between membrane size and visual prognosis Retina, 3, 7-11, 1983	Not a relevant study design
Bressler S B, Pieramici D J, Koester J M, and Bressler N M. Natural History of Minimally Classic Subfoveal Choroidal Neovascular Lesions in the Treatment of Age-Related Macular Degeneration with Photodynamic Therapy (TAP) Investigation: Outcomes Potentially Relevant to Management - TAP Report No. 6. Archives of Ophthalmology,122, 325-329, 2004	No intervention of interest considered
Colenbrander A, Goodwin L, and Fletcher D C. vision rehabilitation and AMD. International Ophthalmology Clinics, 47: 139-48, 2007.	No intervention of interest considered
Dutton G N .Age related macular degeneration: Could we improve the services we offer? British Journal of Ophthalmology, 84, 945-946, 2000	Editorial
Gudnadottir G S, Magnusson K P, Stefansson E, Jonasson F, Helgadottir G, and Sigurdsson H. The time pattern of bilateral exudative age-related macular degeneration. Acta Ophthalmologica Scandinavica,83, 333-6, 2005	Not a relevant study design
Lee P P, Feldman Z W, Ostermann J, Brown D S, and Sloan F A. Longitudinal rates of annual eye examinations of persons with diabetes and chronic eye diseasesOphthalmology, 110, 1952-1959, 2003	Not a relevant study design
Lichtinger A, Caraza M, Galbinur T, and Chowers I. Factors associated with early detection of choroidal neovas cularization in age-related macular degeneration in the clinic setting. Israel Medical Association Journal, 14, 363-366, 2012	Not a relevant study design
Lim J H, Wickremasinghe S S, Xie J, Chauhan D S, Baird P N, Robman L D, Hageman G, and Guymer R H. Delay to treatment and visual outcomes in patients treated with anti-vascular endothelial	Not a relevant study design

Study	Reason for exclusion
growth factor for age-related macular degeneration.American Journal of Ophthalmology,153, 678-86, 686.e1-2, 2012	
Loewenstein A, Richard , Hinda Rosenthal, and Foundation. The significance of early detection of age-related macular degeneration: Richard & Hinda Rosenthal Foundation lecture, The Macula Society 29th annual meeting. Retina, 27, 873-8, 2007	Not a relevant study design
Markun Stefan, Dishy Avraham, Neuner-Jehle Stefan, Rosemann Thomas, and Frei Anja. The Chronic Care for Wet Age Related Macular Degeneration (CHARMED) Study: A Randomized Controlled Trial. PLoS ONE, 10, 2015	No outcomes of interest considered
Mehta S. Age-Related Macular Degeneration. Primary Care - Clinics in Office Practice, 42, 377-391, 2015	No intervention of interest considered
Oliver-Fernandez A, Bakal J, Segal S, Shah G K, Dugar A, and Sharma S. Progression of visual loss and time between initial assessment and treatment of wet age-related macular degeneration. Canadian Journal of Ophthalmology, 40: 313-9, 2005.	No intervention of interest considered
Pron G. Optical coherence tomography monitoring strategies for A-VEGF-Treated age-related macular degeneration: An evidence-based analysis. Ontario Health Technology Assessment Series,14, 1-64, 2014	Non-systematic review
Rasmussen A, Bloch S B, Fuchs J, Hansen L H, Larsen M, Lacour M, Lund-Andersen H, and Sander B. A 4-year longitudinal study of 555 patients treated with ranibizumab for neovascular age-related macular degeneration. Ophthalmology, 120, 2630-6, 2013	No outcomes of interest considered
Sandberg M A, Weiner A, Miller S, and Gaudio A R . High-risk characteristics of fellow eyes of patients with unilateral neovascular age-related macular degeneration. Ophthalmology 105, 441-7, 1998.	Not a relevant study design
Solomon S D, Jefferys J L, Hawkins B S, and Bressler N M. Incident choroidal neovascularization in fellow eyes of patients with unilateral subfoveal choroidal neovascularization secondary to age-related macular degeneration: SST report No. 20 from the Submacular Surgery Trials Research Group. Archives of ophthalmology (Chicago, and Ill. : 1960), 125, 1323-30, 2007	No outcomes of interest considered
Weingessel B, Hintermayer G, Maca S M, Rauch R, and Vecsei-Marlovits P V. The significance of early treatment of exudative age-related macular degeneration: 12 months' results. Wiener Klinische Wochenschrift, 124,750-5, 2012	Not a relevant study design
Williams G S, Seow E, Evans H, Owoniyi M, Evans S, and Blyth C. Factors affecting visual acuity after one year of follow up after repeated intravitreal ranibizumab for macular degeneration.Saudi Journal of Ophthalmology, 29, 187-191, 2015	Not a relevant study design

Study	Reason for exclusion
Woo J H, Sanjay S, Au Eong, and K G. Benefits of early awareness in age-related macular degeneration.Eye, 23, 2271, 2009	Letter
Yoon Y H, Kim J G, Chung H, and Lee S Y. Rapid progression of subclinical age-related macular degeneration in the untreated fellow eye after intravitreal bevacizumab. Acta Opthalmologica, 87, 685-7, 2009	Not a relevant study design

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F.7.31 Self-monitoring strategies

