ACMO SAMPLE PATIENT 1

Demographics
42-year-old black male; accountant

Chief complaint
"My left eye is red and irritated."

History of present illness
Character/signs/symptoms: redness and irritation
Location: OS
Severity: 7/10 on pain scale
Nature of onset: acute
Duration: 2 weeks
Frequency: constant
Exacerbations/remissions: none
Relationship to activity or function: none
Accompanying signs/symptoms: photophobia

Secondary complaints/symptoms
blurred vision in left eye

Patient ocular history
metallic corneal foreign body OS 5 years ago

Patient medical history
unremarkable

Medications taken by patient
no relief with TobraDex® q.i.d. OS x 1 week

Patient allergy history
NKMA

Family ocular history
unremarkable

Family medical history
father: lung cancer

Review of systems
Constitutional/general health: denies
Ear/nose/throat: denies
Cardiovascular: denies
Pulmonary: denies
Endocrine: denies
Dermatological: cold sore on lower lip
Gastrointestinal: denies
Genitourinary: denies
Musculoskeletal: denies
Neuropsychiatric: denies
Immunologic: denies
Hematologic: denies

Mental status
Orientation: oriented to time, place, and person
Mood: normal
Affect: normal
Clinical findings

BVA: Distance
OD: 20/20
OS: 20/30

Pupils: PERRL, negative RAPD
EOMs: full, no restrictions
Confrontation fields: FTFC OD, OS

Slit lamp:
- lids/lashes/adnexa: unremarkable OD, OS
- conjunctiva: normal OD, 2+ diffuse injection with 1+ palpebral follicles OS
- cornea: clear OD, see images 1, 2 OS
- anterior chamber: deep and quiet OD, OS
- iris: normal OD, OS
- lens: clear OD, OS
- vitreous: clear OD, OS

IOPs: 14 mmHg OD, 12 mmHg OS @ 3:00 PM by non-contact tonometry

Fundus OD:
- C/D: 0.3H/0.35V
- macula: normal
- posterior pole: normal
- periphery: unremarkable

Fundus OS:
- C/D: 0.35H/0.4V
- macula: normal
- posterior pole: normal
- periphery: unremarkable

Blood pressure: 126/84 mmHg, right arm sitting
Pulse: 78 bpm, regular

Image 1: following instillation of rose bengal
Image 2: following instillation of fluorescein
Correct answer

(Item 1 of Patient 1)
1. Which of the following is the MOST likely diagnosis of the patient's corneal condition OS?

   a. Neurotrophic keratitis
   b. Herpes simplex keratitis
   c. Keratoconjunctivitis sicca
   d. Recurrent corneal erosion
   e. Pseudodendrite
   f. Thygeson's superficial punctate keratitis

(Item 2 of Patient 1)
2. Which of the following would be MOST helpful in confirming the diagnosis?

   a. Case history
   b. Impression cytology
   c. Corneal sensitivity testing
   d. Phenol red thread test
   e. Corneal topography

(Item 3 of Patient 1)
3. The condition resolved with appropriate treatment. However, the patient returns 4 months later with a recurrence of the condition plus a large area of stromal haze. Which of the following is MOST appropriate to treat the condition at the 4 month follow-up and to prevent recurrences?

   a. Oral prednisone
   b. Viroptic®
   c. Oral acyclovir
   d. Pred Forte®
   e. Oral doxycycline
   f. Restasis®

(Item 4 of Patient 1)
4. Which of the following ocular structures is LEAST likely to be affected by future manifestations of this patient's condition?

   a. Retina
   b. Corneal epithelium
   c. Eyelid
   d. Corneal endothelium
   e. Lacrimal gland
ACMO SAMPLE PATIENT 2

Demographics
56-year-old white male; truck driver

Chief complaint
blur when reading

History of present illness
Character/signs/symptoms: blur OD, OS
Location: near
Severity: moderate
Nature of onset: gradual
Duration: 2 years
Frequency: constant
Exacerbations/remissions: none
Relationship to activity or function: worse when reading
Accompanying signs/symptoms: asthenopia

