

SUPPORTING MATERIAL

Attitudes of Optometrists toward Artificial Intelligence for the Diagnosis of Retinal Disease: A cross-sectional mail-out survey

Sharon Ho^{1,2}, Gordon S. Doig^{1,2} and Angelica Ly^{1,2,3}

¹Centre for Eye Health, The University of New South Wales, Sydney, Australia.

²School of Optometry and Vision Science, The University of New South Wales, Sydney, Australia.

³Brien Holden Vision Institute, The University of New South Wales, Sydney, Australia.

Corresponding Author:

Dr. Angelica Ly

Rupert Myers Building

Gate 14 Barker Street, UNSW Kensington, 2052

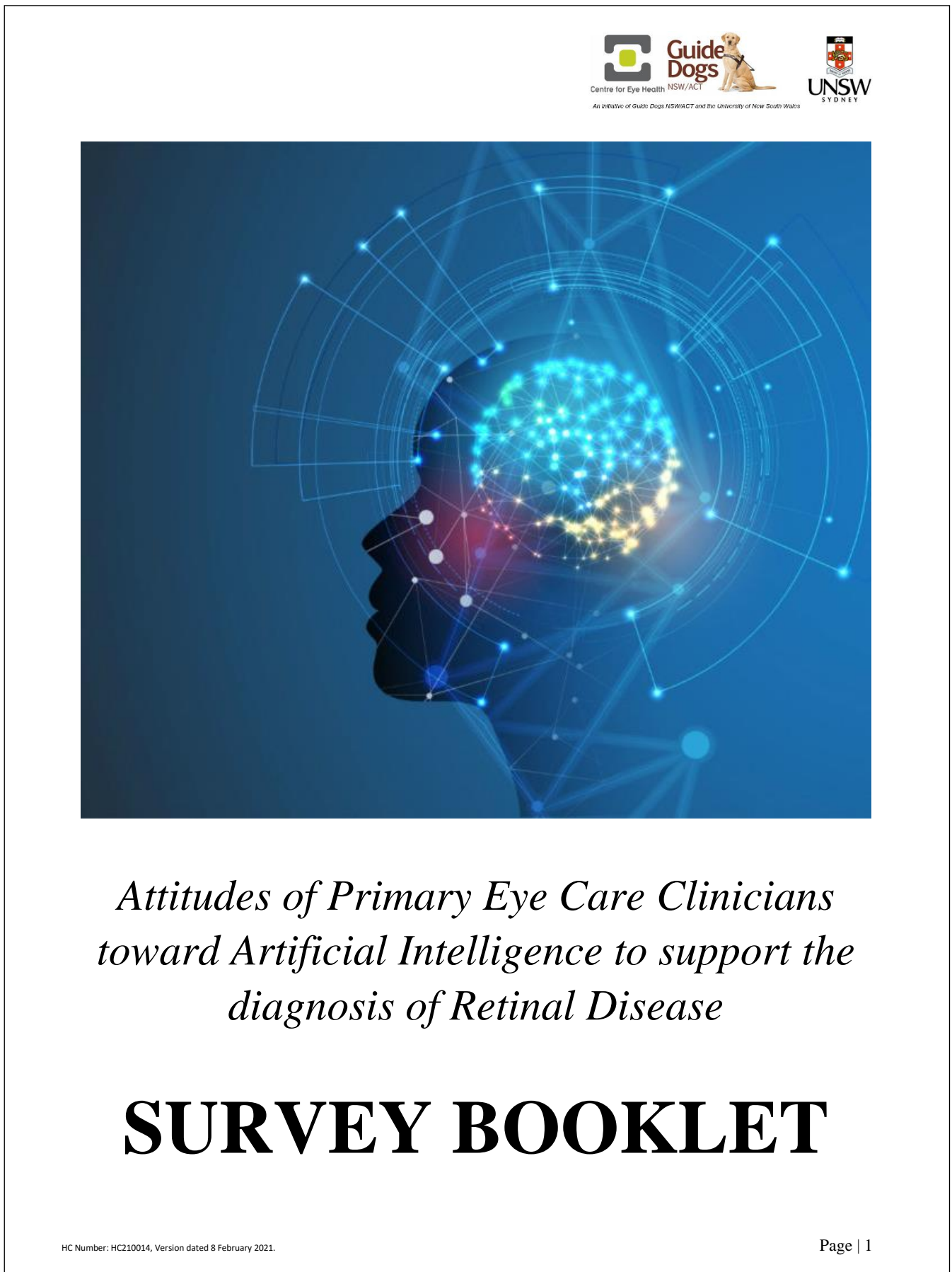
Australia

Email: a.ly@unsw.edu.au

Contents

Figure s1. Survey Booklet.	3
Table s1. Additional workplace characteristics.	11
Table s2. Attitudes toward Advanced pattern recognition algorithms.....	13
Table s3. Attitudes toward Artificial Intelligence.	14
Table s4. General comments on the use of Artificial Intelligence.....	15
Table s5. Attitudes toward the use of Artificial Intelligence in an alternative clinical scenario.	16
Table s6. Univariate and multivariate analysis of factors influencing attitudes toward Artificial Intelligence.	17

Figure s1. Survey Booklet.



***General Instructions:** Please respond to all statements to the best of your ability in the order that they appear. Directions for completing individual sections are given throughout the survey where necessary. When you have completed the survey please return at your earliest convenience using the provided postage-paid envelope. All responses collected through this survey will be completely anonymous and confidential.*

Section 1: Participant characteristics

Unless otherwise stated, please provide one response per question.

<p><u>Gender</u> 1.1 Which gender do you identify with?</p>	<p><input type="checkbox"/> a. Male <input type="checkbox"/> b. Female <input type="checkbox"/> c. Gender diverse</p>
<p><u>Age</u> 1.2 What is your age?</p>	
<p><u>Experience</u> 1.3 How many years (total full-time equivalent) have you have been practising in primary eye care?</p>	
<p><u>Workplace: general</u> 1.4 In which state or territory is your main workplace located?</p>	<p><input type="checkbox"/> a. NSW <input type="checkbox"/> d. QLD <input type="checkbox"/> g. WA <input type="checkbox"/> b. ACT <input type="checkbox"/> e. NT <input type="checkbox"/> h. SA <input type="checkbox"/> c. VIC <input type="checkbox"/> f. TAS</p>
<p>1.5 Where is your main workplace located? Provide the postcode.</p>	