2 RQ23a: What strategies and tools are useful for self-monitoring for people with AMD?

Study	Reason for exclusion
Augustin A J, Offermann I, Lutz J, Schmidt-Erfurth U, and Tornambe P. Comparison of the original Amsler grid with the modified Amsler grid: result for patients with age-related macular degeneration Retina, 25, 443-445, 2005	Non-randomised study
Aquilante K, Leong J, and Zlotina A. Smith-kettlewell skill card scores for low vision patients. American Academy of Optometry 1999	Conference abstract
Bartlett H, Davies L N, and Eperjesi F. The macular mapping test: a reliability study BMC Ophthalmology, 5, 18, 2005	No interventions of interest considered (performed by practitioners)
Bernardes R, Lobo C, and Cunha-Vaz J G. Multimodal macula mapping: a new approach to study diseases of the macula. Survey of Ophthalmology, 47, 580-89, 2002	Non-randomised study
Chang T S, Tonnu I Q, Glove D R, and Fine J. Longitudinal changes in self-reported visual functioning in AMD patients In a randomized controlled Phase I/II trial of lucentisTM (ranizumab; rHuFAB v2). Iovs 45, 2004.	Conference abstract
Chen N, and Wagner D. Evaluation of commercially available sunglasses in patients with eye disorders. Iovs 37, 1996	Conference abstract
Chesnutt D A, Stinnett S, and Mahmoud T H. The Amsler Grid: White on Black or Black on White? Ivos 4, 2002.	Conference abstract
Chew E Y, Clemons T E, Bressler S B, Elman M J, Danis R P, Domalpally A, Heier J S, Kim J E, and Garfinkel R A. Randomized trial of the ForeseeHome monitoring device for early detection of neovascular age-related macular degeneration. The HOme Monitoring of the Eye (HOME) study design - HOME Study report number 1.Contemporary clinical trials, 37, 294-300, 2014	Study protocol
Dagnelie G, Torr-Brown S, Gulati R, Jeong A, and Roser M. Use and appreciation of the vms? self-monitoring grid by patients with established amd. American Academy of Optometry 2009.	Conference abstract
Falkenstein I, Cochran D E, Azen S P, Dustin L, Tammwar A M, Kozak I, and Freeman W R. Comparison of Visual Acuity Measurements in Macular Degeneration Patients Tested With Snellen and LogMAR (ETDRS) Charts. Iovs 48, 2007.	Conference abstract
Kaiser P K; Wang Y Z; He Y G; Weisberger A ; Wolf S ; Smith C H. FEasibility of a novel remote daily monitoring system for age-related macular degeneration using mobile handheld deviCES: Results of a pilot study. Retina, 33, 1863-70, 2013	Non-randomised controlled trial study
Lowenstein A, Pollack A, and Schachat A. Results of a multicenter clinical trial to evaluate the macular computerized psychophysical test for detection of	Not available

Study	Reason for exclusion
age-related macular degeneration. The Macula Society 2002.	
Loewenstein A, Pollack A, and Schachat A P. Results of a Multicentered, Masked Clinical Trial to Evaluate the Macular Computerized Psychophysical Test (MCPT) for Detection of Age-related Macular Degeneration (AMD). Iovs 43, 2002.	Conference abstract
Loewenstein A ; Malach R ; Goldstein M ; Leibovitch I ; Barak A ; Baruch E ; Alster Y ; Rafaeli O ; Avni I ; Yassur Y . Replacing the Amsler grid: a new method for monitoring patients with age-related macular. Ophthalmology 110, 966-70, 2003.	No interventions of interest considered
Loewenstein A. Macular diseases: Moving the battlefield to the patient's home Retina, 31, 1445-1448, 2011	Editorial
Markun Stefan ; Dishy Avraham ; Neuner-Jehle Stefan ; Rosemann Thomas ; Frei Anja. The Chronic Care for Wet Age Related Macular Degeneration (CHARMED) Study: A Randomized Controlled Trial. PLoS ONE, 10, 2015.	No interventions of interest considered (self-management)
Neelam K, Nolan J, Chakravarthy U, and Beatty S. Psychophysical function in age-related maculopathy. Survey of Ophthalmology, 54, 167-210, 2009	Non systematic review
Radin P P, Midena E, and Boccassini B. Microperimetry vs Preferential Hyperacuity Perimetry in Patients With Intermediate Age-Related Macular Degeneration.Iovs 46, 2005.	Conference abstract
Trevino R. Recent progress in macular function self-assessment. Ophthalmic & Physiological Optics 28, 183-92, 2008	Non systematic review
Trevino R, and Kynn M G. Macular function surveillance revisited. Optometry (St. Louis, and Mo.), 79, 397-403, 2008	Non systematic review

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F.7.5 Monitoring strategies and tools for people with late age-related macular degeneration (wet active)

RQ23b: What strategies and tools are useful for monitoring for people with late AMD (wet active)?