Secondary complaints/symptoms
headaches

Patient ocular history
last eye exam 5 years ago

Patient medical history
HTN; COPD; erectile dysfunction; GERD; obesity

Medications taken by patient
albuterol; cimetidine; clonidine; ipratropium; lisinopril; metoprolol; sildenafil

Patient allergy history
sulfa medications

Family ocular history
mother: glaucoma

Family medical history
father: HTN; type 2 DM; non-Hodgkins lymphoma

Review of Systems:
Constitutional/general health: obesity
Ear/nose/throat: denies
Cardiovascular: denies
Pulmonary: exertional dyspnea
Endocrine: denies
Dermatological: denies
Gastrointestinal: heartburn
Genitourinary: erectile dysfunction
Musculoskeletal: denies
Neuropsychiatric: denies
Immunologic: denies
Hematologic: denies

Mental Status:
Orientation: oriented to time, place, and person
Mood: normal
Affect: normal

Clinical findings
BVA: Distance
OD: 20/20
OS: 20/20
Pupils: PERRL, negative RAPD
EOMs: full, no restrictions
Confrontation fields: FTFC OD, OS
Slit lamp:
  lids/lashes/adnexa: 1+ blepharitis OD, OS
  conjunctiva: normal OD, OS
  cornea: clear OD, OS
  anterior chamber: deep and quiet OD, OS
  iris: normal OD, OS
  lens: 1+ NS OD, OS
  vitreous: clear OD, OS
IOPs: 27 mmHg OD, 28 mmHg OS @ 3:00 PM by applanation tonometry
Gonioscopy: CB visible with open approach 360° OD, OS
Fundus OD:
  C/D, macula, posterior pole: see Images 1, 3
  periphery: unremarkable
Fundus OS:
  C/D, macula, posterior pole: see Images 2, 4
  periphery: unremarkable
Blood pressure: 130/85 mmHg, right arm sitting
Pulse: 64 bpm, regular
Corneal pachymetry: 498 microns OD, 499 microns OS
Visual field testing: see Image 5 OD, see Image 6 OS
Correct answer

(Item 1 of Patient 2)
5. Which of the following is LEAST likely to be included in the differential diagnosis of this patient’s posterior segment condition?

a. AION
b. Papilledema
c. Optic nerve head drusen
d. POAG

(Item 2 of Patient 2)
6. Which 2 of the following would be useful in determining the diagnosis? (Select 2 answer options)

a. Goldmann visual field
b. B-scan ultrasonography
c. Lumbar puncture
d. CT scan of the head and orbits without contrast
e. MRI of the head and orbits with and without contrast
f. Westergren ESR and C-reactive protein
g. Home BP monitoring
h. Bartonella henselae titers

(Item 3 of Patient 2)
7. Which of the following is the MOST appropriate treatment for this patient?

a. Timoptic® 0.5% b.i.d. OU
b. ALT 180° OU
c. Trusopt® 2% t.i.d. OU
d. Oral acetazolamide
e. Travatan Z® h.s. OU
f. Oral prednisone

(Item 4 of Patient 2)
8. Which of the following is MOST appropriate to include in the education of this patient?

a. Driving a truck is contraindicated.
b. A diet rich in green leafy vegetables may be beneficial.
c. Sildenafil should be used with caution.
d. Visual field changes will improve with time.
e. Weight loss will improve the ocular prognosis.
ACMO SAMPLE PATIENT 3

Demographics
54-year-old white male; restaurant owner

Chief complaint
blurred vision in both eyes

History of present illness
Character/signs/symptoms: blur OD, OS
Location: near
Severity: moderate
Nature of onset: gradual onset
Duration: 2 years
Frequency: constant
Exacerbations/remissions: none
Relationship to activity or function: worse with reading
Accompanying signs/symptoms: none