<p>1.6 What is your main work setting?</p>	<p><input type="checkbox"/> a. Public hospital <input type="checkbox"/> b. Private hospital <input type="checkbox"/> c. Community health centre <input type="checkbox"/> d. Educational institution <input type="checkbox"/> e. Corporate practice <input type="checkbox"/> f. Independent practice</p>
<p>1.7 How is your main workplace funded? (Select all that apply)</p>	<p><input type="checkbox"/> a. Medicare bulk billing <input type="checkbox"/> b. Medicare non-bulk billing <input type="checkbox"/> c. Private health insurance <input type="checkbox"/> d. Private spectacles sales <input type="checkbox"/> e. Private contact lens sales <input type="checkbox"/> f. Not-for-profit organisations <input type="checkbox"/> g. State government <input type="checkbox"/> h. Other; please specify _____</p>

Survey continues on next page...

1.8 How many optometrists do you work alongside on a regular day at your main workplace, INCLUDING YOURSELF?	
1.9 How many patients do you see on an average day at your main workplace?	
1.10 How many patients with retinal disease do you see on an average day at your main workplace? (Include retinal disease of any severity, and conditions such as vitreomacular traction and pigmented lesions. Exclude glaucoma affecting the retinal ganglion cell layer, and other optic neuropathies)	
1.11 How easy or difficult is it for you to obtain the ophthalmology services you need at your main workplace?	<input type="checkbox"/> a. Very easy <input type="checkbox"/> b. Easy <input type="checkbox"/> c. Moderate <input type="checkbox"/> d. Difficult <input type="checkbox"/> e. Very difficult
<p><u>Workplace: technology</u></p> 1.12 What ophthalmic devices, if any, are used when providing care to patients at your main workplace? (Select all that apply)	<input type="checkbox"/> a. Fundus camera <input type="checkbox"/> b. Optical coherence tomography (OCT) <input type="checkbox"/> c. Ultra-wide field imaging <input type="checkbox"/> d. Fundus autofluorescence <input type="checkbox"/> e. Visual field <input type="checkbox"/> f. OCT-angiography <input type="checkbox"/> g. Non-contact tonometry or Icare tonometer <input type="checkbox"/> h. Digital letter chart <input type="checkbox"/> i. Keratometer <input type="checkbox"/> j. Pachymeter <input type="checkbox"/> k. Corneal topographer <input type="checkbox"/> l. Autorefractor <input type="checkbox"/> m. Autophoropter <input type="checkbox"/> n. Slitlamp camera <input type="checkbox"/> o. None of the above
1.13 What form of medical record system do you use at your main workplace?	<input type="checkbox"/> a. Paper-based <input type="checkbox"/> b. Electronic

