Patient Care Curriculum: Hand Surgery

Version 1.2 (October 2010)
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GENERAL TOPICS

a. Anatomy/Embryology

b. Imaging

c. Interpersonal Communication Skills

d. Practice Based Learning
   - Evidence-Based Medicine

e. Professionalism
   - Medico-Legal Considerations

f. System Based Practice
   - Practice Management
   - Rehabilitation
   - The Public Medical System (Medicare, Medicaid, VA)

DEFINITIONS

DISEASES/CONDITIONS

* **BROAD** - A graduate should be able to care for all aspects of disease and provide comprehensive management (ie carpal tunnel syndrome).
* **FOCUSED** - A graduate should be able to make the diagnosis, provide initial management/stabilization, but will not be expected to be able to provide comprehensive management (ie traumatic segmental defect of the median nerve).

OPERATIONS/PROCEDURES

* **ESSENTIAL-COMMON** - Frequently performed operations in hand surgery; specific procedure competency is required by end of training and should be attainable primarily by case volume (ie carpal tunnel release).
* **ESSENTIAL-UNCOMMON** - Rare, often urgent, operations seen in hand surgery practice and not typically done in significant numbers by trainees; specific procedure competency required by end of training but cannot be attained by case volume alone (ie repair of traumatic radial artery and median nerve lacerations).
* **COMPLEX** - Not consistently performed by hand surgeons in training and not typically performed in hand surgery practice. Generic experience in complex procedures in residency is required but not competence in individual procedures. Some residency programs may provide sufficient experience for competence in some specific procedures (ie sensory nerve transfers for median nerve deficits).
SPECIFIC TOPICS

1. Amputations/Finger tip injuries

DISEASES/CONDITIONS

BROAD
- Diagnosis and Treatment of Nailbed Injury
- Dx, Bx and Rx of pigmented lesions of the nail matrix
- Dx, Bx and Rx of non-pigmented lesions of the nail matrix
- Replantation (Principles, Practice)
  - Thumb MCP

FOCUSED
- Prosthetics
  - Principles (incl. passive, myoelectric)
  - Targeted Innervation
- Replantation (Principles)
  - Arm
  - Forearm
  - Wrist
  - TransMC
  - Thumb (CMC, MC, P1, IP, P2)
  - Digit (number; MC, MCP, P1, IP, P2)

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON
- Nail and Nailbed
  - Excision
  - Repair
  - Revision
- Traumatic/Atraumatic Amputation
  - Ray
  - Digit

ESSENTIAL/UNCOMMON
- Nail and Nailbed
  - Biopsy
  - Graft
- Replantation (Practice)
  - Thumb MCP
- Thumb Reconstruction
  - MC lengthening
- Traumatic/Atraumatic Amputation
  - Transhumeral
  - Through Elbow
  - Forearm
  - Wrist
  - Transmetacarpal

COMPLEX
- Replantation (Practice)
  - Arm
  - Forearm
  - Wrist
TransMC
Thumb (CMC, MC, P1, IP, P2)
Digit (number; MC, MCP, P1, IP, P2)

Thumb Reconstruction
  Pollicization
  Bone Graft + Flap
  Wrap around
  Great toe
  Second toe

Traumatic/Atraumatic Amputation
  Forequarter
  Shoulder Disarticulation
2. Anesthesia, Pain Management

DISEASES/CONDITIONS

BROAD
Pain mechanisms, theory
Pharmacology/Mechanisms
  Local anesthetics
  NSAIDs
  Narcotics
  Anti-seizure medications
  Corticosteroids
CRPS 1, CRPS 2
  Medical management
  Surgical management

FOCUSED

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON
Regional anesthesia
  Peripheral Nerve: LABCN, Radial, Median, Ulnar; Location
  Bier block
  Wrist block
  Digital bloc

ESSENTIAL/UNCOMMON

COMPLEX
Regional anesthesia
  Cervical
    Supraclavicular
    Infraclavicular
  Axillary
General anesthesia
Stellate ganglion block
3. Arthritis

