THE COLLEGE OF OPTOMETRISTS

Stage Two

Overarching case scenario 5

AGE AND GENDER Male Aged 55 years

ETHNIC BACKGROUND Caucasian

OCCUPATION AND HOBBIES Hotel Reception . Hobbies: sea angling, sailing. Driver

PRESENTING SYMPTOMS AND HISTORY RE has been uncomfortable and slightly red for past 2 weeks. Possibly vision slightly blurred in RE. Monthly disposable CLs worn for past 2 years, last aftercare 3 months ago. Current pair of lenses are 1 week old, normally wears 16 hours per day; worn 6 hours today. All-in-one multipurpose disinfecting/storage solution. No personal or family history of eye disorder.

GENERAL HEALTH AND MEDICATION Had flu last week, still feeling "under the weather''.

PRESENT Rx, CENTRATION AND ACUITIES Spectacles 5 years old CR39 SV lenses ocd= 60mm

RE: -4.50/-0.50 x 20

LE: -6.25/-0.25 x 160 bvd = 12mm

VA RE: 6/9 N10 LE: 6/6+1 N10

Contact Lenses RE: -4.00 LE: -4.50 VA RE: 6/7.5 LE: N5

Lenses show no signs of damage/deposits

PD/NCD 60/57 at 33 ems

VISION RE: 3/60 LE: 6/60 **PINHOLE VISION** RE: 6/7.5 LE: 6/6

REFRACTION

RE: -4.50/-0.25 x 20 Poor ret reflex bvd = 12mm

LE: -6.50/-0.25 x 160 Good ret reflex bvd = 12mm.

Add+ 1.25 R&L

VA **Distance** RE: 6/7.5 LE: 6/5-2 **Near** RE: N5 LE: N5

ACCOMMODATION RE: 3.5 LE: 3.5 Binoc: 4D

BINOCULAR STATUS

With Rx Distance Maddox Rod ortho

Near Maddox Wing 6 exophoria

Near Mallett Unit No slip Horiz or Vert

MOTILITY full, no diplopia **CONVERGENCE** 8 cm

PUPIL REACTIONS direct, consensual and near reflexes present: RE waters when light shone into it