Survey continues on next page...

<p>1.14 What computerised systems, if any, are used at your main workplace? (Select all that apply)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> a. Electronic patient appointment system <input type="checkbox"/> b. Online patient booking system, whereby a patient can book an appointment directly <input type="checkbox"/> c. Billing tracking software (e.g. for Medicare claims, dispensing sales) <input type="checkbox"/> d. Electronic therapeutic prescribing <input type="checkbox"/> e. Dedicated electronic referral/report management system <input type="checkbox"/> f. Practice management software (e.g. Sunix, Optomate) <input type="checkbox"/> g. None of the above
<p>1.15 In what capacity are you involved in decisions related to the use of digital health technologies at your main workplace?</p>	<ul style="list-style-type: none"> <input type="checkbox"/> a. I have a major role in decisions <input type="checkbox"/> b. I am able to influence decisions <input type="checkbox"/> c. I have no role in decisions
<p>1.16 Who oversees the IT systems at your main workplace? (Select all that apply)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> a. External, contracted IT service provider <input type="checkbox"/> b. Practice manager <input type="checkbox"/> c. Administrative staff member <input type="checkbox"/> d. Colleague <input type="checkbox"/> e. Myself <input type="checkbox"/> f. Other; please specify _____ <input type="checkbox"/> g. Don't know

Survey continues on next page...

Section 2: Survey Part A

Please indicate the extent to which you agree or disagree with the following statements as they apply to primary eye care. For all statements:

- Consider the application of advanced pattern recognition algorithms in identifying important features in OCT scan data to classify images and thereby aid the diagnosis of retinal disease.

For the remainder of the survey, disregard the influence your employer and other colleagues may have on IT decisions and respond based on **YOUR** views alone. Select one response per statement.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
2.1 In the future, I see myself using advanced pattern recognition algorithms as tools to aid the diagnosis of retinal disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2 Increased use of advanced pattern recognition algorithms to aid the diagnosis of retinal disease excites me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Once you begin Section 3, please do not change your responses to Section 2.

Section 3: Survey Part B

Please indicate the extent to which you agree or disagree with the following statements as they apply to primary eye care. For all statements:

- Artificial intelligence (AI) is defined as systems that incorporate computer-based technologies that mimic human thought processes to augment clinical decision-making. Clinical decision-making is defined as the process by which patient data is gathered, interpreted and evaluated by the clinician in order to formulate a diagnosis.
- Consider Clinical Scenario 1: During an examination, a clinician suspects a patient to have a retinal disease based on the case history and routine pre-testing but is uncertain of the diagnosis. The clinician may then process the patient's OCT scan data using AI which provides a likely diagnosis.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
<i>AI application</i>					
3.1 In the future, I see myself using AI as a tool to aid the diagnosis of retinal disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2 In the future, I see myself using AI as a learning tool to improve my own diagnostic abilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Survey continues on next page...