**DISEASES/CONDITIONS**

**BROAD**

Location: Hand CMC/Wrist/Ulnocarpal/DRUJ/Elbow/Shoulder
- MCP, PIP, DIP osteoarthritis
- MCP, PIP rheumatoid arthritis
- Swan-neck in rheumatoid
- Boutonniere’s in rheumatoid
- Thumb deformity in rheumatoid
- Thumb CMC osteoarthritis
- Thumb STT arthritis
- Wrist arthritis
  - Rheumatoid
  - SLAC wrist
  - SNAC wrist
  - Isolated mid-carpal arthritis
  - Hamate arthritis +/- LT (HALT)
  - Radiolunate arthritis (inflammatory, gout, pseudogout)
  - DRUJ arthritis
  - Elbow arthritis
    - Radiocapitellar arthritis
    - Ulnohumeral arthritis
    - Combined
  - Acromioclavicular arthritis
  - Glenohumeral arthritis
  - Sternoclavicular arthritis

**Etiology:** Degenerative, Sero+, Sero-, Crystalline, Charcot, Septic (non-acute)
- Osteoarthritis
- Rheumatoid arthritis
- Post-traumatic arthritis
- Post-infectious arthritis
- Gout
- Pseudogout
- SLE related joint deformity
- Scleroderma related joint deformity
- Psoriatic arthritis
- Charcot arthropathy
- Chronic Sepsis (fungal, mycobacterial, bacterial)

**Principles of Arthrodesis**
- **Principles of Arthroplasty and soft tissue balancing**
  - Excision
  - Interposition
  - Implant

**FOCUSED**

**OPERATIONS/PROCEDURES**

**ESSENTIAL/COMMON**
- Corticosteroid injection (GH, AC, elbow, wrist, ulnocarpal, DRUJ, CMC, STT, MCP, PIP, DIP)
Excision of tophus
Excision of rheumatoid nodule
Excision of mucous cyst
Extensor tenosynovectomy
Joint synovectomy (wrist, MCP)
Arthrodesis
  Glenohumeral arthrodesis
  Complete wrist arthrodesis
    Rheumatoid
    Non-rheumatoid
  Limited intercarpal arthrodesis
    Radiocarpal (radio scapholunate) arthrodesis
    Four-corner arthrodesis
    STT arthrodesis
    Full mid-carpal arthrodesis (scaphoid preservation)
  1st CMC arthrodesis
  MCP arthrodesis
  IP arthrodesis
Arthroplasty
  Implant
    Total shoulder arthroplasty
    Hemi-shoulder replacement arthroplasty
    Total elbow arthroplasty
    MCP arthroplasty
      Rheumatoid arthritis
      other
    PIP arthroplasty
      Osteoarthritis
      other
Excision
  Trapeziectomy +/- ligament reconstruction and interposition
  Darrach
  Distal ulna hemiresection
  Proximal row carpectomy
  Radial head excision
  Acromioclavicular excision arthroplasty
Osteotomy
  Distal radius osteotomy for malunion
  Extra-articular
  Ulnar shortening osteotomy for ulnocarpal impaction
  Excision of carpal boss
  Radial styloidectomy

**ESSENTIAL/UNCOMMON**
Arthrodesis
  Ulnorhumeral arthrodesis
  Radioulnar arthrodesis
  One-bone forearm
Arthroplasty
  Implant
Reverse Total Shoulder arthroplasty
Glenoid resurfacing arthroplasty, graft
Humeral head resurfacing, graft
Total wrist arthroplasty
DRUJ arthroplasty
  Ulnar head endoprosthesis
  Total DRUJ replacement

Excision
  Sauve-Kapandji procedure
  Darrach salvage
  Feldon wafer procedure (open, arthroscopic) for ulnocarpal impaction
  Resection arthroplasty for MCP or IP joints in scleroderma
  Glenohumeral excision arthroplasty
  Sternoclavicular excision arthroplasty

Osteotomy
  Distal radius osteotomy for malunion
    Intra-articular
  Thumb metacarpal osteotomy for early CMC arthritis

COMPLEX
4. Burns

**DISEASES/CONDITIONS**

**BROAD**
- Thermal
  - Principles, Classification
  - Resuscitation
- Chemical
  - Emergency treatment
- Frostbite
  - Evaluation
  - Rewarming protocol