Study	Reason for exclusion
Ahlers (2005)Topographic angiography and optical coherence tomography: a correlation of imaging characteristics	Outcome (cannot derive diagnostic accuracy)
Amissah-Arthur (2012) Optical coherence tomography changes before the development of choroidal neovascularization in second eyes of patients with bilateral wet macular degeneration	Target group (CNV patients' fellow eye)
Anijeet (2012)Imaging and evaluation of corneal vascularization using fluorescein and indocyanine green angiography	Outcome (no diagnostic accuracy)
Arroyo (1997) Indocyanine green videoangiography after acute retinal pigment epithelial tears age-related macular degeneration	Study type (case study)
Atmaca (1997) ICG videoangiography of occult choroidal neovascularization in age-related macular degeneration	Outcome (no diagnostic accuracy
Avvad (1995)The digital indocyanine green videoangiography characteristics of well-defined choroidal neovascularization	Intervention (not OCT index test)
Axer-Siegel (1999) Simultaneous indocyanine green and fluorescein angiography in retinal pigment epithelium tear using the confocal scanning laser ophthalmoscope	Target group (people with RPE as a result of AMD
Baumal (1997)Indocyanine green hyperfluorescence associated with serous retinal pigment epithelial detachment in age-related macular degeneration	Target group (people with AMD)
Boniface (2009)Acute subretinal hemorrhage and exudative age-related macular degeneration: the role of bedside ocular ultrasound in ED diagnosis and management	Study type (abstract)
Bottoni (1994) Clinical application of digital indocyanine green videoangiography in senile macular degeneration	Target group (people with AMD (not nAMD specific)
Brancato (2000)ICGA-guided laser photocoagulation of occult choroidal neovascularization in age-related macular degeneration	Intervention (not monitoring)
Brancato (2002) Optical coherence tomography (OCT) in retinal angiomatous proliferation (RAP)	Intervention (diagnosing of RAP not monitoring nAMD
Bressler (1988)Natural course of poorly defined choroidal neovascularization associated with macular degeneration	Intervention (not monitoring
Bressler (1991) Loculated fluid. A previously undescribed fluorescein angiographic finding in choroidal neovascularization associated with macular degeneration	Study type (case study)
Cakir (2009) Retinal pigment epithelial tear following bevacizumab for exudative age-related macular degeneration: An OCT follow-up	Study type (case study)
Cheung (2014) Understanding indocyanine green angiography in polypoidal choroidal vasculopathy: The	Outcome (no diagnostic accuracy)

Study	Reason for exclusion
group experience with digital fundus photography and confocal scanning laser ophthalmoscopy	
Chiang (2008)Predictors of anti-VEGF-associated retinal pigment epithelial tear using FA and OCT analysis	Outcome (cannot derive diagnostic accuracy (sensitivity/specificity))
Cohen (2007) Types of choroidal neovascularisation in newly diagnosed exudative age-related macular degeneration	Outcome (cannot derive diagnostic accuracy (sensitivity/specificity))
Coscas (2007)Optical coherence tomography identification of occult choroidal neovascularization in age-related macular degeneration	Target group (AMD people at the time of diagnosis)
Coscas (2012) Combined fluorescein angiography and spectral-domain optical coherence tomography imaging of classic choroidal neovascularization secondary to age-related macular degeneration before and after intravitreal ranibizumab injections	Intervention (not monitoring nAMD)
Coscas (2015)Optical coherence tomography angiography during follow-up: qualitative and quantitative analysis of mixed type I and II choroidal neovascularization after vascular endothelial growth factor trap therapy	Study type (case study)
Costa (2003)Immediate indocyanine green angiography and optical coherence tomography evaluation after photodynamic therapy for subfoveal choroidal neovascularization	Outcome (cannot derive outcome of interest)
Costagliola (2009) Changes in neovascular choroidal morphology after intravitreal bevacizumab injection: Prospective trial on 156 eyes throughout 12-month follow-up	Intervention (not monitoring nAMD)
Cukras (2010)Optical coherence tomography-based decision making in exudative age-related macular degeneration: comparison of time- vs spectral-domain devices	Outcome (cannot derive outcome of interest)
De Niro (2014)Sensitivity of fluid detection in patients with neovascular amd using spectral domain optical coherence tomography high-definition line scans	Intervention (reference standard is not listed in the protocol)
De Salvo (2014)Sensitivity and specificity of spectral-domain optical coherence tomography in detecting idiopathic polypoidal choroidal vasculopathy	Intervention (diagnostic (not monitoring)
Ding (2013)Automatic detection of subretinal fluid and sub-retinal pigment epithelium fluid in optical coherence tomography images	Study type (conference proceedings)
Durlu (2003) Retinal and choroidal alterations following photodynamic therapy	Study type (case study)
Elmekawey (2014)Long term result of intravitreal ranibizumab (lucentis) injection for cases with serous retinal pigment epithelial detachment secondary to age related macular degeneration	Study type (abstract)
Elsner (2001)Imaging of choroidal neovascularization: A comparison of optical coherence tomography and topographic angiography	Study type (conference proceeding)
Folgar (2014)Comparison of optical coherence tomography assessments in the comparison of age-related macular degeneration treatments trials	Intervention (comparison of OCT)

