Rheumatoid Arthritis

**Question 190**- A 67-year-old woman with painful rheumatoid arthritis presents for metacarpophalangeal joint arthroplasties of all four fingers. What is the expected functional outcome 1 year after surgery?
1. Increased flexion but no improvement of the ulnar drift
2. Decreased extensor lag and improvement of the ulnar drift
3. Decreased total range of motion but improvement of the ulnar drift
4. Improvement in total range of motion but increased extensor lag
5. No change in total range of motion or extensor lag

Compressive Neuropathy

**130**
Figures 130a through 130c are the radiographs of a college baseball player obtained 7 days after sustaining an injury. He is tender to palpation over the carpal tunnel and denies any numbness or tingling in his fingers. What is the next most appropriate step in management?

1. CT scan of the wrist
2. MRI scan of the carpal tunnel
3. Complete blood count with differential
4. Referral to a neurologist for nerve conduction velocity studies
5. Hand therapy consultation for pain reduction and strengthening exercises

**265.** According to the American Academy of Orthopaedic Surgeons clinical guidelines, which of the following has the strongest evidence to support its use in the non-surgical treatment of carpal tunnel treatment?

1. Acupuncture
2. Iontopheresis
3. Wrist splinting
4. Heat therapy
5. Massage therapy

**58.** An otherwise healthy 42-year-old woman is scheduled for carpal tunnel release. The physician should adhere to routine sterility protocols
1. without local or systemic antibiotics.
2. and irrigate with cefazolin solution.
3. and irrigate with bacitracin solution.
4. and administer cefazolin within 1 hour before incision.
5. and administer cefazolin within 1 hour before incision and continue dosing up to 23 hours after surgery.
**Question 274**
A 37-year-old woman has a 2-month history of weakness in thumb and finger extension, but has normal radial deviation during extension of the wrist. An MRI scan of her forearm shows no abnormality. She does not recall any traumatic event. Needle electromyography findings show fibrillations and reduced recruitment in the extensor pollicis longus, abductor pollicis longus, extensor digitorum communis, and extensor carpi ulnaris muscles. Which nerve is most likely compressed?
1. Median  
2. Radial  
3. Anterior interosseous  
4. Posterior interosseous  
5. Lateral antebrachial cutaneous

A 24 year-old man with weakness and atrophy of the thumb for 12 months has very slight numbness on the radial side of the thumb that is constant and not progressing. He has no other hand or finger numbness. His 2-point static sensory examination is unremarkable in all digits and there is marked atrophy of the thenar muscles. His carpal tunnel provocative tests are negative. He has not symptoms on the opposite hand and otherwise is in excellent health. Which next step will most likely reveal the diagnosis?

1. An MRI scan  
2. Muscle Biopsy  
3. Carpal Tunnel diagnostic injection  
4. Electrodiagnostic testing  
5. Carpal Tunnel view radiograph

**Flexor Tendon Injuries**

![Figure 225](image)

**Question 225**-Figure 225 is the clinical photograph of a 26-year-old man who fell through a window and sustained alaceration to his thumb 5 days ago. He is unable to flex his thumb. Treatment should include:

1. palmaris longus tendon transfer.  
2. reconstruction with a palmaris longus free tendon bridge graft.  
3. direct repair of the flexor pollicis longus with core sutures only.  
4. repair of the flexor pollicis longus with core and epitendinous sutures.  
5. transfer of the flexor digitorum superficialis of the ring finger to the thumb.
**Question 170**
In repairs to finger flexor tendons in adults, immediate controlled active flexion postoperative protocols require which of the following techniques?

a. epitendonous suture only  
b. 2-strand core suture repair  
c. 4-strand core suture repair  
d. 2-strand core suture repair with epitendonous suture  
e. 4-strand core suture repair with epitendonous suture

**Figure 75**

**Question 75**
The least gliding resistance for a flexor tendon laceration at the thumb palmar-digital crease as shown in Figure 75 can be achieved with

1. a 6-strand repair.  
2. a division and repair.  
3. debridement of the partial laceration.  
4. no debridement, motion therapy only.  
5. multiple-strand core repair with epitendinous repair.