**FOCUSED**

**OPERATIONS/PROCEDURES**

**ESSENTIAL.COMMON**
- Thermal
  - Escharotomy
  - Reconstruction
    - STSG, FTSG, other sources of cutaneum

**ESSENTIAL.UNCOMMON**
- Thermal
  - Excision
  - Reconstruction
    - Syndactyly release

**COMPLEX**
5. Combined hand injuries

**DISEASES/CONDITIONS**

**BROAD**
Evaluation

**FOCUSED**
Organization

**OPERATIONS/PROCEDURES**

**ESSENTIAL/COMMON**

**ESSENTIAL/UNCOMMON**
Reconstruction
Capsulectomy
Tenolysis

**COMPLEX**
6. Compartment syndromes

**DISEASES/CONDITIONS**

**BROAD**
Acute compartment syndrome
- Hand (including CTS)
- Forearm
- Arm

**FOCUSED**
Venomous snake bite
Volkmann's ischemic contracture

**OPERATIONS/PROCEDURES**

**ESSENTIAL/COMMON**
Compartment pressure measurement
Fasciotomies of the hand, CTR
Fasciotomies of the forearm (volar, dorsal)
Fasciotomies of the arm

**ESSENTIAL/UNCOMMON**
Skin release
Z-plasty lengthening of tendons
- Muscle slide
- Tendon transfers

**COMPLEX**
External neurolysis of median and ulnar nerves
Innervated free muscle transfer
7. Congenital Conditions

**DISEASES/CONDITIONS**

**BROAD**

Classification

Neuromuscular Conditions

- CP
- Syndactyly
- Supernumerary digit
- Trigger Thumb

**FOCUSED**

- Clinodactyly, Camptodactyly
- Thumb hypoplasia
- Radial club hand
- Ulnar club hand
- Polydactyly
- Adactyly
- Symbrachydactyly
- Macroductyly

Acquired Growth Conditions

- Madelung’s
- Physeal arrest

Neuromuscular Conditions

- Arthrogryposis
- Muscular Dystrophy
- Brachial plexus birth palsy

Sprengels

Vascular anormalities

**OPERATIONS/PROCEDURES**

**ESSENTIAL/COMMON**

- Trigger thumb release
- Excision supernumerary digit

**ESSENTIAL/UNCOMMON**

- Syndactyly release, simple

**COMPLEX**

- Syndactyly release, complex
- Pollicization
- Centralization
- Cleft Hand reconstruction
- Constriction band release
- Madelung osteotomy (dome)
8. Contractures, Spasticity, Stiffness, Weakness

**DISEASES/CONDITIONS**

**BROAD**
- CP/Stroke/TBI
  - Classification, Evaluation
  - Pathophysiology and Natural History
- SCI/Myopathy
  - Classification, Evaluation
- Post-Traumatic
  - Shoulder, Elbow, Wrist, CMC, MCP, IP

**FOCUSED**

**OPERATIONS/PROCEDURES**

**ESSENTIAL/COMMON**
- Post-Traumatic
  - MCP, IP capsulectomy and joint release
  - Tenolysis
  - Arthrodesis
  - Arthroplasty

**ESSENTIAL/UNCOMMON**
- CP/Stroke/TBI
  - Tendon Transfers
  - Muscle slide
  - Joint releases
  - Tenotomy, tendon lengthening
  - Arthrodesis
- SCI/Myopathy
  - Tendon Transfers
  - Muscle slide
  - Joint releases
  - Tenotomy, tendon lengthening
  - Arthrodesis
- Post Ischemia
  - Joint releases
  - Tenotomy
  - Arthrodesis
- Post-Traumatic
  - Shoulder, Elbow, Wrist, CMC capsulectomy and joint release
  - Frozen shoulder, release (closed, arthroscopic)

**COMPLEX**
9. Dupuytren's

**DISEASES/CONDITIONS**

**BROAD**

Genetics and epidemiology
Associated conditions
Dupuytren's diathesis
Dupuytren's disease
  - Nodules
  - Cords
  - Contractures
  - Garrod's pads
  - Peyronie's disease
  - Ledderhose's disease

**FOCUSED**

**OPERATIONS/PROCEDURES**

**ESSENTIAL/COMMON**

- Splinting or casting for contracture
- Injection of nodule
- Fasciotomy of Dupuytren's contracture
  - Palm
  - Finger
- Fasciectomy of Dupuytren’s contracture
  - Palm
  - Finger
- Dermofasciectomy
  - Palm
  - Finger
- Skin closure techniques
  - Local flaps
  - Z-plasty
  - V to Y
  - McCash technique
  - Full Thickness skin grafting
- PIP joint release
- Microscopic nerve or vessel repair for iatrogenic injury
- Amputation
  - Ray
  - With transposition