Secondary complaints/symptoms
reading glasses are badly scratched

Patient ocular history
last eye exam 4 years ago

Patient medical history
depression; HTN; hyperlipidemia; erectile dysfunction

Medications taken by patient
aspirin; felodopine; simvastatin; venlafaxine; sildenafil

Patient allergy history
NKMA

Family ocular history
unremarkable

Family medical history
unremarkable

Review of systems
Constitutional: easily fatigued
Ear/nose/throat: decreased hearing L > R
Cardiovascular: denies
Pulmonary: denies
Endocrine: denies
Dermatological: denies
Gastrointestinal: colon polyps
Genitourinary: erectile dysfunction
Musculoskeletal: morning stiffness, back, hips, and legs
Neuropsychiatric: depression
Immunologic: denies
Hematologic: denies

Mental status
Orientation: oriented to time, place, and person
Mood: normal
Affect: normal

Clinical findings
BVA: Distance
   OD: 20/60
   OS: 20/50
Pupils: PERRL, negative RAPD
**EOMs:** full, no restrictions  
**Confrontation fields:** FTFC OD, OS  
**Slit lamp:**  
- lids/lashes/adnexa: unremarkable OD, OS  
- conjunctiva: normal OD, OS  
- cornea: arcus OD, OS  
- anterior chamber: deep and quiet OD, OS  
- iris: normal OD, OS  
- lens: 1+ NS OD, OS  
- vitreous: syneresis OD, OS  
**IOPs:** 16 mmHg OD, 16 mmHg OS @ 2:00 PM by applanation tonometry  
**Fundus OD:**  
- C/D, macula: see Image 1  
- posterior pole, periphery: unremarkable  
**Fundus OS:**  
- C/D, macula: see Image 2  
- posterior pole, periphery: unremarkable  
**Imaging:** plain film x-ray of the skull shows generalized thinning and demineralization  
**Blood pressure:** 118/84 mmHg, right arm, sitting  
**Pulse:** 88 bpm, regular  
**Laboratory tests:**  
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<tr>
<th>Test</th>
<th>Results</th>
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<tr>
<td>Cholesterol</td>
<td>235 mg/dL (H)</td>
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<tr>
<td>Alkaline phosphatase</td>
<td>130 U/L (H)</td>
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<tr>
<td>Sickle cell prep</td>
<td>negative</td>
</tr>
<tr>
<td>Calcium</td>
<td>15.2 mg/dL (H)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Reference ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholesterol</td>
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<tr>
<td>Alkaline phosphatase</td>
<td>30 – 125</td>
</tr>
<tr>
<td>negative</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>8.7 – 11.9</td>
</tr>
</tbody>
</table>
Correct answer

(Item 1 of Patient 3)

9. Which of the following systemic diagnoses is **MOST** likely associated with this patient's ocular condition?

   a. Neurofibromatosis
   b. Ehlers-Danlos syndrome
   c. Pseudoxanthoma elasticum
   d. Paget's disease of the bone
   e. Sickle cell anemia

(Item 2 of Patient 3)

10. Which of the following is the **MOST** likely location of the primary ocular structural abnormality?

   a. Nerve fiber layer
   b. Inner photoreceptor layer
   c. Outer photoreceptor layer
   d. Retinal pigment epithelium
   e. **Bruch's membrane**
   f. Choriocapillaris
   g. Sclera

(Item 3 of Patient 3)

11. Which of the following is **MOST** appropriate to include in the management of this patient?

   a. Skin biopsy
   b. MRI of the head
   c. **Radioactive bone scan**
   d. CBC with differential
   e. IOP-lowering drugs
   f. Hemoglobin electrophoresis

(Item 4 of Patient 3)

12. Which of the following ocular complications is **MOST** likely to occur?

   a. Peripheral retinal “sea fan” neovascularization
   b. Branch retinal artery occlusion
   c. **Choroidal neovascular membrane**
   d. Rhegmatogenous retinal detachment
   e. Enophthalmos secondary to erosion of orbital bones
   f. Subluxation of the lens
Demographics
   61-year-old black male; history teacher