**Question 182**
In zone II flexor tendon lacerations, repairing only 1 slip compared to repairing both slips of the flexor digitorum sublimis results in

1. a higher rupture rate.  
2. profundus bowstringing.  
3. improved tendon gliding.  
4. improved passive range of motion.  
5. proximal interphalangeal joint hyperextension

**Tenosynovitis**

**Question 56**
In a 2-year-old child, what neurovascular structure is most likely to be injured while performing a trigger thumb release?

1. Princeps pollicis artery  
2. Ulnar digital nerve  
3. Radial digital nerve  
4. Thenar motor branch of the median nerve  
5. Palmar cutaneous branch of the median nerve
Fractures of the Hand

Figures 63a+b

**Question 63.** Figures 63a and 63b are the radiographs of a 40-year-old male soldier with a painful middle fingertip. He sustained a fracture 9 months ago and management consisted of a splint for the first 2 months. He has a significant nail deformity and is unable to grip with the fingertip because of pain. Management should now consist of

1. reduction and percutaneous wire fixation.
2. spiral oblique retinacular ligament reconstruction.
3. continued full-time splinting until the fracture heals.
4. application of a pulsed electromagnetic field to the finger.
5. bone grafting and internal fixation of the distal phalanx.

Figure 74

**Question 74.** Figure 74 shows the fracture of a 4-year-old boy with an avulsed nail bed. Treatment should consist of

1. closed reduction and pinning.
2. buddy taping to the fourth digit.
3. application of an aluminoform splint.
4. application of a distal interphalangeal joint extension splint.
5. irrigation, nail bed repair, and reduction
Figures 28a and 28b are the pre- and postreduction radiographs of a finger. The rehabilitation protocol indicated is

1. buddy tape and active motion.
2. static splint in full extension.
3. static splint in 45 degrees of flexion at the proximal interphalangeal joint.
4. static splint in metacarpophalangeal joint flexion and proximal interphalangeal joint extension.
5. extension block splint in 90 degrees of flexion at the proximal interphalangeal joint.

Figure 49

**Question 49**

Figure 49 features the radiographs of a 22-year-old man. The most appropriate treatment is:

1. observation.
2. cast treatment.
3. buddy tape and active motion.
4. closed reduction and pinning.
5. open reduction and internal fixation.
Figure 89a,b,+c

Question 89
Figures 89a through 89c are the radiographs of a 66-year-old man who fell 1 week ago. Examination revealed rotational deformity of his index finger. Treatment should consist of reduction and
1. casting.
2. buddy taping.
3. plate fixation.
4. intramedullary fixation.
5. interfragmentary fixation

Osteoarthritis of the Hand

Question 95
The deformity caused by long-term arthritis of the first carpometacarpal joint of the hand often leads to a secondary hyperextension arthrosis of which joint?
1. Midcarpal
2. Radiocarpal
3. Scaphotrapezotrapezoidal
4. Thumb interphalangeal
5. Thumb metacarpophalangeal

Distal Radius Fractures

Question 85.
A 35-year-old patient has an isolated fracture of the ulnar shaft 10 cm proximal to the distal radioulnar joint. There is 2 mm of displacement. In discussing treatment options, the physician should state that
1- there is no difference in outcomes between surgical and nonsurgical treatment.
2- nonsurgical healing is faster than surgical healing.
3- prolonged immobilization is necessary for proper nonsurgical healing.
4- intramedullary fixation is superior to plate fixation.
5- plate removal is always necessary.
Question 38