FUNDUS EXAMINATION see attached

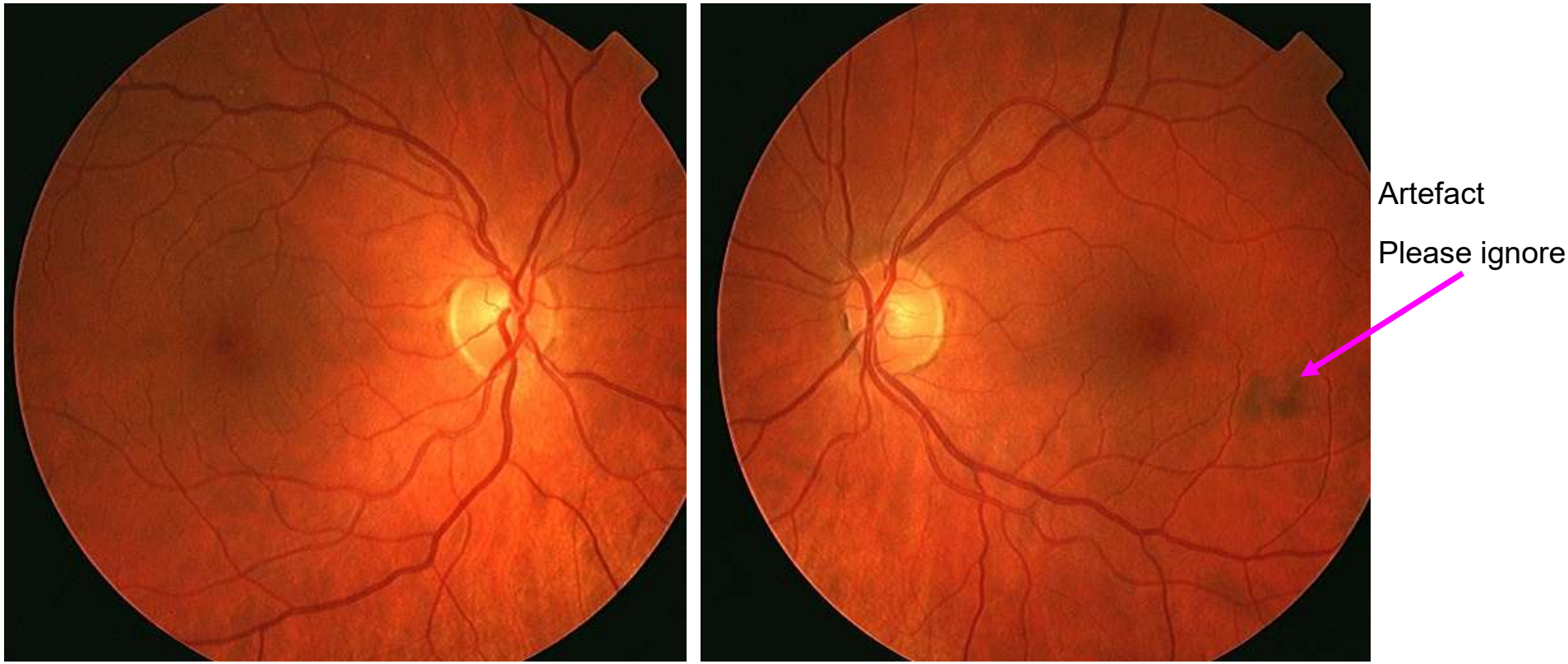
FIELDS see attached

IOP RE: 11 mmHg LE: 12 mmHg Goldman 4.00pm

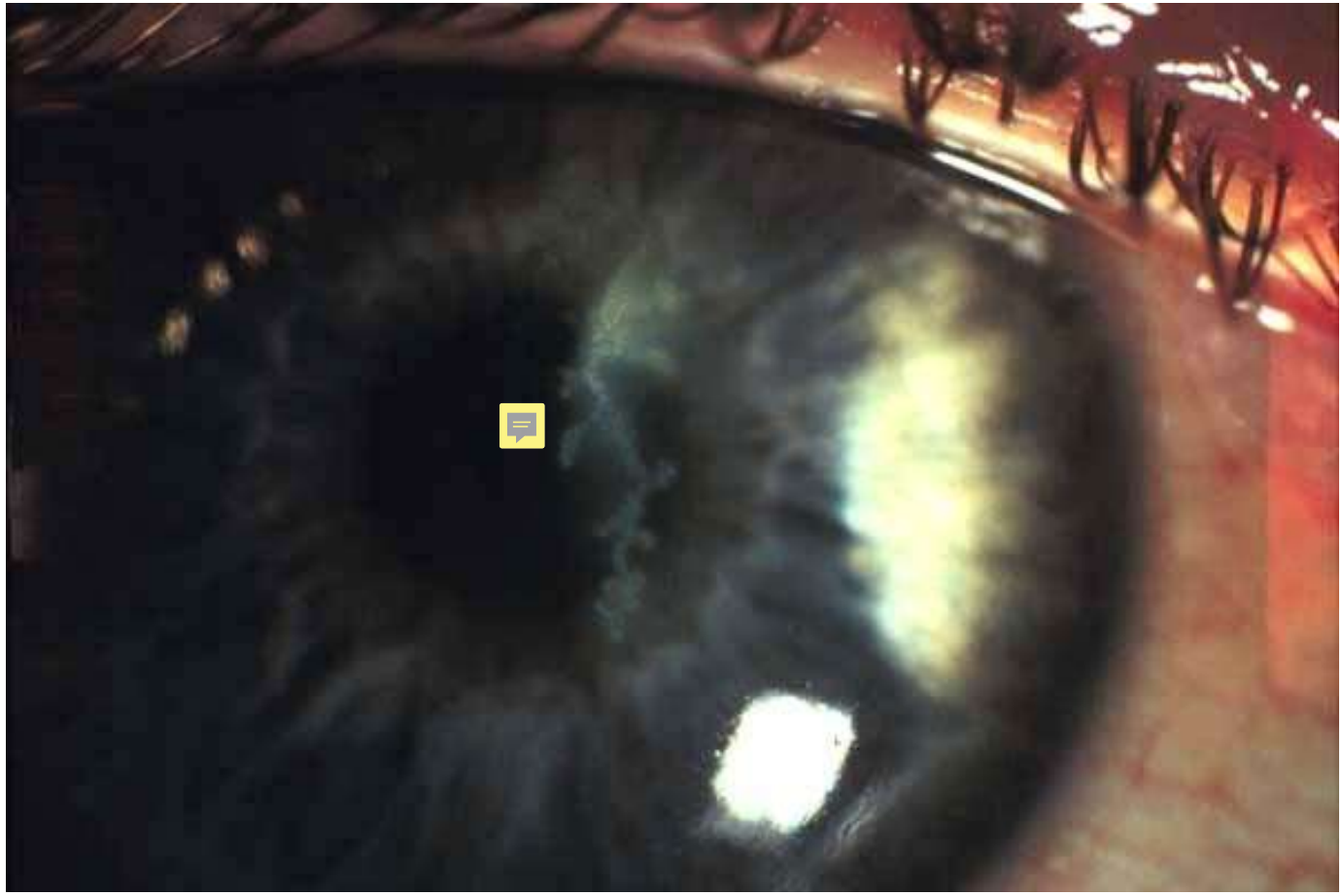
EXTERNAL EYE EXAMINATION see attached