**ESSENTIAL/UNCOMMON**

Revision excision of Dupuytren's contracture with possible:
  - Phalangeal shortening
  - PIP replacement
  - PIP arthrodesis

**COMPLEX**

- Collagenase injection treatment
Percutaneous release of cords
10. Fractures/dislocations/nonunions/malunions

**DISEASES/CONDITIONS**

**BROAD**

- Biology of bone healing
- Principles of bone grafts
  - Autografts
  - Allografts
  - Bone substitutes

**Fractures and Dislocations: Treatment Principles and Decision Making (open and closed)**

- Distal phalanx (thumb and digits)
- DIP (and IP joint thumb)
  - Mallet finger
  - Bony mallet
  - Bony profundus avulsion
- Middle phalanx
  - Condylar
  - Shaft
  - Proximal
- PIP
  - Volar
  - Dorsal
  - Dorsal Fracture-Dislocation
- Proximal Phalanx (thumb and digits)
  - Condylar
  - Shaft
  - Intraarticular (proximal)
  - Collateral Avulsions
- MCP (thumb and digits)
  - Collateral ligament tears
  - Skier’s thumb
  - Gamekeeper thumb
  - Acute RCL injury
  - Dorsoradial capsular strain
- Metacarpal
  - Head
  - Neck
  - Shaft
  - Base
  - Baby Bennett
  - Bennett
  - Rolando
- Trapezium
  - Tubercle
  - other
- Trapezoid
- Capitate
  - Waist
  - Scaphocapitate syndrome
- Hamate
Dorsal rim
Hook
Body
Pisiform
Triquetrum
  Dorsal avulsion
  LT avulsion
  other
Lunotriquetral ligament tear
Lunate
Scaphoid
  Distal pole
  Waist
    Displaced
    Undisplaced
    Multifragmentary
  Proximal pole
    Associated with intercarpal ligament injury, dislocation
Scapholunate ligament tear
Distal Radius
  Extra-Articular
  Partial Articular
    Volar Barton
    Lunate Facet
      Dorsal
      Volar
  Complete Articular
    Associated with distal ulna instability
DRUJ
  Volar Dislocation
  Dorsal Dislocation
Distal Ulna
  Styloid
  Head
  Neck
  Complex
Radius
  Galeazzi
Ulna
  Monteggia
Radius and Ulna
Radial Head
  Undisplaced
  Displaced
  Radial neck
Coronoid Process
Radio-Capitellar Joint
  LUCL sprain
Ulno-Humeral Joint
  LUCL sprain
MCL tear

PRUJ

Humerus
- Humeral head
- Humeral neck
- Surgical neck
- Shaft
- Supracondylar
- Intercondylar Y, T, multifragmentary
- Lateral condyle
- Medial condyle

Glenohumeral joint
- Anterior dislocation
- Posterior dislocation
- Inferior dislocation, Luxatio erecta

Acromioclavicular joint
- Types 1 to 6

Scapulothoracic joint
- Scapulothoracic dissociation
- Vascular, plexus injuries

Sternoclavicular joint
- Anterior dislocation
- Posterior dislocation

Clavicle
- Shaft
- Associated AC separation

Scapula
- Glenoid
- Neck
- Body

Principles of Pediatric Fractures
Specific Pediatric fractures
- Salter classification
- Seymour fracture
- Salter 2 fracture of distal radius
- Torus fractures
- Greenstick fracture
- Pediatric both-bone forearm fractures

Nonunions and Chronic Dislocations: Treatment Principles and Decision Making
Distal phalanx (thumb and digits)
DIP (and IP joint thumb)
- Mallet finger (chronic)
- Bony mallet

Middle phalanx
- Condylar
- Shaft
- Proximal

PIP
- Volar (Bony boutonniere)
Dorsal (Chronic)  
Dorsal Fracture-Dislocation (Chronic)  

Proximal Phalanx (thumb and digits)  
  Condylar  
  Shaft  
  Intraarticular (proximal)  
  Collateral Avulsions  

MCP (thumb and digits)  
  Collateral ligament tears  
  Gamekeeper thumb  
  Chronic RCL injury  
  Dorsoradial capsular strain  

Metacarpal  
  Head  
  Neck  
  Shaft  
  Base  
  Baby Bennett  
  Bennett  
  Rolando  