Figure 38 is the sagittal CT scan of a 45-year-old woman who injured her wrist after a fall. Appropriate treatment of the fracture should include
1. cast immobilization.
2. closed reduction and percutaneous pin fixation.
3. open reduction and volar locking plate fixation.
4. open reduction and radial styloid column plating.
5. open reduction and internal fixation of the volar fracture fragment

Question 78

A 42-year-old woman has the injury shown in Figures 78a and 78b. The decision to treat the ulnar styloid surgically is based upon which finding?
1. Patient age
2. Displacement of the radius fracture
3. Displacement of the ulnar styloid fracture
4. Position of the ulnar styloid after open reduction and internal fixation of the radius
5. Stability of the distal radioulnar joint after open reduction and internal fixation of the radius
**Question 230**

Figures 230a through 230d are the pre-and post-reduction radiographs of a 6-year-old boy who had a fracture of the radius and ulna shafts in the distal diaphyses. Successful reduction of the completely displaced fractures is achieved. To best maintain reduction while minimizing complications, treatment should include immobilization in a

1. removable splint.
2. sugar-tong splint.
3. short-arm cast.
4. long-arm cast.
5. long-arm thumb spica cast.

Figures 117 a,b,c

117. What is the most appropriate treatment for the injury shown in Figures 117a through 117c?

1- Closed reduction and long arm casting with weekly radiographs and cast changes
2- Closed reduction, percutaneous pinning of the radioulnar articulation, and casting
3- **Open reduction and internal fixation of the distal radioulnar articulation, followed by open reduction and internal fixation of the radius**
4- **Open reduction and internal fixation of the radius, followed by intraoperative evaluation of the distal radioulnar articulation**
5- **Open reduction and internal fixation of the radius, followed by open repair of the ulnar styloid and triangular fibrocartilaginous complex**

**Question 127.**
A 30-year-old man undergoes open reduction and locked volar plate fixation of a displaced distal radius fracture. The surgery was uncomplicated and performed under supraclavicular regional anesthesia. After the block has worn off, the patient reports dense numbness in the palmar aspect of the thumb, index, and middle fingers with severe wrist pain. Management should consist of

1. loosening all the dressings and follow-up in 1 week.
2. emergent nerve conduction velocity studies.
3. forearm compartment pressure monitoring.
4. open carpal tunnel release.
5. exploration of the supraclavicular brachial plexus.

**Question 253.** A 43-year-old woman who is right-hand dominant fell onto her outstretched arm while rollerblading 1 day ago. She reports a painful wrist. Examination reveals swelling and tenderness dorsally. Radiographs reveal a nondisplaced transverse fracture of the distal radius. She is placed in a short arm cast. What can be done to reduce the risk of type 1 complex regional pain syndrome?

1. Transcutaneous electrical nerve stimulation
2. Occupational therapy treatment for finger dexterity
3. Strict elevation above the heart for 72 hours
4. Alpha adrenergic blockers for 2 weeks after injury
5. Daily oral vitamin C for 2 months

![Figure 273](image_url)

**Figure 273**
273. Figure 273 are the radiographs of a 50-year-old man who sustained a wrist injury after a motorcycle accident. There is no distal radioulnar joint instability after radius fixation. Management should include fixation of the radius

1. alone.
2. and ulnar styloid excision.
3. and repair of the triangular fibrocartilage complex.
4- and percutaneous fixation of the ulnar styloid.
5- and open reduction and internal fixation of the ulnar styloid.