Study	Reason for exclusion
Flores-Moreno (2015)En face swept-source optical coherence tomography in neovascular age-related macular degeneration	Outcome (cannot derive diagnostic accuracy)
Framme (2010) Effects on choroidal neovascularization after anti-VEGF upload using intravitreal ranibizumab, as determined by spectral domain-optical coherence tomography	Outcome (cannot derive diagnostic accuracy)
Gass (2005)Optical coherence tomography and an intraretinal lesion [4]	Study type (commentary)
Giani (2011)Displayed reflectivity of choroidal neovascular membranes by optical coherence tomography correlates with presence of leakage by fluorescein angiography	Outcome (cannot derive diagnostic accuracy)
Golbaz (2011)Quantification of the therapeutic response of intraretinal, subretinal, and subpigment epithelial compartments in exudative AMD during anti-VEGF therapy	Outcome (cannot derive diagnostic accuracy)
Guyer (1994)Digital indocyanine-green videoangiography of occult choroidal neovascularization	Intervention (not OCT)
Hannan (2007)Retinal pigment epithelial tear following intravitreal bevacizumab for choroidal neovascular membrane due to age-related macular degeneration [1]	Study type (letter)
Hanutsaha (1998) Indocyanine-green videoangiography of drusen as a possible predictive indicator of exudative maculopathy	Outcome (cannot derive diagnostic accuracy)
Helb (2010) Clinical evaluation of simultaneous confocal scanning laser ophthalmoscopy imaging combined with high-resolution, spectral-domain optical coherence tomography	Outcome (cannot derive diagnostic accuracy)
Helbig (2005) Simultaneous fluorescein and indocyanine green angiography for exudative macular degeneration	Outcome (cannot derive diagnostic accuracy)
Holekamp (2006)Two-Year FA/0CT Results of MARINA Study of Ranibizumab (Lucentis) in Neovascular AMD Presenting	Availability (full text cannot be retrieved)
Hong (2013) Response of pigment epithelial detachments following intravitreal aflibercept for age-related macular degeneration	Study type (abstract)
Huang (2015)Optical coherence tomography angiography of time course of choroidal neovascularization in response to anti-angiogenic treatment	Study type (case study)
Hughes (2005)In vivo demonstration of the anatomic differences between classic and occult choroidal neovascularization using optical coherence tomography	Study type (report)
Iida T (2007) Polypoidal choroidal vasculopathy with an appearance similar to classic choroidal neovascularisation on fluorescein angiography	Study type (editorial)
Inoue (2015)Optical Coherence Tomography Angiography of Polypoidal Choroidal Vasculopathy and Polypoidal Choroidal Neovascularization	Outcome (cannot derive outcome of interest)
Jung (2014)The incidence of neovascular subtypes in newly diagnosed neovascular age-related macular degeneration	Intervention (not nAMD monitoring)

Study	Reason for exclusion
Jurklies (2002)Monitoring retinal function in neovascular maculopathy using multifocal electroreticography - Early and long-term correlation with clinical findings	Outcome (cannot derive diagnostic accuracy)
Kaiser (2002)Variability in fluorescein angiography interpretation for photodynamic therapy in age-related macular degeneration	Outcome (cannot derive outcome of interest)
Kaiser (2007)Angiographic and optical coherence tomographic results of the MARINA study of ranibizumab in neovascular age-related macular degeneration	Outcome (cannot derive outcome of interest)
Keane (2008)Quantitative subanalysis of optical coherence tomography after treatment with ranibizumab for neovascular age-related macular degeneration	Outcome (cannot derive diagnostic accuracy)
Kim (2013) Structure of polypoidal choroidal vasculopathy studied by colocalization between tomographic and angiographic lesions	Outcome (cannot derive diagnostic accuracy)
Kiss (2009)Evaluation of ranibizumab-induced changes in high- resolution optical coherence tomographic retinal morphology and their impact on visual function	Outcome (cannot derive diagnostic accuracy)
Kozak (2008)Discrepancy between fluorescein angiography and optical coherence tomography in detection of macular disease	Condition (macular disease (macular edema)
Kramer (2000)Comparison of fluorescein angiography and indocyanine green angiography for imaging of choroidal neovascularization in hemorrhagic age-related macular degeneration	Outcome (cannot derive outcome of interest)
Krebs (2007)Prognosis of untreated occult choroidal neovascularization	Outcome (cannot derive diagnostic accuracy)
Kuehlewein (2015)Optical Coherence Tomography Angiography of Type 1 Neovascularization in Age-Related Macular Degeneration	Outcome (cannot derive outcome of interest)
Landa (2007)The diagnostic contribution of indocyanine green to fluorescein angiography in fellow drusen eyes of patients with wet age-related macular degeneration	Target group (fellow eye of people with AMD)
Leitritz (2008)Can the risk of retinal pigment epithelium tears after bevacizumab treatment be predicted? An optical coherence tomography study	Outcome (cannot derive outcome of interest)
Iida (2007)Polypoidal choroidal vasculopathy with an appearance similar to classic choroidal neovascularisation on fluorescein angiography	Study type (Editorial)
Lim (1995)Selective use of indocyanine green angiography for occult choroidal neovascularization	Intervention (not monitoring)
Malamos (2009)Correlation of high-definition optical coherence tomography and fluorescein angiography imaging in neovascular macular degeneration	Outcome (not monitoring and no diagnostic accuracy)
Mathews (2007)Retinal pigment epithelial tear following intravitreal injection of bevacizumab (Avastin): optical coherence tomography and fluorescein angiographic findings	Study type (letter (correspondence)
Mathew (2014)Correlation of fundus fluorescein angiography and spectral-domain optical coherence	Intervention (identification of subtypes in nAMD)

