

**Supplementary Table 1.** Keywords used for the search strategy.

No	Population		Index test				Target condition	
	Diabetes Mellitus type I and type II		Low cost smartphone-attached device for fundus photography				Table-top color fundus photography	
	population	Source	smartphone	Source	fundus photography	Source	DR	Source
1	Diabetes Mellitus	MeSH	Smartphone	MeSH	ophthalmoscope	MeSH	Diabetic Retinopathy	MeSH
2	Diabetes Mellitus	ti, ab			ophthalmoscopy	MeSH	Vision, low	MeSH
3	diabet*	ti, ab	phone, cell	MeSH	fundus photograph*	all fields	blindness	MeSH
4	non insulin depend* OR noninsulin depend*	all fields	cellphone*	ti,ab,kw.	funduscop*	all fields	eye hemorrhage	MeSH
5	insulin depend*	all fields			fundus camera*	all fields	neovascularization, pathologic	MeSH
6	IDDM OR NIDDM OR MODY OR T1DM OR T2DM OR T1D OR T2D	all fields	((cell* OR mobile* OR handheld* OR hand held* OR smart) AND (phone* OR telephone* OR technolog* OR device*))	ti,ab,kw.	Monocular indirect ophthalmoscop*	all fields	Macular edema	MeSH
7			smartphone*	ti,ab,kw.	indirect ophthalmoscop*	all fields	vitreous body	MeSH
8					indirect lens adapter*	all fields	Diabetic Retinopath*	all fields
9			samsung OR nokia OR android	all fields	retinal imaging adapter*	all fields	diabet* AND retinopath*	all fields
10					((retina*) OR (fundus)) AND ((photo*) OR	all fields	(vision* OR visual OR retina* OR eye) AND (disease* OR disorder*)	all fields

					(imag*) OR (camera*)			
11			ipad* OR i-pad* OR ipod* OR i-pod* OR iphone* OR i-phone*	all fields	(diagnos*) AND ((computer-assist*) OR (ophthalmo*))	all fields	((vision* OR visual*) AND (loss* OR subnormal OR low OR handicap OR impair* OR disab*))	all fields
12			Mobile technolog*	all fields	tele-ophthalmolog*	all fields	maculopath* OR blindness	all fields
13			Portable device*	all fields			retinopath*	all fields
14			portable electronic device*	all fields	Photograph*	all fields	((hard OR soft) AND exudate*)	all fields
15			Transportable Cellular Phone*	all fields	image*	all fields	retina* microaneurysm*	all fields
16							(cotton wool AND (spot* OR patch*))	all fields
17							(macula* AND (defect* OR degeneration* OR oedem* OR edem*))	all fields
18							(DME OR DMO OR CME OR CSME)	all fields
19							intraretina* microvascular abnormalit* OR IRMA	all fields
20							(venous AND (bead* OR loop*))	all fields
21							((vitre* OR intraretina*) AND (hemorrhag* OR haemorrhag*))	all fields
22							vitre* AND (body OR bodies)	all fields
23								
24								
25							(retin* AND (detachment* OR neovascularization* OR neovascularisation* OR proliferans OR pre-proliferat* OR preproliferat* OR proliferat*))	all fields

26							fibrous tissue OR retinitis OR maculopath*	all fields
							(rubeosis AND (iris* OR irid*))	all fields
							VTDR OR STDR OR vision-threatening diabetic retinopath* OR sight-threatening diabetic retinopath*	all fields