COLOUR VISION see attached

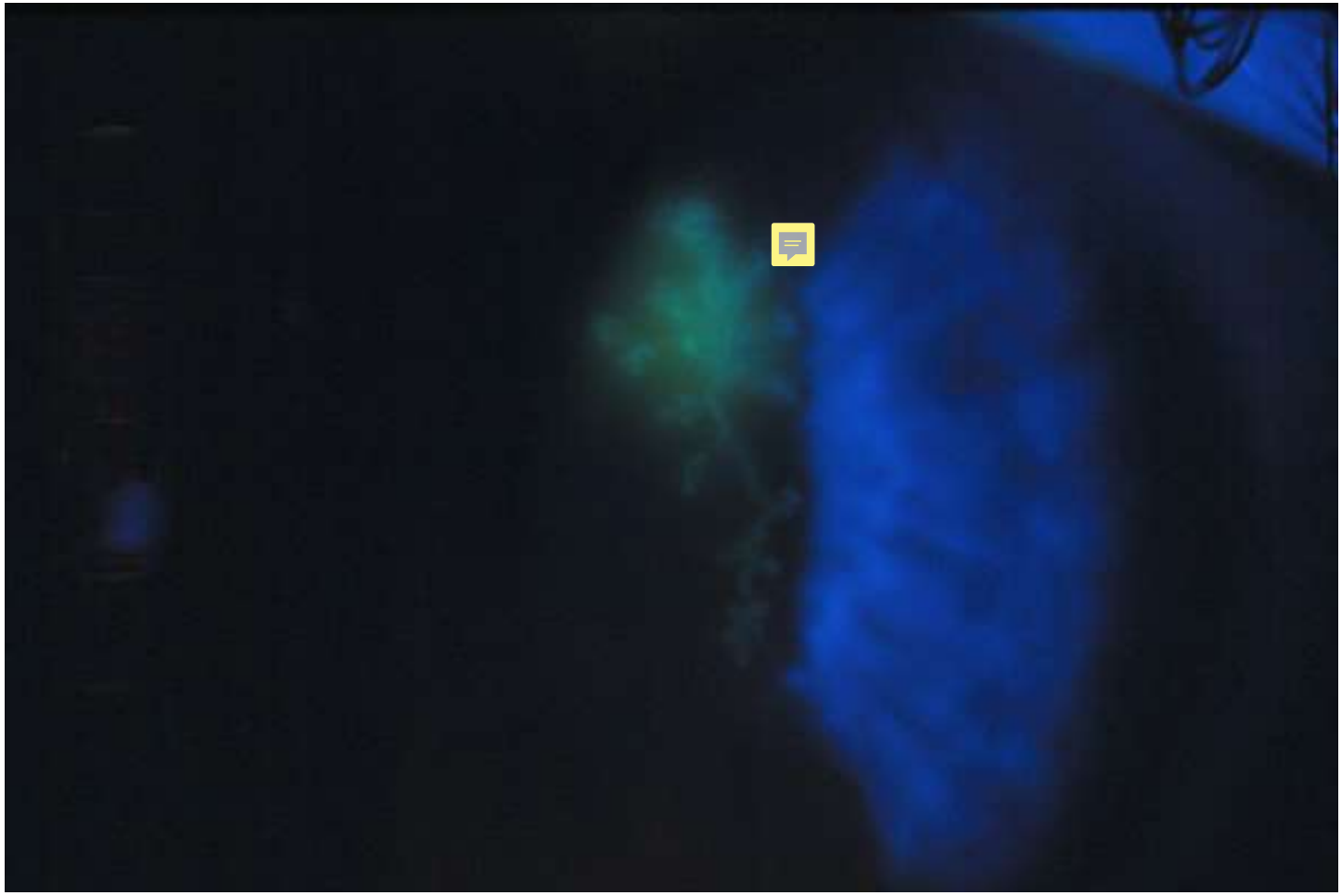
Fundus Image



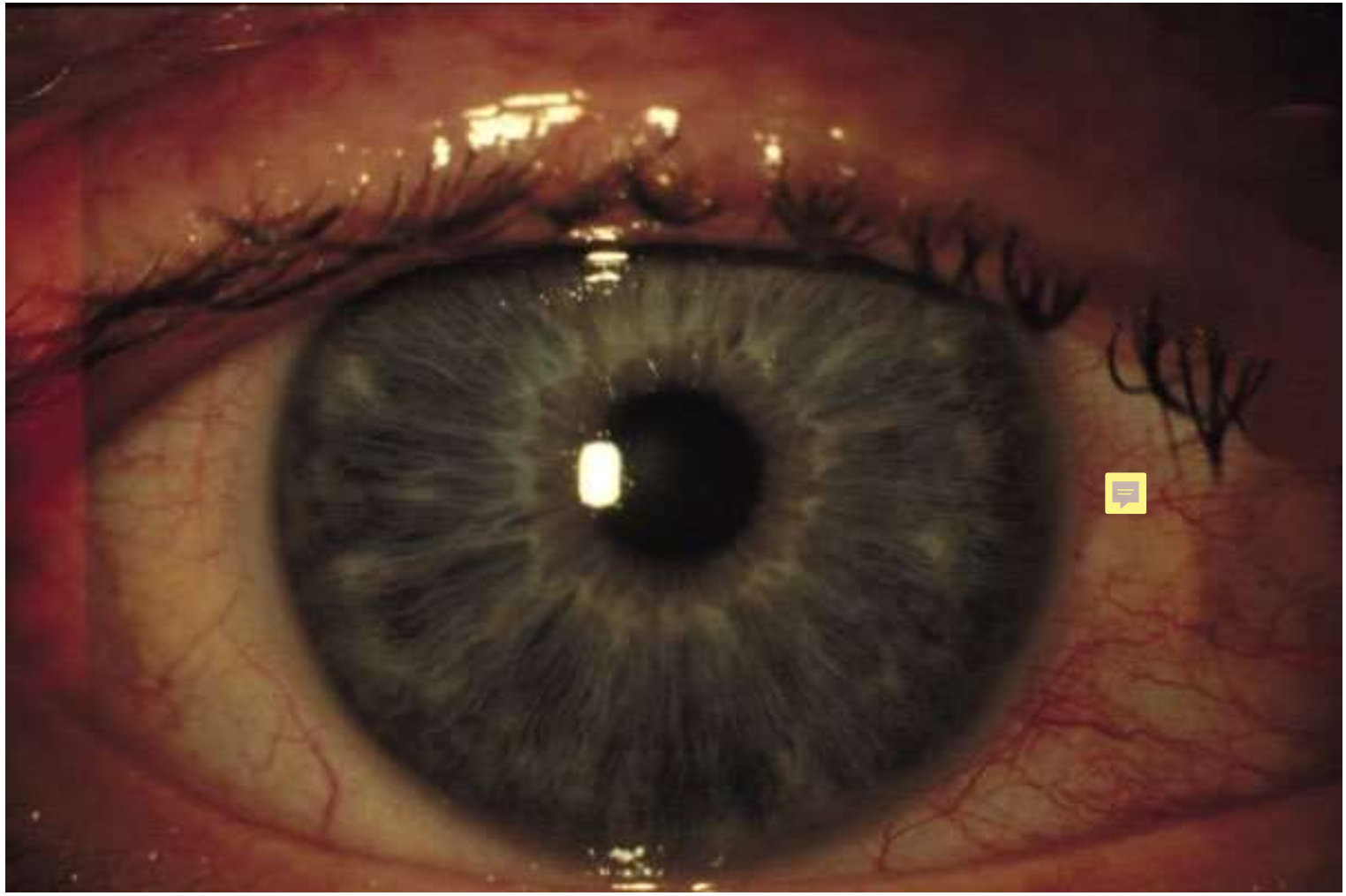
External Eye RE



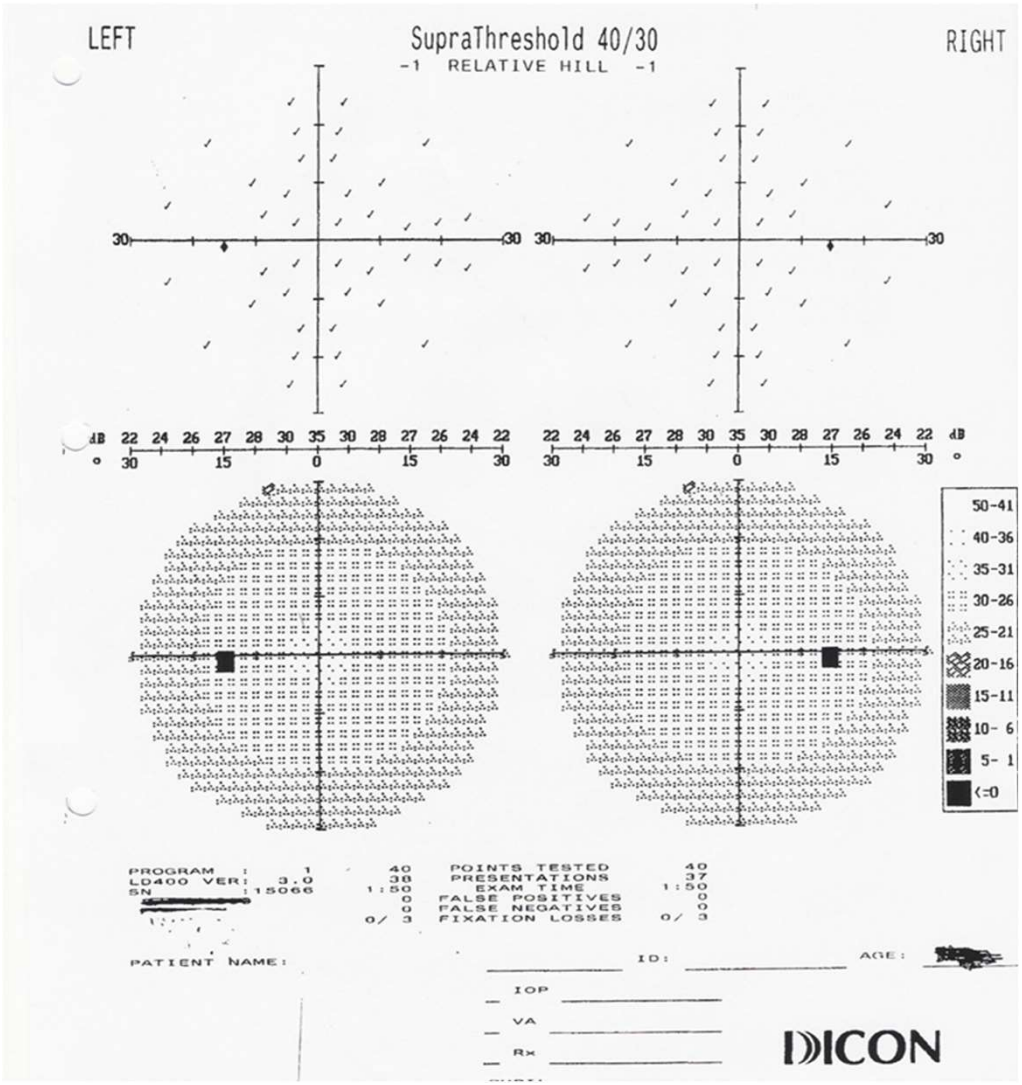
External Eye RE



External Eye LE



Field RE & LE


LEFT
SupraThreshold 40/30
-1 RELATIVE HILL -1
RIGHT
30
30
30
30
dB 22 24 26 27 28 30 35 30 28 27 26 24 22
30 15 0 15 30
22 24 26 27 28 30 35 30 28 27 26 24 22 dB
30 15 0 15 30
50-41
40-36
35-31
30-26
25-21
20-16
15-11
10- 6
5- 1
<=0
PROGRAM : 1
LD400 VER: 3.0
SN :15066
40 POINTS TESTED 40
38 PRESENTATIONS 37
1:50 EXAM TIME 1:50
0 FALSE POSITIVES 0
0 FALSE NEGATIVES 0
0/ 3 FIXATION LOSSES 0/ 3
PATIENT NAME:
ID:
AGE:
IOP
VA
Rx
DICON