Study	Reason for exclusion
tomography in identification of membrane subtypes in neovascular age-related macular degeneration	
McBain (2007)Fundus autofluorescence in exudative age-related macular degeneration	Outcome (cannot derive diagnostic accuracy)
Michalewski (2014)Spectral-domain optical coherence tomography features preceding new-onset neovascular membrane formation	Intervention (no reference standard)
Michels (2000)ICG-angiographic evaluation of photodynamic therapy in the TAP Investigation	Study type (abstract)
Michels (2008)Value of polarisation-sensitive optical coherence tomography in diseases affecting the retinal pigment epithelium	Outcome (cannot derive diagnostic accuracy)
Miere (2015)Optical coherence tomography angiography in early type 3 neovascularization	Outcome (cannot derive diagnostic accuracy)
Miura (2011)Three-dimensional visualization of ocular vascular pathology by optical coherence angiography in vivo	Outcome (cannot derive diagnostic accuracy)
Moult (2014)Ultrahigh-speed swept-source OCT angiography in exudative AMD	Outcome (cannot derive diagnostic accuracy)
Mowatt (2014)Optical coherence tomography for the diagnosis, monitoring and guiding of treatment for neovascular age-related macular degeneration: a systematic review and economic evaluation	Evidence (no additional new evidence)
Munk (2015)Relationship of retinal morphology and retinal sensitivity in the treatment of neovascular age-related macular degeneration using aflibercept	Outcome (cannot derive diagnostic accuracy)
Patel (2009)Interobserver agreement for the detection of optical coherence tomography features of neovascular age-related macular degeneration	Intervention (no reference standard)
Pece (1998)Indocyanine green angiography in age-related macular degeneration with occult neovascularization	Outcome (cannot derive outcome of interest)
Phillips (1991)Detection and quantification of hyperfluorescent leakage by computer analysis of fundus fluorescein angiograms	Intervention (not OCT)
Pierro (2012)Spectral domain OCT versus time domain OCT in the evaluation of macular features related to wet age-related macular degeneration	Outcome (cannot derive diagnostic accuracy)
Polito (2006) The role of optical coherence tomography (OCT) in the diagnosis and management of retinal angiomatous proliferation (RAP) in patients with age-related macular degeneration	Study type (mini review)
Punjabi (2013)Imaging characteristics of neovascular pigment epithelial detachments and their response to anti-vascular endothelial growth factor therapy	Outcome (cannot derive diagnostic accuracy)
Querques (2013)Multimodal imaging of early stage 1 type 3 neovascularization with simultaneous eye-tracked spectral-domain optical coherence tomography and high-speed real-time angiography	Study type (case study)
Rahimy (2014)Radial versus raster spectral-domain optical coherence tomography scan patterns for detection of macular pathology	Outcome (cannot derive diagnostic accuracy)

Study	Reason for exclusion
Rishi (2009)Discrepancy between fluorescein angiography and optical coherence tomography in detection of macular disease	Study type (letter, correspondence)
Ritter (2011)Evaluation of optical coherence tomography findings in age-related macular degeneration: a reproducibility study of two independent reading centres	Outcome (cannot derive outcome of interest (no diagnostic accuracy)
Riusala (2005)Visual acuity and structural findings in old age-related macular degeneration	Intervention (not nAMD monitoring)
Rogers (2002)Optical coherence tomography findings following photodynamic therapy of choroidal neovascularization	Intervention (no reference standard)
Rohrschneider (2008) Use of fundus perimetry (microperimetry) to quantify macular sensitivity	Outcome (cannot derive diagnostic accuracy)
Roquet (2004)Clinical features of drusenoid pigment epithelial detachment in age related macular degeneration	Outcome (cannot derive diagnostic accuracy)
Saito (2008)Cross-sectional and en face optical coherence tomographic features of polypoidal choroidal vasculopathy	Outcome (cannot derive diagnostic accuracy)
Saito (2016) Subfoveal choroidal thickness in polypoidal choroidal vasculopathy after switching to intravitreal aflibercept injection	Outcome (cannot derive diagnostic accuracy)
Sallet (1996) Indocyanine green angiography and age-related serous pigment epithelial detachment	Intervention (not OCT)
Salti (2015) Combined nonmydriatic spectral-domain optical coherence tomography and nonmydriatic fundus photography for the detection of age-related macular degeneration changes	Target group (not nAMD specific)
Sato (2001)Optical coherence tomography of retinal pigment epithelial detachment in age-related macular degeneration	Language (Japanese)
Sato (2004)Correlation of optical coherence tomography with angiography in retinal pigment epithelial detachment associated with age-related macular degeneration	Target group people with AMD
Saxena (2012) 3D spectral domain OCT in spontaneous retinal pigment epithelial tear	Study type (case study)
Sayanagi (2009)Comparison of spectral-domain versus time-domain optical coherence tomography in management of age-related macular degeneration with ranibizumab	Intervention (comparison of SD-OCT and TD-OCT)
Sayanagi (2015)En-face high-penetration optical coherence tomography imaging in polypoidal choroidal vasculopathy	Outcome (cannot derive diagnostic accuracy)
Sayed (2011)Early visual impacts of optical coherence tomographic parameters in patients with age-related macular degeneration following the first versus repeated ranibizumab injection	Outcome (cannot derive diagnostic accuracy)
Schick (2015)Phenotype characteristics of fellow eyes in patients with early onset of neovascular age-related macular degeneration	Intervention (not monitoring)

