

SUPPLEMENTARY MATERIALS

Remote Monitoring of Visual Function in Patients with Maculopathy: The Aphelion Study

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Table S1 Survey questions

Survey question	Answer format
I found this test easy to use	1 to 5 scale; strongly disagree (1) to strongly agree (5)
I found the amount of time needed to complete this test	1 to 5 scale; much too long (1) to much too short (5)
I was confident that I was providing responses to the best of my ability	1 to 5 scale; strongly disagree (1) to strongly agree (5)
Between the E test and the C test, which was easiest to use?	1 to 5 scale; E was the easiest (1) to C was the easiest (5)
I would imagine that most people would learn to use these digital vision tests very quickly	1 to 5 scale; strongly disagree (1) to strongly agree (5)
What type of personal smartphone do you have?	Multiple choice: • Apple (e.g., iPhone 7) • Android (e.g., Samsung Galaxy S9) • Windows (e.g., Nokia Lumina 1250) • Other • I don't have a personal smartphone
What do you use your smartphone for?	Multiple choice, multiple answers permitted: • Making phone calls • Web/internet • Sending messages (e.g., text messages) • Banking apps • Food ordering apps (e.g., Uber Eats) • Ride ordering apps (e.g., Uber, Lyft) • Shopping (e.g., Amazon) • Social media (e.g., Facebook, Instagram) • Health apps • Tracking fitness • Reading books/magazines/newspapers • Taking pictures • Watching TV shows or movies • Maps (e.g., Google Maps) • I don't have a smartphone
Do you have a tablet device at home (e.g., iPad, Amazon Fire, Samsung Galaxy Tab)?	Yes or no
What do you use your tablet for?	Multiple choice, multiple answers permitted: • Making phone calls • Web/internet • Sending messages (e.g., text messages) • Banking apps • Food ordering apps (e.g., Uber Eats) • Ride ordering apps (e.g., Uber, Lyft) • Shopping (e.g., Amazon)

I would feel comfortable taking these tests at home using a smartphone or tablet
How often would you be willing to check your vision using these tests at home on a smartphone or tablet?

If your doctor recommended that you take the vision tests twice per week at home, what would be the maximum amount of time you would be willing to spend doing that?

If your doctor recommended that you take the vision tests twice a week at home, what would help you to keep up with testing?

- Social media (e.g., Facebook, Instagram)
- Health apps
- Tracking fitness
- Reading books/magazines/newspapers
- Taking pictures
- Watching TV shows or movies
- Maps (e.g., Google Maps)
- I don't have a tablet

1 to 5 scale; strongly disagree (1) to strongly agree (5)

Multiple choice:

- Daily
- Twice per week
- Once per week
- Once per month
- I would be willing to take it as often as my doctor recommends
- I would not be willing to check my vision at home

Multiple choice:

- 3–5 min
- 6–10 min
- 11–15 min
- 16–20 min
- More than 20 min

Multiple choice, multiple answers permitted:

- Calendar reminders
 - Tracking the number you've done in a row (your streak)
 - Tracking your progress towards a testing goal
 - Sharing your progress with your doctor using the app
 - Sharing your progress with selected family members using the app
 - Receiving feedback from your doctor through the app
 - Receiving feedback from selected family members through the app
 - Other (please specify)
 - None of the above
-

Table S2 Time taken to complete each mVTx test

	Time taken to complete the test, minutes, median (IQR)
Tumbling E	3.22 (2.37–3.93)
Landolt C	3.55 (2.69–4.85)
Contrast sensitivity	3.75 (2.81–5.38)
SDH test	2.28 (1.86–3.25)

mVTx myVisionTrack expanded version, *IQR* interquartile range, *SDH* shape discrimination hyperacuity