Colour Vision (Binocular)

City University Colour Vision Test (3rd Edition 1998)

Subject: _____ Address: _____

Male/Female: ____ Examiner: _____ Date: _____

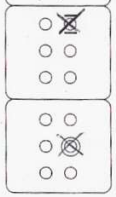
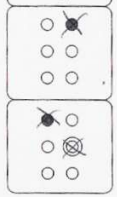
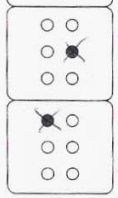
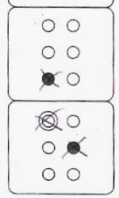
Spectacles worn?: ____ Eye(s) tested (delete as needed): both RE LE

Viewing at 40cm approx. Illumination ('Daylight' type) level: _____ Lux: _____

Part One, *screening / selection: PD or Tritan*

FORMULA: Here are some rows of 3 coloured spots, each page has four rows.
Please do not touch the pages.
Starting with the left row at the top of the page, tell me if the colour of one of the 3 spots is different from the colour of the other two spots in the same row.
The three colours *may* be the same.
In the top right hand row at the top of the page, is there a different colour?
And the other rows, is there a different colour in one or both rows?

Page number

Symbols	1	2	3	4
○ Should be seen by all subjects ● R/G defect may miss ◎ Tritan defect may miss				
No. seen on each page:	2	3	2	3

TOTAL correctly seen: (10) 9 8 7 6 5 4 3 2 1 0

RECORD: Complete Part One of the person's record sheet with a cross **'X'** over each spot chosen as **different in colour** from the other two spots in the **same** row of three spots. (see example)

INTERPRETATION: **10** or **9** spots correctly seen suggests normal colour vision, at least 'adequate' for most every-day purposes. If less than **8** - refer to instructions.

City University Colour Vision Test (3rd Edition 1998)

Part Two, *detection / selection: Protan, Deutan or Tritan*

FORMULA: Here are 4 coloured spots **around** the one in the centre.
Please do not touch the pages.
Tell me which spot looks most like the **colour** of the one in the centre.
Use the words 'TOP', 'BOTTOM', 'RIGHT' or 'LEFT'.
(Note: Indicate any variation from part ONE as to eye(s) tested, etc.)

		INTERPRETATION			
Page (**D** is for demonstration)	Subject's choice of match and eye(s): R, L, Both	Normal	Protan	Deutan	Tritan
5		R	B	L	T
6		L	R	T	B
7		R	L	B	T
8		L	T	R	B
9		R	L	B	T
10		R	L	B	T
SCORE:		/6	/6	/6	/6

RECORD: Complete Part Two of the person's record sheet with name, date, etc., R, L, Both eyes, as appropriate.
Mark correct spaces with person's response (B, R, L, T) clearly.
A 'score' out of 6 may be indicated if required. (**see example given**)

INTERPRETATION: A 'normal response' score of 6 suggests that colour vision is at least 'adequate' for most every-day purposes.
If **more** than ONE entry 'Protan', 'Deutan', or 'Tritan', refer to appendix 3.