Study	Reason for exclusion
Schneider (1995)Indocyanine green angiographically well-defined choroidal neovascularization: angiographic patterns obtained using the scanning laser ophthalmoscope	Outcome (cannot derive diagnostic accuracy)
Sickenberg (1999)A computer-based method to quantify the classic pattern of choroidal neovascularization in order to monitor photodynamic therapy	Outcome (cannot derive diagnostic accuracy)
Sikorski (2011)Drusen with accompanying fluid underneath the sensory retina	Study type (case study)
Siqueira (2010)Identifying early recurrence of choroidal neovascularization during treatment with ranibizumab using C-scan	Outcome (cannot derive diagnostic accuracy)
Sohrab (2012)A Pilot Study of Morphometric Analysis of Choroidal Vasculature In Vivo, Using En Face Optical Coherence Tomography	Outcome (cannot derive diagnostic accuracy)
Stehouwer (2016)Detecting signs of retinal leakage in exudative AMD using Cirrus OCT versus SL SCAN-1, a novel integrated FD-OCT into a common slit lamp	Outcome (cannot derive diagnostic accuracy)
Straatsma (1985)Fluorescein angiography in reticular degeneration of the pigment epithelium	Outcome (cannot derive diagnostic accuracy)
Taban (2010)Assessing the reliability of automated OCT retinal thickness measurements in patients with choroidal neovascularization due to age-related macular degeneration	Outcome (cannot derive diagnostic accuracy)
Tan (2011)A novel classification of peripheral clinical and autofluorescence findings in age-related macular degeneration	Study type (abstract)
Tan (2011)A novel angiographic and anatomic classification of polypoidal choroidal vasculopathy predicts its 5-year clinical outcomes	Study type (conference proceeding)
Theelen (2009)Near-infrared reflectance imaging of neovascular age-related macular degeneration	Outcome (cannot derive outcome of interest (diagnostic accuracy)
Ueno (2012)Correlation of indocyanine green angiography and optical coherence tomography findings after intravitreal ranibizumab for polypoidal choroidal vasculopathy	Excluded target group (with PCV)
Vaclavik (2008)Autofluorescence Imaging in Age-Related Macular Degeneration Complicated by Choroidal Neovascularization. A Prospective Study	Outcome (cannot derive diagnostic accuracy)
Von Ruckmann (1999)Distribution of pigment epithelium autofluorescence in retinal disease state recorded in vivo and its change over time	Outcome (cannot derive diagnostic accuracy)
Watzke (2000)A comparison of stereoscopic fluorescein angiography with indocyanine green videoangiography in age-related macular degeneration	Intervention (not OCT (as index test)
Witkin (2009)High-speed Ultrahigh Resolution Optical Coherence Tomography before and after Ranibizumab for Age-related Macular Degeneration	Outcome (cannot derive diagnostic accuracy)
Yannuzzi (1992)Digital indocyanine green videoangiography and choroidal neovascularization	Intervention (not OCT)
Yehoshua (2013)Comparison of drusen area detected by spectral domain optical coherence tomography and color fundus imaging	Target group people with non-exudative AMD

Study	Reason for exclusion
Yuzawa (1992)Clinical evaluation of indocyanine green video-angiography in the diagnosis of choroidal neovascular membrane associated with age-related macular degeneration	Intervention (not OCT)
Zacks (2004)Retinal angiomatous proliferation: Optical coherence tomographic confirmation of an intraretinal lesion	Study type not diagnostic
Zanzottera (2015)The project macula retinal pigment epithelium grading system for histology and optical coherence tomography in age-related macular degeneration	Outcome (cannot derive diagnostic accuracy)
Zeng (2013)The noninvasive retro-mode imaging modality of confocal scanning laser ophthalmoscopy in polypoidal choroidal vasculopathy: a preliminary application	Target group (unclear whether people were in treatment
Zhang (2007)Optical Coherence Tomography Reader Agreement in Neovascular Age-related Macular Degeneration	Outcome (cannot derive diagnostic accuracy)
Zhao (2014)A population-based study of macular choroidal neovascularization using optical coherence tomography in Eastern China	Intervention (diagnosing of AMD not monitoring nAMD)
Zuo (2010)Angiographic leakage of polypoidal choroidal vasculopathy on indocyanine angiography	Outcome (cannot derive outcome of interest (no diagnostic accuracy)

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F.8 Information

F.8.1 Barriers and facilitators to appointment attendance and update of treatment for people with age-related macular degeneration

RQ17: What are the barriers and facilitators to appointment attendance and uptake of treatment for people with AMD?

Study	Reason for exclusion
Adachi K, Wang E C. Y, Kudo K, Crawford B, Fujita K, Nagai Y, Arisawa A, Hiramoto Y, Fujii S, Uda S, Takahashi K, and Yuzawa M. 2013. "Patient burden associated with wet age-related macular degeneration in Japan". Value in Health 16:A179.	Conference abstract
Barstow Elizabeth Anne. 2013. "How older adults with age-related macular degeneration living in a southeastern metropolitan area develop physical activity self-efficacy, a grounded theory study". Dissertation Abstracts International Section A: Humanities and Social Sciences 74:No Pagination Specified.	Dissertation abstract
Bennion A E, Shaw R L, and Gibson J M. 2012. "What do we know about the experience of age related macular degeneration? A systematic review and meta-synthesis of qualitative research". Social Science & Medicine 75:976-85.	Interventions (experience living with AMD)
Bernstein P S, and Seddon J M. 1996. "Decision-making in the treatment of subfoveal neovascularization in age-related macular degeneration. An analysis from the patient's perspective". Retina 16:112-6.	Intervention (decision-making in the treatment)
Boyle J, Vukicevic M, Koklanis K, Itsiopoulos C, and Rees G. 2014. "The psychosocial impact of repeated intravitreal injections on patients with neovascular age-related macular degeneration". Clinical and Experimental Ophthalmology 42:110.	Conference abstract
Boyle J, Vukicevic M, Koklanis K, and Itsiopoulos C. 2015. "Experiences of patients undergoing anti-VEGF treatment for neovascular age-related macular degeneration: a systematic review". Psychology Health & Medicine 20:296-310.	Outcome (treatment experience with anti-VEGF)
Burton Amy E, Shaw Rachel L, and Gibson Jonathan M. 2015. "Living together w ith age-related macular degeneration: An interpretative phenomenological analysis of sense-making within a dyadic relationship". Journal of Health Psychology 20:1285-95.	Intervention (relationship between patients and carers)
Casten Robin J, Maloney Eileen K, and Rovner Barry W. 2005. "Knowledge and use of low vision services among persons with age-related macular degeneration". Journal of Visual Impairment & Blindness 99:720-724.	Intervention (knowledge about the service)
Cheng Mei-Ling, Henderson Clair, Sinclair Anne, and Sanders Roshini. 2015. "Visual health awareness, the Scottish community optometry service and Eyecare Integration Project: Breaking	Intervention (awareness)