Trapezium  
  Tubercle  
  other  

Trapezoid  
  Capitate  
  Waist  
  Scaphocapitate syndrome  

Hamate  
  Dorsal rim  
  Hook  
  Body  

Pisiform  

Triquetrum  
  Dorsal avulsion  
  LT avulsion  
  other  

Lunotriquetral ligament tear (Chronic)  

Lunate  

Scaphoid  
  Distal pole  
  Waist  
  Displaced  
  Undisplaced  
  Multifragmentary  
  Proximal pole  
  Associated with intercarpal ligament injury, dislocation  

Scapholunate ligament tear (Chronic)  
  SLAC 1  
  SLAC 2  
  SLAC 3, 4
Distal Radius
   Extra-Articular
   Partial Articular
      Volar Barton
      Lunate Facet
         Dorsal
         Volar
   Complete Articular
   Associated with distal ulna instability
DRUJ
   Volar Dislocation (Chronic)
   Dorsal Dislocation (Chronic)
Distal Ulna
   Styloid
   Head
   Neck
   Complex
Radius
   Galeazzi, w chronic DRUJ subluxation/dislocation
Ulna
   Monteggia, w chronic radial head subluxation/dislocation
Radius and Ulna
Radial Head
   Undisplaced
   Displaced
   Radial neck
Coronoid Process
Radio-Capitellar Joint
   LUCL sprain
Ulno-Humeral Joint
   LUCL sprain
   MCL tear
PRUJ
Humerus
   Humeral neck
   Surgical neck
   Shaft
   Supracondylar
   Intercondylar Y, T, multifragmentary
   Lateral condyle
   Medial condyle
Glenohumeral joint
   Anterior dislocation (Chronic)
   Posterior dislocation (Chronic)
Acromioclavicular joint
   Types 1 to 6
Scapulothoracic joint
   Snapping scapula
Sternoclavicular joint
   Anterior dislocation (Chronic)
Posterior dislocation (Chronic)

Clavicle
  Shaft
  Associated AC separation

Scapula
  Glenoid
  Neck
  Body

Malunion
  Intra-Articular, Extra-Articular
  Pre-Operative planning
  Specific malunions
    Rotational malunion of phalanx
    Rotational malunion of metacarpal
    Angular malunion of metacarpal
    Malunion of distal radius
      Intra-Articular
      Extra-Articular
    Ulnar shaft
    Radial shaft
    Humerus
    Clavicle

Principles of Fracture fixation (AO)