Wrist Instability

Figure 163

Question 163

Figure 163 is the radiograph of a 68-year-old man with dorsal radial wrist pain. He rated his pain as 8 on the 0-10 Numeric Pain Rating Scale and said that his pain has bothered him constantly despite splinting, steroid injections, and administration of nonsteroidal anti-inflammatory drugs. Surgical treatment for wrist pain should consist of
1. scaphoidectomy.
2. radial styloidectomy.
3. proximal row carpectomy.
4. complete wrist arthrodesis.
5. four-corner fusion with scaphoidectomy

Figure 74a+b

Figures 74a and 74b show the radiographs of a right-hand dominant 25-year-old woman who underwent arthroscopic examination of her painful left wrist. Examination reveals patchy grade II and III chondromalacia at both the proximal and distal articular surfaces of the lunate. The cartilage surfaces are stable to probing and no fractures are visualized. What is the most appropriate management to reduce the patient’s pain symptoms?
1- Arthroscopic débridement to stable surfaces with microfracture technique
2- Radial shortening osteotomy
3- Ulnar shortening osteotomy
4- Proximal row carpectomy
5- Scaphoid excision and four-corner fusion
Figures 52 a+b

Figures 52a and 52b are the radiographs of a right-hand dominant 17-year-old girl with wrist pain that began insidiously 3 months ago. It is aggravated by writing. There is an audible clunk when her wrist is passively moved from radial to ulnar deviation under axial load. She is ligamentously lax. What is the most likely diagnosis?

1- Dorsal wrist ganglion
2- Mid-carpal instability
3- Osteoid osteoma of the hamate
4- Scapholunate interosseous ligament tear
5- Lunotriquetral interosseous ligament tear

Question 256. Following a fall, a 67yo Medicare patient is seen for a new wrist deformity at the request of the primary care physician. The patient was seen by your partner 5 years ago for treatment of a compression spine fracture. After evaluation, documenting your findings, and sending communication to the requesting physician, the most appropriate category for your services is which of the following

1  New patient (CPT code 99203): Medicare no longer recognizes consultation codes
2  Return patient (CPT code 99213): the patient is known to your practice
3  Consultation (CPT code 99243): the requirements for consultation are met
4  Postoperative visit (CPT code 99024): the patient is post spine fracture treatment
5  Second opinion confirmatory (CPT code 99273): you are the second opinion after that of the primary care physician

Hand Infection

Question 48

A mechanic sustained a high-pressure injection of cleaning solvent into the tip of his index finger 2 hours ago. The finger has good capillary refill and his 2-point discrimination is 7 mm. Initial treatment should include

1. a corticosteroid injection.
2. elevation and observation.
3. elective surgical treatment within 7 days.
4. oral clindamycin for 10 days.
5. emergent surgical debridement.
Question 133
Figures 133a and 133b are the clinical photographs of a 34-year-old woman with increasing pain in her index finger for 3 days. The pain is worse with passive extension. Appropriate treatment should consist of
1. observation.
2. hand therapy.
3. oral antibiotics.
4. intravenous antibiotics.
5. irrigation and debridement of the flexor tendon sheath.

Question 256
An 84-year-old patient who has been hospitalized for pneumonia has developed isolated wrist pain and swelling with an effusion. The wrist is aspirated, the nucleated cell count is 75,000 cells/mm3, and urate crystals are identified. What is the most important next treatment step?
1. Begin allopurinol.
2. Begin nonsteroidal anti-inflammatory drugs.
3. Administer a corticosteroid wrist injection.
4. Obtain cultures and begin empiric antibiotics.
5. Obtain radiographs to evaluate for a wrist fracture.

Question 97. A 22-year-old man reports pain in his left index finger for the past hour after cleaning his spray paint gun. He recalls feeling a sharp pain at the tip, but now his entire finger is painful. Examination reveals a small puncture-type wound on the volar pulp of the distal phalanx. A radiograph reveals no fracture. What is the most appropriate management?
1- Tetanus immunization, oral antibiotics, and follow-up in 2 days
2- Referral to a hand surgeon the next day
3- Admission for IV antibiotics and warm soaks
4- Immediate surgical intervention
5- Incision and drainage in the emergency department under local anesthesia
Question 83. Of the following possible risk factors, what is the most significant one for a community-acquired methicillin-resistant Staphylococcus aureus hand infection?