Study	Reason for exclusion
barriers in preventing visual impairment". British Journal of Visual Impairment 33:220-226.	
Chua P Y, Mitrut I, Armbrecht A M, Vani A, Aslam T, and Dhillon B. 2009. "Evaluating patient discomfort, anxiety, and fear before and after ranibizumab intravitreous injection for wet age-related macular degeneration". Archives of Ophthalmology 127:939-40.	Intervention (treatment experience)
Cimarolli V R, Boerner K, Brennan-Ing M, Reinhardt J P, and Horowitz A. 2012. "Challenges faced by older adults with vision loss: a qualitative study with implications for rehabilitation". Clinical Rehabilitation 26:748-57.	Intervention (living experience with the condition)
Crossland M D, Gould E S, Helman C G, Feely M P, and Rubin G S. 2007. "Expectations and perceived benefits of a hospital-based low vision clinic: Results of an exploratory, qualitative research study". Visual Impairment Research 9:59-66.	Intervention (low vision clinic)
Danner Marion, Vennedey Vera, Hiligsmann Mickael, Fauser Sascha, and Stock Stephanie. 2016. "Focus Groups in Elderly Ophthalmologic Patients: Setting the Stage for Quantitative Preference Elicitation". The Patient: Patient-Centered Outcomes Research 9:47-57.	Outcome (quantitative preference)
Droege K M, Caramoy A, Kersten A, Luberichs-Fauser J, Zilkens K, Muller D, Kirchhof B, and Fauser S. 2014. "Patient preference of ranibizumab treatment regimen for neovascular age-related macular degeneration - monthly injections versus pro re nata". Graefes Archive for Clinical & Experimental Ophthalmology 252:31-4.	Intervention (treatment regimen preference)
Elliott A, Chou C, Zhang X, Crews J, Saaddine J, Beckles G, and Owens-Gary M. 2010. "Eye-care utilization among women aged >40 years with eye diseases-19 states, 2006-2008". JAMA: Journal of the American Medical Association 304:1550-1552.	Intervention (study population and condition)
Feely Mary, Vetere Arlene, and Myers Lynn B. 2007. "A qualitative analysis of reading rehabilitation of persons with age-related macular degeneration". Journal of Visual Impairment & Blindness 101:44-49.	Intervention (reading rehabilitation)
Ferreira A, Lall A, Squire A, Gregg L, and Graham A. 2013. "Patient preferences regarding monitoring and treatment for the management of neovascular age-related macular degeneration". Value in Health 16:A508.	Abstract
Gibson D M. 2014. "Eye care availability and access among individuals with diabetes, diabetic retinopathy, or age-related macular degeneration". JAMA Ophthalmology 132:471-7.	Study population
Harper R, Doorduyn K, Reeves B, and Slater L. 1999. "Evaluating the outcomes of low vision rehabilitation". Ophthalmic & Physiological Optics 19:3-11.	Intervention (evaluation of service)

Study	Reason for exclusion
Hochstetler B S, Scott I U, Kunselman A R, Thompson K, and Zerfoss E. 2010. "Adherence to recommendations of the age-related eye disease study in patients with age-related macular degeneration". Retina 30:1166-70.	Study type
Kandula Sushma, Lamkin Jeffrey C, Albanese Teresa, and Edward Deepak P. 2010. "Patients' knowledge and perspectives on wet age-related macular degeneration and its treatment". Clinical Ophthalmology 4:375-81.	Intervention (patients' knowledge about AMD)
Karampelas Michael, Pefkianaki Maria, Rees Angela, Gill Navdeep, Kotecha Aachal, Hamilton Robin, Nikita Eleni, and Patel Praveen J. 2015. "Missed Hospital Appointments of Patients Receiving Ranibizumab Therapy for Neovascular Age-Related Macular Degeneration". Ophthalmology and Therapy 4:43-9.	Outcome (characteristics of patients who missed appointment)
Koenekoop R K, and Gomolin J E. 1995. "The management of age-related macular degeneration: patterns of referral and compliance in seeking low-vision aids". Canadian Journal of Ophthalmology 30:208-10.	Intervention (referrals)
Lotery A, Xu X, Zlatava G, and Loftus J. 2007. "Burden of illness, visual impairment and health resource utilisation of patients with neovascular age-related macular degeneration: results from the UK cohort of a five-country cross-sectional study". British Journal of Ophthalmology 91:1303-7.	Intervention (quality of life)
Manousaridis K, Manjunath V, and Talks J. 2013. "Information used to decide on retreatment of exudative age-related macular degeneration with anti-VEGF in clinical practice". European Journal of Ophthalmology 23:108-113.	Study type (document recorded by clinician)
McCloud C, and Lake S. 2015. "Understanding the patient's lived experience of neovascular age-related macular degeneration: a qualitative study". Eye 29:1561-9.	Intervention (experience living with the condition)
McGrath L, and Lee L. 2012. "Characteristics of patients who dropout from ranibizumab therapy". Clinical and Experimental Ophthalmology 40:112.	Abstract
Mitchell J. 2007. "Investigating the burden of wet macular degeneration". Archives of Ophthalmology 125:1266-8.	Editorial
Mueller Sabrina, Agostini Hansjurgen, Ehlken Christoph, Bauer-Steinhusen Ulrike, Hasanbasic Zoran, and Wilke Thomas. 2016. "Patient Preferences in the Treatment of Neovascular Age-Related Macular Degeneration: A Discrete Choice Experiment". Ophthalmology 123:876-83.	Intervention (preference in the treatment)
Nia K, and Markowitz S N. 2007. "Provision and utilization of low-vision rehabilitation services in Toronto". Canadian Journal of Ophthalmology 42:698-702	Intervention (provision of service)