Chief complaint
dark spot in vision in right eye

History of present illness
   Character/signs/symptoms: dark spot
   Location: central, OD
   Severity: moderate; “I can see through it, but it is like looking through water”
   Nature of onset: unsure
   Duration: sudden awareness 2 days ago
   Frequency: constant
   Exacerbations/remissions: none
   Relationship to activity or function: none
   Accompanying signs/symptoms: none

Secondary complaints/symptoms
tearing in both eyes

Patient ocular history
   unremarkable

Patient medical history
   chronic sinusitis; osteoarthritis; atypical chest pain; colonic polyps; GERD;
   type 2 DM x 7 years

Medications taken by patient
   pseudoephedrine; omeprazole; acetaminophen-codeine; metformin; low-dose enteric coated aspirin

Patient allergy history
   PCN

Family ocular history
   unremarkable

Family medical history
   mother: type 2 DM; HTN
   father: kidney transplant

Review of systems
   Constitutional/general health: denies
   Ear/nose/throat: sinus congestion
   Cardiovascular: chest pain
   Pulmonary: denies
   Endocrine: denies
   Dermatological: denies
   Gastrointestinal: heartburn; constipation
   Genitourinary: denies
   Musculoskeletal: morning joint stiffness
   Neuropsychiatric: denies
   Immunologic: denies
   Hematologic: denies

Mental status
   Orientation: oriented to time, place, and person
   Mood: normal
   Affect: normal
Clinical findings

Habitual spectacle Rx: VA Distance
  OD: -0.75 DS  20/40
  OS: -0.75 DS  20/20

Subjective refraction: VA Distance
  OD: +0.25 -0.25 x 125  20/25
  OS: -0.75 DS  20/20

Pupils: PERRL, negative RAPD
EOMs: full, no restrictions
Confrontation fields: FTFC OD, OS

Slit lamp:
  lids/lashes/adnexa: unremarkable OD, OS
  conjunctiva: benign melanosis OD, OS
  cornea: clear OD, OS
  anterior chamber: deep and quiet OD, OS
  iris: normal without NVI OD, OS
  lens: clear OD, OS
  vitreous: clear OD, OS

IOPs: 10 mmHg OD, 9 mmHg OS @ 12:40 PM by applanation tonometry

Fundus OD:
  C/D, macula, and posterior pole: see Images 1, 3
  periphery: white without pressure 360°

Fundus OS:
  C/D, macula, and posterior pole: see Image 2
  periphery: white without pressure 360°

Blood pressure: 136/90 mmHg, right arm, sitting
Pulse: 65 bpm, regular
Fluorescein angiogram: see Images 4 - 6
OCT: see Image 7

Laboratory test:

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
<th>Reference range</th>
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<tbody>
<tr>
<td>HgbA1c</td>
<td>5.7%</td>
<td>4.0 - 6.0</td>
</tr>
</tbody>
</table>

Image 1

Image 2
Image 3: red free

Image 4: FA at 8 sec

Image 5: FA at 16 sec

Image 6: FA at 2 min

Image 7
(Item 1 of Patient 4)
13. Which of the following is **MOST** likely etiology of this patient’s fundus findings OD?

a. Choroidal neovascular membrane  
b. Retinal macroaneurysm  
c. Hypotony maculopathy  
d. Valsalva retinopathy  
e. Choroidal metastasis

(Item 2 of Patient 4)
14. This patient’s OCT findings are **MOST** consistent with which of the following conditions?

a. Cystoid macular edema  
b. Large confluent drusen  
c. Vitreomacular traction syndrome  
d. **Retinal pigment epithelial detachment**  
e. Choroidal folds  
f. Exudative retinal detachment

(Item 3 of Patient 4)
15. Which of the following is the **MOST** appropriate management for this patient's fundus condition OD?