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
3.3 In the future, I believe there will be an overall need for AI in primary eye care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>AI benefits</i>					
3.4 In the future, I see myself using AI if it is proven to be more accurate than me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.5 In the future, I see myself using AI if it is proven to save me time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.6 In the future, I see myself using AI if it is proven to be more economically viable than my current diagnostic processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.7 In the future, I see myself using AI if it is proven to benefit my patients through more accessible healthcare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.8 In the future, I see myself using AI if it is proven to be more reliable than me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.9 In the future, I see myself using AI if it will fit into my clinical workflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.10 In the future, I see myself using AI if it will be easy to learn to use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>AI validation</i>					
3.11 Validation of the clinical effectiveness of AI through higher quality (randomised controlled trials) rather than lower quality (retrospective trials) studies is necessary for me to use it in the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.12 Validation of the accuracy of AI using a retinal specialist panel reference standard is necessary for me to use it in the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.13 Validation of the accuracy of AI using a general optometrist panel reference standard is necessary for me to use it in the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.14 Validation of AI on a patient population that resembles my clinical practice is necessary for me to use it in the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Survey continues on next page...

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
3.15 Government approval of AI is necessary for me to use it in the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>AI and clinicians</i>					
3.16 In the future, I see myself using AI if such automated processes surpass human clinician involvement in clinical decision-making	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.17 Increased use of AI to aid the diagnosis of retinal disease excites me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.18 Increased dependence on AI resulting in a relative neglect of my clinical skills will limit my use of AI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>AI and patients</i>					
3.19 Informing patients about the use of AI is necessary for me to use it in the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.20 Informing patients of all AI-derived results related to their care is necessary for me to use AI in the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>AI and conformity</i>					
3.21 In the future, I see myself using AI if my peers advise me to do so	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.22 In the future, I see myself using AI if most of my peers are using it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.23 In the future, I see myself using AI if my patient requests that I do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>AI responsibilities: Consider the situation where, following Clinical Scenario 1, the clinician makes a diagnosis based on the AI solution. The diagnosis is then declared incorrect by an ophthalmologist, and the patient decides to take legal action against the primary care clinician.</i>					
3.24 In the future, I see myself using AI if clinicians bear sole medicolegal responsibility for the patient diagnosis. (Note: at the other end of the scale, developers of the AI bear sole medicolegal responsibility for the patient diagnosis)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Survey continues on next page...

Section 4: Survey Part C

Please indicate the extent to which you agree or disagree with the following statements as they apply to primary eye care. For all statements:

- Consider Clinical Scenario 2: During an examination, a clinician suspects a patient to have a retinal disease based on the case history and routine pre-testing but is uncertain of the diagnosis. The clinician makes a tentative diagnosis for the patient. At the end of the day, the clinician selects the patients for which an AI-derived diagnosis is desired, and a system is run overnight to process the OCT scan data of the selected patients using AI which provides a likely diagnosis for each case the following morning. The clinician may then compare their tentative diagnosis to the AI-derived diagnosis, and adjust as required.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
4.1 In the future, I see myself using AI as a tool to aid the diagnosis of retinal disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.2 In the future, I see myself using AI as a learning tool to improve my own diagnostic abilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.3 Increased use of AI to aid the diagnosis of retinal disease excites me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Any other comments?

END OF SURVEY

Thank you for taking the time to participate in our study. Please ensure you have responded to **all statements**, then return this Survey Booklet at your earliest convenience using the postage-paid envelope provided. If you have indicated you would like to receive a copy of the research results on the Consent Form, please also return it along with this completed Survey Booklet.

Table s1. Additional workplace characteristics.