Study	Reason for exclusion
O'Connor E. 2007. "Living with macular degeneration". Alabama Nurse 34:24.	Intervention (living with the condition)
O'Connor P, M , Mu L C, and Keeffe J E. 2008. "Access and utilization of a new low-vision rehabilitation service". Clinical and Experimental Ophthalmology 36:547-552.	Study population (not AMD specific group)
Owsley C, McGwin Jr, G , Scilley K, Dreer L E, Bray C R, and Mason Iii J. O. 2006. "Focus groups with persons who have age-related macular degeneration: Emotional issues". Rehabilitation Psychology 51:23-29.	Intervention (emotional issues related to live with the condition)
Owsley Cynthia, McGwin Gerald Jr, Stalvey Beth T, Weston June, Searcey Karen, and Girkin Christopher A. 2008. "Educating older African Americans about the preventive importance of routine comprehensive eye care". Journal of the National Medical Association 100:1089-1095.	Study population
Rodriguez Ramirez, M , del Barrio Manso, M I, Martin Sanchez, and M D. 2014. "Intravitreal injections: what do patients prefer? Analysis of patient's satisfaction and preferences about where to perform intravitreal injections". Archivos de la Sociedad Espanola de Oftalmologia 89:477-83.	Intervention (preference of location for anti-VEGF treatment)
Shah S U, Pilli S, Telander D G, Morse L S, and Park S S. 2013. "Survey of patients with age-related macular degeneration: Knowledge and adherence to recommendations". Canadian Journal of Ophthalmology 48:204-209.	Intervention (vitamin supplement)
Shah S U, Pilli S, Telander D G, Morse L S, and Park S S. 2015. "Reprint of: Survey of patients with age-related macular degeneration: Knowledge and adherence to recommendations". Canadian Journal of Ophthalmology 50:S23-S28.	Intervention (vitamin supplement)
Sloan F A, Brown D S, Carlisle E S, Picone G A, and Lee P P. 2004. "Monitoring visual status: why patients do or do not comply with practice guidelines". Health Services Research 39:1429-48.	Study population
Varano Monica, Eter Nicole, Winyard Steve, Wittrup-Jensen Kim U, Navarro Rafael, and Heraghty Julie. 2015. "Current barriers to treatment for wet age-related macular degeneration (wAMD): findings from the wAMD patient and caregiver survey". Clinical Ophthalmology 9:2243-50.	Abstract
Whitson H E, Steinhauser K, Ammarell N, Whitaker D, Cousins S W, Ansah D, Sanders L L, and Cohen H J. 2011. "Categorizing the effect of comorbidity: a qualitative study of individuals' experiences in a low-vision rehabilitation program". Journal of the American Geriatrics Society 59:1802-9.	Study population
Wong Elaine Y, Guymer Robyn H, Hassell Jennifer B, and Keeffe Jill E. 2004. "The Experience of Age-related Macular Degeneration". Journal of Visual Impairment & Blindness 98:629-640.	Intervention (living experience)

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F.8.2 Informational needs of people with suspected or confirmed AMD and their family members/carers

RQ3a: What information do people with suspected AMD and their family members or carers find useful, and in what format and when?

RQ3b: What information do people with confirmed AMD and their family members or carers find useful, and in what format and when?

Study	Reason for exclusion
Baxter (2016) Determining patient preferences in the management of neovascular age-related macular degeneration: a conjoint analysis	Lack of relevance to question scope- no mention of informational needs.
Bennion (2012) What do we know about the experience of age related macular degeneration? A systematic review and meta-synthesis of qualitative research	Lack of relevance to question scope- main focus is not information needs and any relevant studies already included
Dahlin (2002) Focus group discussions as a tool for developing a health education programme for elderly persons with visual impairment	Does not present data. Evaluates use of focus groups.
Dahlin-Ivanoff (1998) Development of a health education programme for elderly with age- related macular degeneration: A focus group study	Lack of relevance to question scope- no mention of informational needs. Evaluating a health education programme.
Eklund (2006) Health education for people with macular degeneration: learning experiences and the effect on daily occupations	Lack of relevance to question scope- no mention of informational needs. Evaluating a skills education programme.
Ferreira (2013) Patient preferences regarding monitoring and treatment for the management of neovascular age-related macular degeneration	Conference abstract
Harrow (2016) Value of ocular health screening and education in senior living communities	Conference abstract
Kandula (2010) Patients' knowledge and perspectives on wet age-related macular degeneration and its treatment	Lack of relevance to question scope- not a qualitative study
Keeffe (1998) Impact of vision impairment on functioning	Lack of relevance to question scope- no mention of informational needs
McCloud (2014) Divergence in the lived experience of people with macular degeneration	Lack of relevance to question scope- no mention of informational needs
Mitchell (2006) Quality of life in age-related macular degeneration: a review of the literature	Lack of relevance to question scope- no mention of informational needs. Not a qualitative study.
Moore (2000) Severe visual impairment in older women	Lack of relevance to question scope- no mention of informational needs
Moore (2003) Older men's experiences of living with severe visual impairment	Lack of relevance to question scope- no mention of informational needs
Owsley (2006) Focus groups with persons who have age-related macular degeneration: Emotional issues	Lack of relevance to question scope- no mention of informational needs. Focus on emotional issues.
Shah (2013) Survey of patients with age-related macular degeneration: Knowledge and adherence to recommendations	Lack of relevance to question scope- not a qualitative study.