1- Inmate
2- Homeless
3- IV drug use
4- Diabetes mellitus
5- Human immunodeficiency virus

Ulnar Sided Wrist Pain

Figures 65a+b

Question 65
Figures 65a and 65b are the magnetic resonance arthrogram and wrist arthroscopic photograph of a 25-year-old man who has wrist pain during extension and ulnar rotation. Treatment should consist of
1. synovectomy.
2. ulnar shortening osteotomy.
3. diagnostic arthroscopy only.
4. triangular fibrocartilage complex tear debridement.
5. triangular fibrocartilage complex repair dorsal ligament.

Question 1
For an otherwise healthy carpenter with symptoms of dominant-hand ulnar-sided pain, hand pallor, and coolness, the preliminary work-up should include
1. a CT scan.
2. a MRI scan.
3. a bone scan.
4. sonography.
5. angiography.
Question 59.
Figures 59a and 59b show the radiographs of a 15-year-old girl with bilateral mild wrist pain and increasing limitation of motion for many years. She has no family history of deformity. This deformity is transmitted via what genetic mechanism?
1- Autosomal dominant
2- Autosomal recessive
3- Sex-linked dominant
4- Sex-linked recessive
5- Mitochondrial

Peripheral Nerve Repair
Question 255. The anterior interosseus nerve innervates which of the following muscles?
1- Flexor digitorum profundus to the index and middle fingers, flexor pollicis longus, pronator quadratus
2- Flexor digitorum profundus to the index, middle, ring, little fingers, flexor pollicis longus, pronator quadratus
3- Flexor digitorum profundus to the ring, little fingers, flexor pollicis longus, flexor pollicis brevis
4- Flexor digitorum profundus to the index, middle fingers, flexor pollicis longus, abductor pollicis brevis
5- Flexor digitorum profundus to the index, middle fingers, flexor pollicis longus, lumbricals to the index and middle fingers

Brachial Plexus
Question 115
A 50-year-old man sustained a clavicle fracture after a motorcycle collision. He has no sensation or motor function in the biceps and triceps; however, he has very weak thenar and finger flexion and extension. Which finding would suggest a postganglionic as opposed to a preganglionic injury?
1. Preservation of C8, T1 function
2. Preserved sensory nerve action potential
3. Pseudomeningocele on CT myelogram
4. Ptosis and miosis on the same side as the injury
5. The cervical paraspinal muscle is normal on electromyography

Question 114
A 22-year-old man is unable to raise his arm above shoulder level during forward flexion since being involved in a motorcycle collision 4 months ago. Examination revealed scapular winging on forward flexion of the shoulder. Electromyography confirmed serratus anterior muscle palsy. The nerve involved branches off from cervical roots
2. C4-5.
5. C7-T1.
**Question 232.** A 1-month-old girl has weakness of the right upper extremity that has been present since birth. In the work-up, which of the following findings would suggest a favorable outcome?

1 – Ptosis
2 – Twitch biceps activity
3 – Periscapular muscle atrophy
4 – Motor activity on electromyography
5 – Meningoceles on magnetic resonance imaging

**Principles of Tendon Transfers**

Figure 103

**Question 103**

Figure 103 is the clinical photograph of a 62-year-old man with numbness and weakness that has been progressing for 10 years. What is the most appropriate treatment to improve thumb function?

1. Functional splinting
2. Neurotization of the thenar muscles
3. Hypothenar muscle transfer to thumb intrinsic
4. Arthrodesis of the thumb carpometacarpal joint in abduction
5. Transfer of the extensor indicis proprius around the ulnar wrist

Figure 140

**Question 140**

A 38-year-old woman had a distal radius fracture treated with a short-arm cast 3 months ago. The fracture healed in good alignment. Figure 140 shows her attempt to extend her thumb. What is the best treatment option?