a. Photodynamic therapy  
b. **Anti-VEGF intravitreal injection**  
c. Pred Forte® and atropine  
d. Discontinuation of aspirin therapy  
e. Surgical evacuation of hemorrhage  
f. High fiber diet  
g. Oncology referral

(Item 4 of Patient 4)
16. Which of the following is the **MOST** likely source of the hyperfluorescence noted temporal to the fovea on the fluorescein angiogram OD?

a. Drusen  
b. Microaneurysms  
c. RPE drop out  
d. Lipofuscin deposits  
e. Lipid exudates
ACMO SAMPLE PATIENT 5

Demographics
47-year-old white male; mine worker

Chief complaint
primary care consult for HA evaluation

History of present illness
Character/signs/symptoms: HA
Location: “whole head”
Severity: 6/10 on pain scale
Nature of onset: gradual
Duration: 2 months
Frequency: constant
Exacerbations/remissions: none
Relationship to activity or function: worse upon awakening
Accompanying signs/symptoms: mild photophobia

Secondary complaints/symptoms
none

Patient ocular history
wears OTC readers

Patient medical history
sinusitis; asthma; HTN

Medications taken by patient
albuterol inhaler; ibuprofen; metoprolol

Patient allergy history
NKMA

Family ocular history
mother: cataracts
father: RD

Family medical history
mother: RA
father: HTN, type 2 DM

Review of systems
Constitutional/general health: malaise; 10 pound weight loss in past 4 months
Ear/nose/throat: nasal congestion
Cardiovascular: denies
Pulmonary: dyspnea, hemoptasis
Dermatological: denies
Gastrointestinal: nausea
Genitourinary: denies
Musculoskeletal: denies
Neuropsychiatric: HA
Endocrine: denies
Hematologic: denies
Immunologic: denies

Mental status
Orientation: oriented to time, place, and person
Mood: normal
Affect: normal
Clinical findings

BVA:  Distance
  OD:  20/20
  OS:  20/20

Pupils:  PERRL, negative APD

EOMs:  full, no restrictions

Confrontation fields:  constricted OD, OS

Slit lamp:
  lids/lashes/adnexa:  MGD OD, OS
  conjunctiva:  normal OD, OS
  cornea:  clear OD, OS
  anterior chamber:  deep and quiet OD, OS
  iris:  normal OD, OS
  lens:  clear OD, OS
  vitreous:  clear OD, OS

IOPs:  13 mmHg OD, 11 mmHg OS @ 10:30 AM by applanation tonometry

Fundus OD:
  C/D, macula, posterior pole:  see Image 1
  periphery:  unremarkable OD, OS

Fundus OS:
  C/D, macula, posterior pole:  see Image 2
  periphery:  unremarkable OD, OS