Table S3 Test order randomization scheme

Test sequence		All participants
		<i>N</i> = 122
mVTx tests performed first	Contrast sensitivity, Landolt C, tumbling E, SDH, Pelli–Robson chart, ETDRS chart	10 (8.2)
	Contrast sensitivity, tumbling E, Landolt C, SDH, Pelli–Robson chart, ETDRS chart	10 (8.2)
	Landolt C, contrast sensitivity, tumbling E, SDH, ETDRS chart, Pelli–Robson chart	11 (9.0)
	Landolt C, tumbling E, contrast sensitivity, SDH, ETDRS chart, Pelli–Robson chart	10 (8.2)
	Tumbling E, contrast sensitivity, Landolt C, SDH, ETDRS chart, Pelli–Robson chart	11 (9.0)
	Tumbling E, Landolt C, contrast sensitivity, SDH, ETDRS chart, Pelli–Robson chart	10 (8.2)
	Pelli–Robson chart, ETDRS chart, contrast sensitivity, Landolt C, tumbling E, SDH	10 (8.2)
	Pelli–Robson chart, ETDRS chart, contrast sensitivity, tumbling E, Landolt C, SDH	10 (8.2)
Standard clinical tests performed first	ETDRS chart, Pelli–Robson chart, Landolt C, contrast sensitivity, tumbling E, SDH	10 (8.2)
	ETDRS chart, Pelli–Robson chart, Landolt C, tumbling E, contrast sensitivity, SDH	10 (8.2)
	ETDRS chart, Pelli–Robson chart, tumbling E, contrast sensitivity, Landolt C, SDH	10 (8.2)
	ETDRS chart, Pelli–Robson chart, tumbling E, Landolt C, contrast sensitivity, SDH	10 (8.2)

ETDRS Early Treatment Diabetic Retinopathy Study, *mVTx* myVisionTrack expanded version, *SDH* shape discrimination hyperacuity

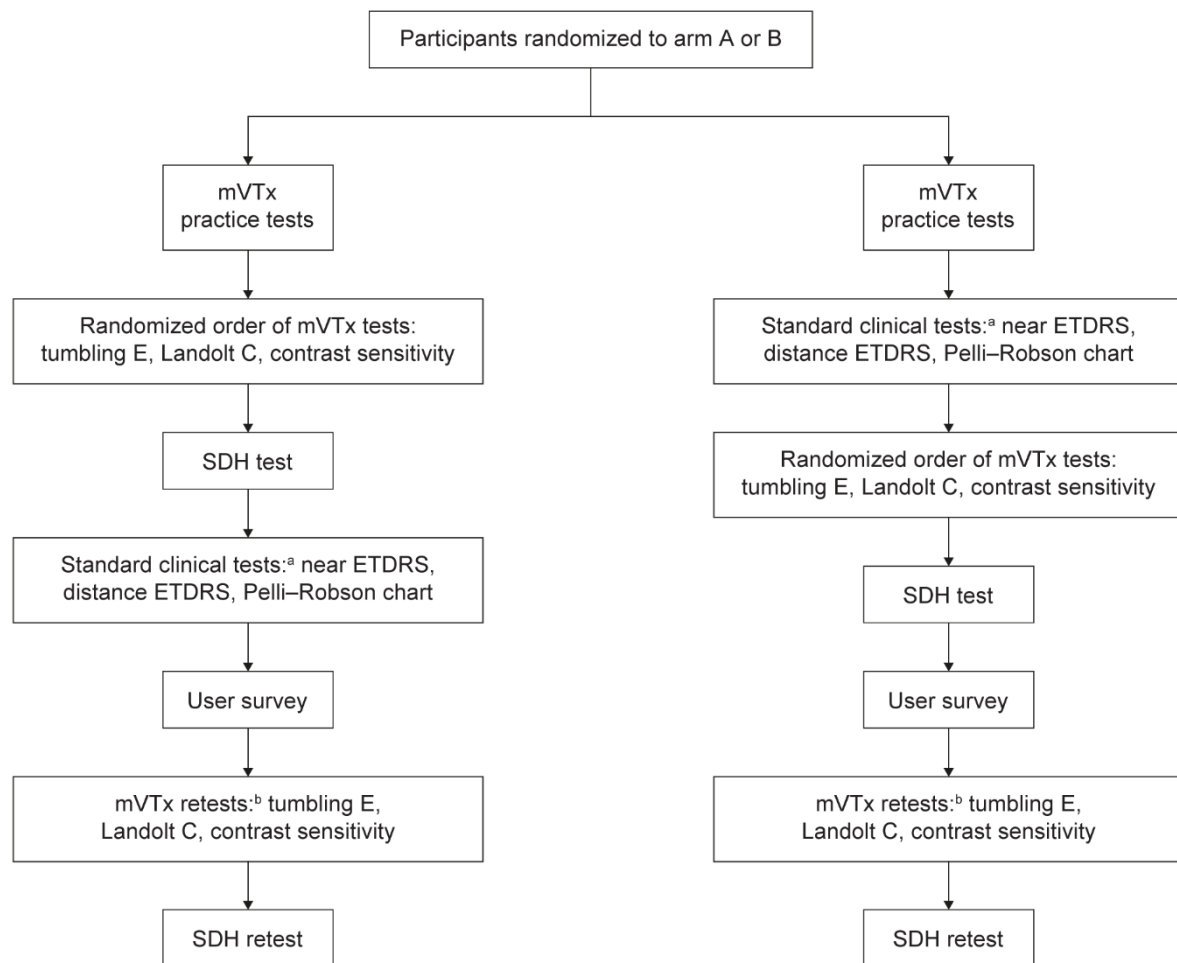


Fig. S1 Study design. ^aStandard clinical tests were performed in the same order as the corresponding mVTx tests. ^bRetests were performed in the same order as the first round of testing. *mVTx* myVisionTrack expanded version, *ETDRS* Early Treatment Diabetic Retinopathy Study, *SDH* shape discrimination hyperacuity