PROFESSIONAL OPINION, as appropriate =

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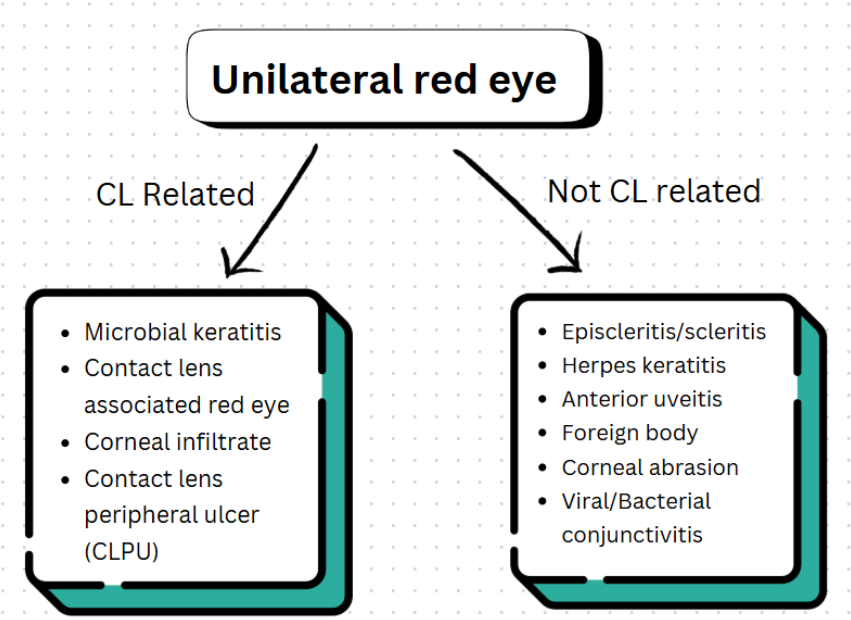
Case scenario 5

Key points:

- Monthly CL wearer, wears his lenses 6/7, 16hours a day
- Does water sports too (risk of CL-related red eyes/complications)
- RE red, uncomfortable, blurry for 2/52
- Flu

Questions to ponder:

- **What is the differential diagnosis of red eyes**
- **What other questions would you ask**
- **What tests would you do**
- **What is your management and referral urgency**



We already know from the anterior photograph the diagnosis is herpes simplex keratitis due to the presence of dendritic bulbs on NaFl.

However, before we jump into that, let's go through the thought process. This is also a common OSCE station, except that sometimes you don't have the answers right away.

During history taking, we should ask about whether he does water sports with his contact lens, with goggles or without. This is a huge risk factor for CL-related ulcers.

When seeing a red eye patient, it's worth asking if the symptoms have improved, worsened or stay the same since the onset. Serious pathology tends to worsen with time, such as microbial or infective keratitis, untreated anterior uveitis, scleritis.

Those that improve with time are subconjunctival haemorrhage, episcleritis, bacterial conjunctivitis, corneal abrasion.

Those that stay the same: CLARE, CLPU, viral conjunctivitis, foreign body.

Be concise with the key words.

Clarify if its pain, uncomfortable, or slight irritation? A lot of patients use this term interchangeably.

How bad is it, from a scale of 1 to 5, 5 being the worse?

Record negative symptoms. It shows that you ask and you're thinking about other possible causes of red eyes.

'No lacrimation. No photophobia.'

'Did you use anything to make it feel better?'

Management

Explain the cause of red eye, management, referral urgency, treatment options.

Layman explanation
'Herpes simplex keratitis is an eye infection caused by the herpes virus, which usually causes cold sores. When this virus affects the eye, it can make it red, sore, and sensitive to light. Your eye may feel uncomfortable, and your vision could get blurry.

Think of it like having a cold sore but in your eye. This needs to be treated quickly with eye drops or ointments to fight the virus and reduce inflammation. I am referring you to the eye clinic today to get this looked at by an ophthalmologist. In some cases, the infection can reoccur when the immune system is low, and this may cause scarring and blurry vision.*

Stop wearing your contact lens until this is resolved and throw your current lens away.'

**According to the COO guidelines, herpes simplex keratitis confined to epithelium is referred urgently to the HES (within 1 week). However, as if the patient is a contact-lens wearer/stromal involvement/children, it' an emergency referral (same day)*

Even though the red eye is unlikely due to CL-wear, we should advise against the danger of wearing CL and doing water sports as this increases his risks of microbial keratitis. Once this incident has been resolved, consider a separate CL check appointment to discuss options to refit the CL as the left eye appears red (perhaps due to overwearing CL).

Prescription goggles can be used for water sports without putting himself at risk.

Some other points of discussion to consider

Contact tonometry **should not** be done on a compromised cornea. IOP check with non-contact tonometry is sufficient.

Topical acyclovir ointment is the first line of treatment. Sometimes topical steroid drops may be required and the IOP is checked prior and after to check for steroid respondent. If so, anti-glaucoma drops are required to reduce the IOP.

Doing visual fields and colour vision in this case seems unnecessary. These are extra tests, usually done after anterior and posterior eye exam. Whenever a test is done, think of what the purpose is behind doing it. Is it to rule out a differential diagnosis?