1. Static splinting
2. Dynamic splinting
3. Transfer of the extensor pollicis brevis
4. Transfer of the extensor indicis proprius
5. Arthrodesis of the interphalangeal joint
Figures 14a+b

**Question 14**

Figures 14a and 14b show the radiographs of a 45-year-old farmer whose right arm was caught in a grain auger with a resultant open fracture of the proximal radius. The extensor carpi ulnaris and supinator muscles have been destroyed and the posterior interosseous nerve has a 6-cm segmental loss distal to the bicipital tuberosity. After multiple surgical débridements, the radius is plated and the bone and soft-tissue envelope go on to heal at 3 months. A complete posterior interosseous nerve palsy remains. What is the next most appropriate step in surgical reconstruction?

1. Neurotization of the radial nerve to the posterior interosseous nerve
2. Wrist fusion with transfer of the flexor carpi radialis to the finger extensors
3. Transfer of the pronator teres to the wrist extensors and the flexor carpi radialis to the finger extensors
4. Transfer of the flexor carpi radialis to the wrist extensors, the flexor digitorum superficialis to the finger extensors, and the palmaris longus to the extensor pollicis longus
5. Transfer of the flexor carpi radialis to the finger extensors and the palmaris longus to the extensor pollicis longus

**Dupuytren’s Disease**

**Question 245**

During the preoperative evaluation of a man with Dupuytren’s disease who is about to undergo partial fasciectomy, it is noted that he has a contracture at the metacarpophalangeal joint level with a pit in the skin denoting a possible `spiral cord.’ This cord displaces the neurovascular bundle in which direction?

1. Dorsal
2. Medial
3. Midline
4. Dorsolateral
5. Midline and volar
Benign Tumors of the Hand and Wrist

Figure 1

**Question 1**
A 33-year-old woman has left index fingertip pain that is severely exacerbated by reaching movements. An intense T2 signal under the nailbed is visible on the MRI scan seen in Figure 1. What is the best treatment option?
1. Tumor excision
2. Sympathetic digital block
3. Oral calcium channel blockers
4. Tuft amputation with nail ablation
5. Activity modification and glove wear

Figure 213 a+b

**Question 213**
Figures 213a and 213b are the clinical photograph and biopsy specimen of a 65-year-old man with a lesion under his thumbnail that was biopsied by a dermatologist. Appropriate treatment should consist of
1. observation.
2. local excision.
3. marginal excision.
4. thumb ray resection.
5. amputation at the interphalangeal joint.
**Question 258**

Figure 258 shows the clinical photograph of a 54-year-old woman with a painful mass over her middle finger. To prevent recurrence of the mass, treatment should consist of

1. needle aspiration.
2. liquid nitrogen application.
3. topical application of salicylic acid.
4. surgical excision of the mass.
5. surgical excision of the mass and marginal osteophyte.

**Question 269**

Figures 269a and 269b are the MRI scans of a 60-year-old man who has pain and loss of elbow flexion strength. In addition to the distal biceps tendon injury, what is the most likely diagnosis?

1. Soft-tissue sarcoma
2. Intraneural ganglion cyst
3. Denervation of the biceps muscle
4. Benign peripheral nerve sheath tumor
5. Malignant peripheral nerve sheath tumor
Figure 64

**Question 64**
Figure 64 is a T2-weighted MRI scan of a 64-year-old man who has had a right volar radial mass for the past 2 years. What is the most likely diagnosis?
1. Lipoma
2. Ganglion
3. Schwannoma
4. Radial artery aneurysm
5. Giant-cell tumor of tendon sheath

Figure 213

**Question 213**
Figure 213 is the clinical photograph of a 70-year-old woman with squamous cell cancer on her thumb. Resection and reconstruction is planned and requires soft-tissue coverage. Thumb region coverage is best obtained with
1. the Moberg flap.
2. a third dorsal metacarpal artery flap.
3. a first dorsal metacarpal artery flap.
4. a full-thickness skin grafting.
5. a reverse cross-finger flap from the index finger with full-thickness skin grafting.