Variable	Result
<i>General workplace characteristics</i>	
Location (Australian state/territory)	
New South Wales	36.8% (49/133)
Victoria	27.1% (36/133)
Queensland	17.3% (23/133)
Western Australia	7.5% (10/133)
South Australia	5.3% (7/133)
Australian Capital Territory	3.0% (4/133)
Tasmania	2.3% (3/133)
Northern Territory	0.8% (1/133)
Location (geographical classification category) [†]	
MM1	55.6% (74/133)
MM3	15.8% (21/133)
MM2	12.0% (16/133)
MM4	10.5% (14/133)
MM5	4.5% (6/133)
MM6	1.5% (2/133)
MM7	0% (0/133)
Sources of funding include (may have reported >1)	
Private spectacle sales	95.5% (127/133)
Private contact lens sales	88.7% (118/133)
Medicare bulk billing	88.0% (117/133)
Private health insurance	85.0% (113/133)
Medicare non-bulk billing	47.4% (63/133)
State government	9.8% (13/133)
Not-for-profit organisations	3.8% (5/133)
Other	2.3% (3/133)
Optometrists working per day, mean (SD)	1.9 (1.8)
Patients seen per day, mean (SD)	12.5 (5.2)
Patients with retinal disease seen per day, mean (SD)	2.4 (1.8)
Level of accessibility to ophthalmology services	
Very easy	37.6% (50/133)
Easy	35.3% (47/133)
Moderate	22.6% (30/133)
Difficult	2.3% (3/133)
Very difficult	2.3% (3/133)
<i>Technology-related workplace characteristics</i>	
Ophthalmic devices used (may use >1)	
Visual field	99.2% (132/133)
Fundus camera	90.2% (120/133)
Digital letter chart	86.5% (115/133)
Non-contact tonometry/Icare	82.0% (109/133)
Optical coherence tomography	75.9% (101/133)
Keratometer	66.9% (89/133)
Autorefractor	60.2% (80/133)
Pachymeter	57.9% (77/133)
Corneal topographer	48.9% (65/133)
Slitlamp camera	45.1% (60/133)
Ultra-wide field imaging	33.1% (44/133)
Fundus autofluorescence	31.6% (42/133)
Autophoropter	26.3% (35/133)
Optical coherence tomography angiography	10.5% (14/133)
None	0% (0/133)
Computerised systems used (may use >1)	
Practice management software	89.5% (119/133)
Electronic patient appointment system	85.7% (114/133)
Billing tracking software	75.2% (100/133)
Online patient booking system	69.2% (92/133)
Dedicated electronic referral/report management system	38.3% (51/133)

Electronic therapeutic prescribing	30.8% (41/133)
None	3.0% (4/133)
Number of computerised systems used	
Five	33.1% (44/133)
Four	21.1% (28/133)
Three	17.3% (23/133)
Six	10.5% (14/133)
Two	9.0% (12/133)
One	6.0% (8/133)
None	3.0% (4/133)
Level of involvement in decisions related to the use of digital health technologies	
Major role	47.4% (63/133)
Influential role	31.6% (42/133)
No role	21.1% (28/133)
Party that oversees the IT systems (may have reported >1)	
External contracted IT service provider	67.7% (90/133)
Self	27.1% (36/133)
Practice manager	24.1% (32/133)
Administrative staff	13.5% (18/133)
Colleague	12.8% (17/133)
Other	6.0% (8/133)
Don't know	5.3% (7/133)

†Locations classified according to the Australian government's Modified Monash Model for measuring remoteness and population size.

Abbreviations: MM; Modified Monash, SD; Standard deviation.

Table s2. Attitudes toward Advanced pattern recognition algorithms.

Reported extent to which respondents agreed or disagreed with statements concerning the use of AI which employed the term “*advanced pattern recognition algorithms*” instead of “AI”. Allowable responses were: Strongly disagree (score 1), Disagree (score 2), Neither agree nor disagree (score 3), Agree (score 4), Strongly agree (score 5).

Question number & Statement	Ranked score, mean (SD)	% (n/N) selected each category				
		1	2	3	4	5
In the future, I see myself using advanced pattern recognition algorithms as...						
2.1 Tools to aid the diagnosis of retinal disease	4.0 (0.8)	0 (0/133)	5.3 (7/133)	16.5 (22/133)	54.9 (73/133)	23.3 (31/133)
2.2 Their increased use to aid the diagnosis of retinal disease excites me	3.9 (0.8)	0.8 (1/133)	3.8 (5/133)	22.6 (30/133)	51.9 (69/133)	21.1 (28/133)

Abbreviations: SD; Standard deviation.

Table s3. Attitudes toward Artificial Intelligence.

Reported extent to which respondents agreed or disagreed with statements concerning the use of artificial intelligence under Clinical Scenario 1, across its applications, benefits and validation. Allowable responses were: Strongly disagree (score 1), Disagree (score 2), Neither agree nor disagree (score 3), Agree (score 4), Strongly agree (score 5).