Blood pressure:  152/91 mmHg, right arm, sitting

Pulse:  65 bpm, regular

Visual field testing:  see Image 3 OD, see Image 4 OS

Spiral CT scan:  see Image 5

CT scan:  see Image 6
<table>
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<tr>
<th>Laboratory tests:</th>
<th>Results</th>
<th>Reference ranges</th>
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<tbody>
<tr>
<td>WBC</td>
<td>10.8 K/µL</td>
<td>3.9 - 11.0</td>
</tr>
<tr>
<td>Neutrophil %</td>
<td>60.5%</td>
<td>49 - 78</td>
</tr>
<tr>
<td>Lymphocyte %</td>
<td>31.2%</td>
<td>20 - 45</td>
</tr>
<tr>
<td>Monocyte %</td>
<td>7.4%</td>
<td>3.0 - 9.5</td>
</tr>
<tr>
<td>Eosinophil %</td>
<td>0.8%</td>
<td>0.0 - 4.0</td>
</tr>
<tr>
<td>Basophil %</td>
<td>0.1%</td>
<td>0.0 - 3.0</td>
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<tr>
<td>Neutrophil #</td>
<td>6.5 K/µL</td>
<td>1.4 - 6.5</td>
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<tr>
<td>Lymphocyte #</td>
<td>3.4 K/µL</td>
<td>1.2 - 3.4</td>
</tr>
<tr>
<td>Monocyte #</td>
<td>0.8 K/µL</td>
<td>0.0 - 1.5</td>
</tr>
<tr>
<td>Eosinophil #</td>
<td>0.1 K/µL</td>
<td>0.0 - 1.0</td>
</tr>
<tr>
<td>Basophil #</td>
<td>0.0 K/µL</td>
<td>0.0 - 0.2</td>
</tr>
<tr>
<td>RBC</td>
<td>3.9 M/µL (L)</td>
<td>4.5 - 5.9 (male)</td>
</tr>
<tr>
<td>Hgb</td>
<td>12.8 g/dL (L)</td>
<td>13.5 - 17.5 (male)</td>
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<tr>
<td>Hct</td>
<td>38.5 % (L)</td>
<td>42 - 54 (male)</td>
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<tr>
<td>MCV</td>
<td>80.6 fl</td>
<td>80 - 103</td>
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<td>MCH</td>
<td>29 pg</td>
<td>26 - 34</td>
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<td>MCHC</td>
<td>29.4 g/dL (L)</td>
<td>30 - 37</td>
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<td>RDW-CV</td>
<td>12.3%</td>
<td>11.5 - 14.5</td>
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<tr>
<td>Platelet</td>
<td>142 K/µL</td>
<td>130 - 400</td>
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<tr>
<td>MPV</td>
<td>10.2 fl</td>
<td>7.4 - 12.0</td>
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<tr>
<td>Glucose</td>
<td>108 mg/dL</td>
<td>60 – 109 (fasting)</td>
</tr>
<tr>
<td>BUN</td>
<td>15.8 mg/dL</td>
<td>8 - 21</td>
</tr>
<tr>
<td>Creatinine</td>
<td>1.2 mg/dL</td>
<td>0.6 - 1.3</td>
</tr>
<tr>
<td>Calcium</td>
<td>9.8 mg/dL</td>
<td>8.7 - 11.9</td>
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<tr>
<td>Sodium</td>
<td>138 mmol/L</td>
<td>136 - 146</td>
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<tr>
<td>Potassium</td>
<td>4.4 mmol/L</td>
<td>3.7 - 5.3</td>
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<tr>
<td>Chloride</td>
<td>109 mmol/L</td>
<td>101 - 111</td>
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<tr>
<td>CO₂</td>
<td>27 mmol/L</td>
<td>21 - 31</td>
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<tr>
<td>Cholesterol</td>
<td>224 mg/dL (H)</td>
<td>&lt; 200</td>
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<td>Triglyceride</td>
<td>182 mg/dL (H)</td>
<td>30 - 149</td>
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<td>HDL</td>
<td>107 mg/dL (H)</td>
<td>&gt; 40</td>
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<tr>
<td>LDL</td>
<td>63 mg/dL</td>
<td>0 - 130</td>
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</tbody>
</table>
(Item 1 of Patient 5)
17. Which of the following is the LEAST important to include in the differential diagnosis for this patient?
   a. CVA
   b. Intracranial mass
   c. GCA
   d. TB meningitis

(Item 2 of Patient 5)
18. Damage to which of the following regions BEST explains the visual field results?
   a. Right occipital
   b. Left occipital
   c. Right parietal
   d. Left parietal
   e. Right temporal
   f. Left temporal

(Item 3 of Patient 5)
19. Which of the following is the MOST appropriate NEXT step in the management of this patient?
   a. PPD testing
   b. MRA
   c. Electroencephalogram
   d. Oncology referral
   e. Peripheral vascular referral
   f. Temporal artery biopsy

(Item 4 of Patient 5)
20. Which of the following conditions is this patient MOST likely to develop?
   a. CRAO
   b. Cranial nerve palsy
   c. Subdural hematoma
   d. Choroidal granuloma
   e. Normal pressure hydrocephalus