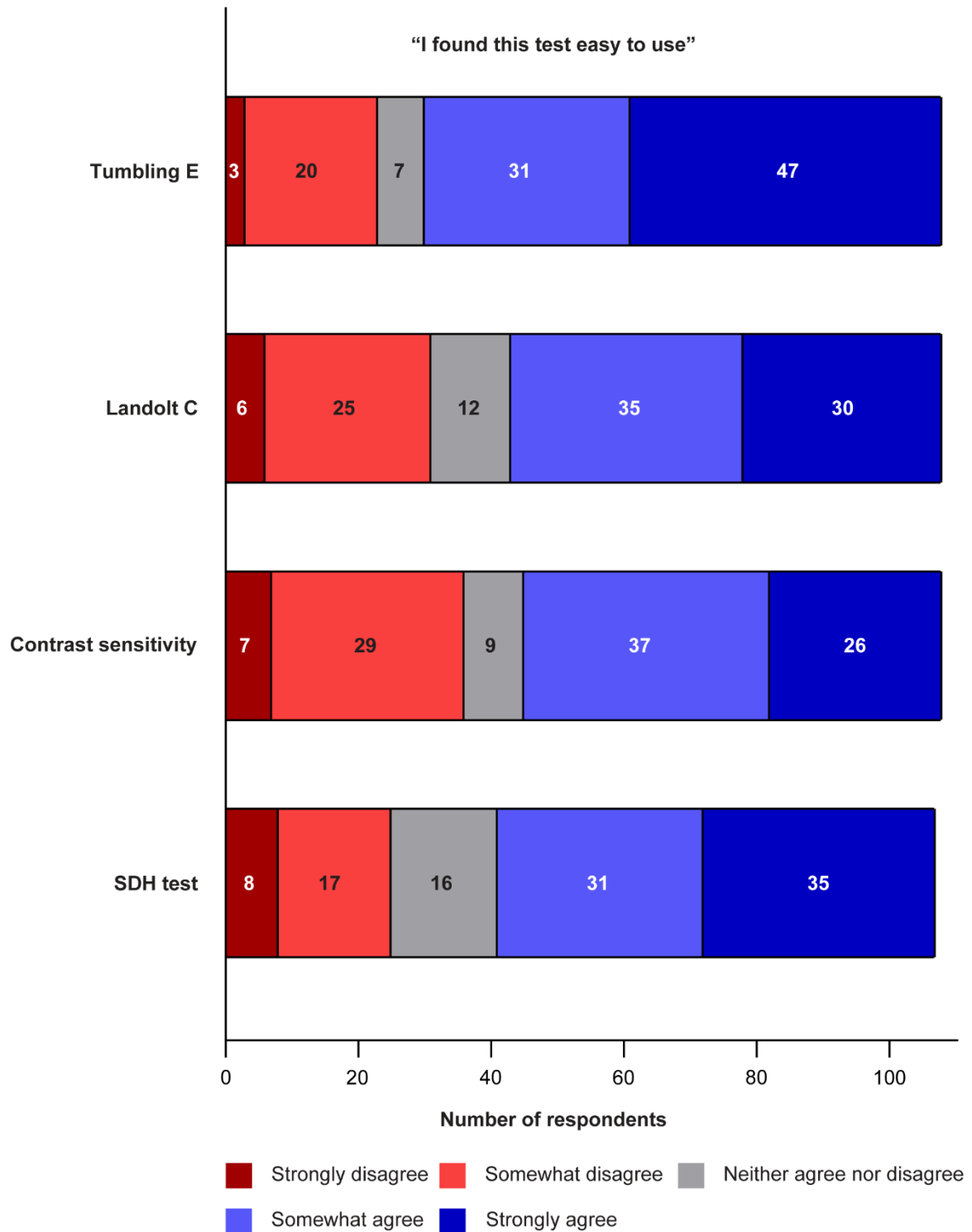


Fig. S2 Responses on the ease-of-use item from the patient usability survey. $n = 108$, except for the SDH test, $n = 107$. *SDH* shape discrimination hyperacuity