Question number & Statement	Ranked score, mean (SD)	% (n/N) selected each category				
		1	2	3	4	5
AI Applications: In the future, I see myself using AI as...						
3.1 A tool to aid the diagnosis of retinal disease	4.0 (0.8)	0 (0/133)	4.5 (6/133)	17.3 (23/133)	56.4 (75/133)	21.8 (29/133)
3.2 A learning tool to improve my own diagnostic abilities	4.0 (0.7)	0 (0/133)	2.3 (3/133)	18.8 (25/133)	56.4 (75/133)	22.6 (30/133)
3.3 I believe there will be an overall need for AI in primary eye care	3.8 (0.8)	0 (0/133)	5.3 (7/133)	27.1 (36/133)	46.6 (62/133)	21.1 (28/133)
AI Benefits: In the future, I see myself using AI if it is proven to...						
3.4 Be more accurate than me	4.1 (0.7)	0 (0/133)	3.0 (4/133)	15.0 (20/133)	52.6 (70/133)	29.3 (39/133)
3.5 Save me time	4.1 (0.7)	0 (0/132)	3.8 (5/132)	9.8 (13/132)	56.8 (75/132)	29.5 (39/132)
3.6 Be more economically viable than my current diagnostic processes	4.0 (0.8)	0 (0/133)	3.8 (5/133)	20.3 (27/133)	51.1 (68/133)	24.8 (33/133)
3.7 Benefit my patients through more accessible healthcare	4.4 (0.6)	0 (0/133)	0.8 (1/133)	6.0 (8/133)	45.9 (61/133)	47.4 (63/133)
3.8 Be more reliable than me	4.3 (0.6)	0 (0/133)	0.8 (1/133)	6.8 (9/133)	54.1 (72/133)	38.3 (51/133)
3.9 Fit into my clinical workflow	4.2 (0.6)	0 (0/133)	0.8 (1/133)	8.3 (11/133)	60.9 (81/133)	30.1 (40/133)
3.10 Be easy to learn to use	4.1 (0.7)	0 (0/133)	2.3 (3/133)	14.3 (19/133)	51.1 (68/133)	32.3 (43/133)
AI Validation: For me to use AI in the future, it is necessary to validate...						
3.11 The clinical effectiveness of AI through higher quality (randomised controlled trials) rather than lower quality (retrospective trials) studies	4.1 (0.8)	0 (0/133)	2.3 (3/133)	18.0 (24/133)	43.6 (58/133)	36.1 (48/133)
3.12 The accuracy of AI using a retinal specialist panel reference standard	4.1 (0.7)	0 (0/133)	1.5 (2/133)	15.8 (21/133)	54.1 (72/133)	28.6 (38/133)
3.13 The accuracy of AI using a general optometrist panel reference standard	3.7 (0.9)	0.8 (1/133)	6.8 (9/133)	31.6 (42/133)	42.1 (56/133)	18.8 (25/133)
3.14 AI on a patient population that resembles my clinical practice	3.6 (0.9)	1.5 (2/133)	9.8 (13/133)	35.3 (47/133)	35.3 (47/133)	18.0 (24/133)
3.15 AI through government approval	3.4 (1.0)	3.0 (4/133)	15.0 (20/133)	40.6 (54/133)	25.6 (34/133)	15.8 (21/133)

Abbreviations: SD; Standard deviation, AI; Artificial intelligence.

Table s4. General comments on the use of Artificial Intelligence.

Open-ended feedback from respondents regarding the use of artificial intelligence in clinical optometric practice.