**Amputations and Replantations**

Figure 235
**Question 235.** Figure 235 shows the clinical photograph of a 26 year old man who amputated the tip of his non-dominant thumb while working with a table saw. The tuft of his distal phalanx is exposed. The most appropriate management at this time is definitive debridement and:
1. daily saline soaks and dressing changes
2. cross finger flap closure
3. volar advancement (Moberg) flap closure
4. first dorsal interosseous flap closure
5. interphalangeal joint disarticulation and primary closure

![Figure 235](image)

**Question 166.** Figure 166 is the clinical photograph of a 38-year-old woman who sustained an injury to her right dominant hand in a manufacturing plant. Treatment should include:

1. Revision amputation of all digits because of the avulsion nature of the injury
2. Revision amputation because amputations through zone II should not be replanted
3. Replantation of all digits with forearm exposure for tendon reattachment
4. Replantation of the selected digit(s) based on anatomic site match (index to index, long to long, etc)
5. Replantation of the selected digit(s) based on best intact parts proximally and distally, even if mismatched

![Figure 166](image)

**Question 135** Figures 135a through 135c are the radiograph and clinical photographs of a 15-year-old left-hand-dominant boy who amputated his left hand through the midcarpal joint with a saw. The hand and patient arrived within 1 hour of the injury. The hand was wrapped in a moist saline dressing, put in a plastic bag, and placed in a cooler on top of ice. The next treatment step should include

1. replantation of the hand.
2. free-flap coverage of the wound.
3. radial artery flap coverage of the wound.
4. revision of the amputation wound to a distal forearm amputation.
5. revision of the amputation at the wrist to preserve the distal radioulnar joint.

![Figures 135a,b,c](image)
Question 15
A contraindication for attempting a replantation by an experienced surgeon in an appropriately equipped facility includes
1. amputation through flexor zone I.
2. major limb amputation in a child.
3. absence of athrosclerotic disease.
4. crush or avulsion mechanism of amputation.
5. sharp transection of the thumb at the metatarsophalangeal joint lev

Congenital Anomalies

Question 6
A 6-month-old child has a hypoplastic thumb on the left hand. Which of the following is considered the most important factor when deciding to reconstruct the thumb?
1. Intact sensation
2. Stability of the carpometacarpal joint
3. Stability of the metacarpophalangeal joint
4. First web space contracture
5. Absence of thumb opposition

Question 151
An otherwise healthy 1-year-old girl has an extra little finger on both hands. In which of the following ethnic groups is the incidence of this condition much higher than average?
1. Polynesians
2. African-Americans
3. Native South Americans
4. North American Indians
5. Caucasians of northern European descent

Figure 8

Question 8: Figure 8 shows the clinical photograph of a 3-month-old girl who has a circumferential crease around her arm. She is neurovascularly intact. The hand appears to function normally, but she has significant swelling of the forearm when it is dependent. Treatment should consist of
a. above-elbow amputation.
b. through-elbow amputation.
c. resection of the redundant skin.
d. circumferential band excision and z-plasty.
e. radical skin resection and reconstruction at age 18 months.

**Question 125.** A 12-month-old boy undergoes surgical release and full-thickness skin grafting for the congenital condition shown in Figures 125a and 125b. What is the most common postoperative complication that could negatively affect long-term function?

1. Web creep  
2. Nail deformity  
3. Digital nerve injury  
4. Flexor tendon adhesions  
5. Infection of the graft harvest site

**Question 143.** Fanconi anemia is associated with what congenital deformity?

1. Brachydactyly  
2. Preaxial polydactyly  
3. Postaxial polydactyly  
4. Ulnar longitudinal deficiency  
5. Radial longitudinal deficiency
Question 149
Figure 149 shows the clinical photograph of a 4-month-old child who has a deformity of the left hand and forearm. The thumb is absent. The right hand and forearm are normal. Laboratory studies show a normal CBC with platelets. What is the most appropriate surgical procedure?