**Supplementary Table 3.** Search strategy for CENTRAL in April 22<sup>nd</sup> 2021.

ID	Search
#1	MeSH descriptor: [Diabetes Mellitus] explode all trees
#2	(Diabetes Mellitus):ti,ab,kw OR (diabet*):ti,ab,kw OR (insulin depend*)
#3	non insulin depend* OR noninsulin depend*
#4	IDDM OR NIDDM OR MODY OR T1DM OR T2DM OR T1D OR T2D
#5	#1 OR #2 OR #3 OR #4
#6	MeSH descriptor: [Smartphone] explode all trees
#7	MeSH descriptor: [Cell Phone] explode all trees
#8	(smartphone*):ti,ab,kw OR (cell* phone*):ti,ab,kw OR (cell* telephone*):ti,ab,kw
#9	(cell*):ti,ab,kw OR (mobile*):ti,ab,kw OR (handheld*):ti,ab,kw OR (hand held*):ti,ab,kw OR (smart):ti,ab,kw
#10	(phone*):ti,ab,kw OR (telephone*):ti,ab,kw OR (technolog*):ti,ab,kw OR (device*):ti,ab,kw
#11	#9 AND #10
#12	(samsung) OR (nokia) OR (android)
#13	(ipad* OR i-pad* OR ipod* OR i-pod* OR iphone* OR i-phone*)
#14	(Mobile technolog*) OR (Portable device*) OR (portable electronic device*) OR (Transportable Cellular Phone*)
#15	#6 OR #7 OR #8 OR #10 OR #12 OR #13 OR #14
#16	MeSH descriptor: [Ophthalmoscopes] explode all trees
#17	MeSH descriptor: [Ophthalmoscopy] explode all trees
#18	(fundus photograph*) OR (funduscop*) OR (fundus camera*) OR (Monocular indirect ophthalmoscop*) OR (indirect ophthalmoscop*) OR (indirect lens adapter*) OR (retinal imaging adapter*) OR (tele-ophthalmolog*)
#19	((retina*) OR (fundus)) AND ((photo*) OR (imag*) OR (camera*))
#20	(diagnos*) AND ((computer-assist*) OR (ophthalmo*))
#21	#16 OR #17 OR #18 OR #19 OR #20
#22	MeSH descriptor: [Diabetic Retinopathy] explode all trees
#23	MeSH descriptor: [Vision, Low] explode all trees
#24	MeSH descriptor: [Blindness] explode all trees

#25	MeSH descriptor: [Eye Hemorrhage] explode all trees
#26	MeSH descriptor: [Neovascularization, Pathologic] explode all trees
#27	MeSH descriptor: [Macular Edema] explode all trees
#28	MeSH descriptor: [Vitreous Body] explode all trees
#29	Diabetic Retinopath* OR (diabet* AND retinopath*) OR ((vision* OR visual OR retina* OR eye) AND (disease* OR disorder*)) OR ((vision* OR visual*) AND (loss* OR subnormal OR low OR handicap OR impair* OR disab*)) OR maculopath* OR blindness OR retinopath* OR ((hard OR soft) AND exudate*) OR retina* microaneurysm* OR (cotton wool AND (spot* OR patch*)) OR (macula* AND (defect* OR degeneration* OR oedem* OR edem*)) OR DME OR DMO OR CME OR CSME OR intraretina* microvascular abnormalit* OR IRMA OR (venous AND (bead* OR loop*)) OR ((vitre* OR intraretina*) AND (hemorrhag* OR haemorrhag*)) OR (vitre* AND (body OR bodies)) OR (retin* AND (detachment* OR neovascularization* OR neovascularisation* OR proliferans OR pre-proliferat* OR preproliferat* OR proliferat*)) OR fibrous tissue OR retinitis OR maculopath* OR (rubeosis AND (iris* OR irid*)) OR VTDR OR STDR OR vision-threatening diabetic retinopath* OR sight-threatening diabetic retinopath*
#30	#22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29
#31	#5 AND #15 AND #21 AND #30

**Supplementary Table 4.** Search strategy for Scopus in August 2<sup>nd</sup> 2022.

Query
( TITLE-ABS-KEY-AUTH ( diabetes AND mellitus ) ) AND ( ( ( TITLE-ABS-KEY ( smartphone ) OR TITLE-ABS-KEY ( cell AND phone* ) ) ) OR ( ( TITLE-ABS-KEY ( fundus AND photograph* ) OR TITLE-ABS-KEY ( fundus AND camera* ) ) ) ) ) AND ( ( TITLE-ABS-KEY ( diabet* AND retinopath* ) OR TITLE-ABS-KEY ( retinopath* ) ) ) AND ( LIMIT-TO ( EXACTKEYWORD , "Human" ) ) AND ( LIMIT-TO ( LANGUAGE , "English" ) )