No.	Comment
1	Optometry is based on personable relationships. Computer recording in front of patients detracts from this. I would be careful not to detour from this in the future. Computers (AI) assist but I would be wary if they replace.
2	Objective analysis does not always see the complete patient picture.
3	I also believe it should be developed to predict/ID risk of cardiovascular and stroke!!
4	While AI is a helpful tool to assist diagnosis, it shouldn't replace entirely our existing ability to examine and diagnose.
5	Have had an OCT in practice since 2010, AI I see as an adjunct but diagnosis ultimately lies with the practitioner.
6	My key concern relating to AI is not its direct application to optometry or diagnostic accuracy but the potential to bypass optometry and refer to GPs or ophthalmology based solely on the acquisition of a scan.
7	AI would significantly assist in the diagnostic skills and capacity for optometry to more efficiently and accurately diagnose clinical conditions, minimising unnecessary overreferral as is currently being shown by corporate based optometrists.
8	Telehealth regionally for ophthalmology would be great also.
9	AI is an enhanced tool which would better enable to make more definitive diagnosis → I understand there is now AI programs that have been granted MDs, however the likelihood that patients will seek a program alone is unlikely.
10	I view AI diagnostics as simply another tool in the clinic. Ultimately the clinician is responsible for the patient.
11	Any technology that enhances patient care should be embraced.
12	Will use AI if available to add to clinical decision making, but not rely solely on it. If unsure, will still refer to ophthalmology for further tests if required.
13	We have come a long way in 40 years. I never stop learning! :)
14	One of our practices will be a trial for AI on diabetic retinopathy in the next 2 months.
15	I would love to see AI uptake for a wide range of equipment models.
16	I feel AI can only aid, not to fully diagnose!!!
17	I'm of the opinion that AI is inevitable, thus we need to ensure that we have a healthy relationship with the technology.
18	Already trialling AI. Still in its infancy but potential is awesome.
19	Too early to decide; if more clinical trials exist evaluating false positives/false negatives associated with diagnosing retinal conditions with AI, may reconsider.

Table s5. Attitudes toward the use of Artificial Intelligence in an alternative clinical scenario.

Reported extent to which respondents agreed or disagreed with statements concerning the use of artificial intelligence under Clinical Scenario 2, where the artificial intelligence is used after the consultation (run overnight) and provides a second opinion on diagnosis the following morning. Allowable responses were: Strongly disagree (score 1), Disagree (score 2), Neither agree nor disagree (score 3), Agree (score 4), Strongly agree (score 5).

<i>Question number & Statement</i>	<i>Ranked score, mean (SD)</i>	<i>% (n/N) selected each category</i>				
		1	2	3	4	5
In the future, I see myself using AI as...						
4.1 A tool to aid the diagnosis of retinal disease	4.1 (0.7)	0 (0/133)	2.3 (3/133)	12.0 (16/133)	61.7 (82/133)	24.1 (32/133)
4.2 A learning tool to improve my own diagnostic abilities	4.1 (0.7)	0 (0/133)	1.5 (2/133)	14.3 (19/133)	61.7 (82/133)	22.6 (30/133)
4.3 Its increased use to aid the diagnosis of retinal disease excites me	3.9 (0.8)	0.8 (1/133)	3.8 (5/133)	23.3 (31/133)	51.9 (69/133)	20.3 (27/133)

Abbreviations: SD; Standard deviation, AI; Artificial intelligence.

Table s6. Univariate and multivariate analysis of factors influencing attitudes toward Artificial Intelligence.

Evaluation of the association between each participant characteristic and the primary outcome question 3.1 “*In the future, I see myself using AI as a tool to aid the diagnosis of retinal disease*”.

<i>Participant characteristic</i>	<i>Significance</i>
Number of computerised systems used	P=0.004
Gender	P=0.327
Age	P=0.882
Years practising in primary eye care	P=0.829
Workplace location (Australian state/territory)	P=0.652
Workplace location (geographical classification) [†]	P=0.746
Rural vs. urban location [‡]	P=0.474
Workplace setting	P=0.964
Number of working optometrists	P=0.568
Number of patients seen daily	P=0.317
Number of patients with retinal disease seen daily	P=0.644
Level of accessibility to ophthalmology services	P=0.290
Form of medical record system used	P=0.176
Decision-making related to the use of digital health technologies	P=0.184
Responsibility for IT systems	P=0.542

[†]Workplace locations classified according to the Australian government’s Modified Monash Model for measuring remoteness and population size. The Modified Monash Model categories were grouped for analysis as follows: Major city (MM1), Large town (MM2), Rural (MM3 to MM7).

[‡] Workplace locations classified according to the Australian government’s Modified Monash Model for measuring remoteness and population size. The Modified Monash Model categories were grouped for analysis as follows: Urban (MM1, MM2), Rural (MM3 to MM7).