1- Centralization of the ulna only
2- Pollicization of the index finger only
3- Pollicization of the index finger and centralization of the ulna
4- Rotational osteotomy and lengthening of the ulna
5- Vascularized transfer of the fibula to the forearm

Vascular Disorders of the Hand

Question 37
A 27-year-old jackhammer operator has a 4-month history of hand coldness and severe ischemia that spares his thumb and index finger. Systemic illnesses have been ruled out. Doppler workup reveals aneurysmal changes, and digital subtraction arteriogram confirms the findings. Intervention should consist of
1. excision and vein graft.
2. surgical thrombectomy.
3. systemic anticoagulation.
4. intravascular fibrinolysis.
5. interventional embolectomy.

Question 61.
Core decompression of the distal radius for the treatment of Kienböck’s disease is thought to work through which of the following mechanisms?
1- Increase force distribution
2- Decrease distal radius stiffness
3- Decrease excessive intraosseous pressure
4- Incite local vascular healing response
5- Unload the lunate fossa
Question 144. Core decompression of the distal radius for the treatment of Kienböck’s disease is thought to work through which of the following mechanisms?

1. Unload the lunate fossa
2. Increase force distribution
3. Decrease distal radius stiffness
4. Decrease excessive intraosseous pressure
5. Incite local vascular healing response

Elbow

Question 42: Figures 42a and 42b show the radiographs of a 3-year-old girl who sustained an injury to her right upper extremity. The preferred management of this injury is closed reduction and immobilization in a long arm cast with the elbow and forearm in which of the following positions?

1- Elbow flexed; forearm in pronation
2- Elbow flexed; forearm in supination
3- Elbow extended; forearm in neutral
4- Elbow extended; forearm in pronation
5- Elbow extended; forearm in supination

Question 84.
The floor of the cubital tunnel is composed of what structure?

1- Intermuscular septum
2- Ligament of Struthers
3- Osborne’s ligament
4- Medial collateral ligament
5- Flexor carpi ulnaris
**Question 147.** A 36-year-old woman sustains an oblique, closed fracture of the humeral shaft 11 cms proximal to the lateral epicondyle with associated radial nerve palsy. The fracture is treated closed with the nerve injury treated expectantly. Which of the following is the first muscle expected to demonstrate evidence of reinnervation?

1. Supinator
2. Brachioradialis
3. Extensor pollicis longus
4. Extensor indicis proprius
5. Extensor carpi radialis brevis

**Figures 228a+b**

**Question 228.** Figure 228a and 228b are the AP radiographs of a 17 year old boy with an elbow deformity. He has a range of motion from 0° to 110° of flexion and is neurologically intact with no pain. If the deformity is treated surgically, which of the following procedures would help in achieving a cosmetically and functionally pleasing result?

1. Medialize the distal fragment
2. Lateralize the distal fragment
3. Close the capitellar epiphysis
4. Transpose the ulnar nerve anteriorly
5. Excise the growth arrest zone medially
Question 261. A 62-year-old right-hand dominant man who has a history of rheumatoid arthritis underwent a primary total elbow arthroplasty one year ago. He continues to report elbow pain since the initial surgery. He has both rest and night pain and denies any drainage from the wound although he does state that at times “my elbow feels hot.” He denies any systemic symptoms. A plain radiograph is seen in Figure 261. His peripheral white blood cell count is 5,500/mm³ (normal 3,000-15,000/mm³) with 80% neutrophils. His C-reactive protein level is 15. Aspiration was performed and cultures grew out propionibacterium acnes. Treatment should now consist of which of the following?

1. Resection Arthroplasty
2. Staged Exchange Arthroplasty
3. Single Stage Exchange Arthroplasty
4. Arthroscopic Irrigation and Debridement
5. Open Irrigation and Debridement with Bushing Exchange