FOCUSSED

OPERATIONS/PROCEDURES
  ESSENTIAL/COMMON
  Surgical/Nonsurgical Treatment of Acute/Subacute/Chronic Fractures and Dislocations
  Distal phalanx tuft fracture
    Closed treatment
  Distal phalanx diaphyseal fracture
    Closed treatment, reduction
    Percutaneous K wire fixation
  Distal phalanx fracture into DIP joint
    Closed treatment
    Percutaneous K wire fixation
  Mallet fracture
    Closed treatment
    CRPP
    Extension block pinning
    ORIF
  FDP avulsion fracture
    Open repair
  Middle phalanx condylar fracture
    Closed treatment
    CRPP
    ORIF
Middle phalanx diaphyseal fracture
  Closed treatment
  CRPP
  ORIF
  External fixation
Central slip avulsion fractures from middle phalanx base
  Closed treatment
  CRPP
  Extension block pinning
  ORIF
Pilon (total articular fractures of base middle phalanx)
  Closed treatment
  CRPP
  External fixation
    Fixed
    Dynamic
  ORIF
Volar plate avulsions/dorsal PIP fracture dislocations
  Closed treatment
  CRPP
  External fixation
    Fixed
    Dynamic
  Extension block K wire fixation
  ORIF
  Volar plate arthroplasty
  Hemi-hamate arthroplasty
PIP dislocation
  Closed reduction
  Open reduction
Proximal Phalanx condylar fracture
Closed treatment
  CRPP
  ORIF
Proximal Phalanx diaphyseal fracture
Closed treatment
  CRPP
  ORIF
  External fixation
Base of proximal phalanx fractures into MCP joint
Associated with collateral ligament avulsion
  Closed treatment
    ORIF
    Repair of collateral ligament to site
Associated with dorsal/volar dislocation; Intraarticular
  Closed treatment
    ORIF
MCP dislocation
  Closed reduction
  Open reduction for complex dislocation, volar and dorsal
Metacarpal head fractures
Closed treatment
  ORIF
Metacarpal neck fractures
Closed treatment
  CRPP
  Crossed in shaft, bouquet, into adjacent MC's
  ORIF
Metacarpal diaphyseal fractures
  Closed treatment
  CRPP
  Crossed in shaft, bouquet, into adjacent MC's
  ORIF
Metacarpal base fracture/dislocation CMC/ Bennett/ Baby Bennett/ Rolando
Closed treatment
  CRPP
  Into fragments, across CMC joints into carpus/adjacent MC's
  ORIF
  Repair/reconstruct anterior oblique ligament for thumb CMC
  Traction
Trapezium
  Tubercle
Body
  CRPP
  ORIF
Trapezoid fracture
CRPP
  ORIF
Capitate
  Waist ORIF
  Scaphocapitate syndrome ORIF
Hamate
  Dorsal rim
    CRPP
    ORIF
  Hook
    Closed Rx
    Excision
Body
  Closed Rx
  ORIF
Pisiform
  Closed Rx
  Excision
Triquetrum
  Dorsal avulsion
  LT avulsion
    Direct repair
    CRPP
other
Lunotriquetral ligament tear
  CRPP
  Open reduction and pinning
  Ligament reconstruction
  Closed treatment
  Limited arthrodesis
Lunate
  ORIF
Scapholunate ligament tear
  CRPP
  Open reduction and pinning w/wo direct suture
  Ligament reconstruction
  Capsulodesis
  Limited arthrodesis
Scaphoid
  Distal pole
    Closed Rx
    Excision
Waist
  Displaced
    ORIF
  Undisplaced
    ORIF
    Closed Rx
    Multifragmentary
    ORIF
Proximal pole
  ORIF
  ORIF w Vascularized Graft
Associated with intercarpal ligament injury, dislocation
  ORIF
  CRPP
Distal Radius
  Extra-Articular
    Closed reduction and casting
    CRPP
    ExFix
    ORIF
      Volar
      Dorsal
      Combined
Partial Articular
  Volar Barton
    ORIF
    Volar
  Lunate Facet
    Dorsal
    ORIF
    Volar
    ORIF
Complete Articular
  Closed reduction and casting
    CRPP
    ExFix
    ORIF
      Volar
      Dorsal
      Combined
  Associated with distal ulna instability
    Fixation ulnar styloid

DRUJ
  Volar Dislocation
    Open reduction
    Closed reduction
  Dorsal Dislocation
    Open reduction
    Closed reduction

Distal Ulna
  Styloid
    ORIF
    CRPP
  Head
    ORIF
    CRPP
    Closed treatment
  Neck
    ORIF
    CRPP
    Excision
  Complex
    ORIF
    CRPP
    Closed treatment
    Excision

Radius
  Galeazzi
    ORIF
    Reduction of DRUJ (open or closed)

Ulna
  Monteggia
    ORIF
    Reduction of radial head (open or closed)
    Annular ligament reconstruction

Radius and Ulna
  ORIF
  IM nails
  Closed treatment

Radial Head
  Undisplaced
    Closed treatment
Displaced
  ORIF
  Fragment excision
  Excision and arthroplasty
Radial neck
  ORIF
  Excision and arthroplasty
Coronoid Process
  ORIF
Radio-Capitellar Joint
  LUCL sprain
    Repair
    Reconstruction
Ulno-Humeral Joint
  LUCL sprain
    Repair
    Reconstruction
  MCL tear
    Closed treatment
    Open repair
PRUJ
  Open reduction
Humerus
  Humeral head
    ORIF
    Arthroplasty
    Hemiarthroplasty
    Closed treatment
  Humeral neck
    ORIF
    CRPP
    Arthroplasty
    Hemiarthroplasty
    Closed treatment
  Surgical neck
    ORIF
    Arthroplasty
  Shaft
    Closed treatment
    ORIF
    IM Nail
Supracondylar
  CRPP
  ORIF
  Arthroplasty
Intercondylar Y, T, multifragmentary
  ORIF
  Arthroplasty
Lateral condyle
  ORIF
Closed treatment

Medial condyle
- ORIF
- Closed treatment

Glenohumeral joint
- Anterior dislocation
  - Closed reduction
  - Open reduction with soft tissue repair
  - Arthroplasty
  - Arthrodesis
- Posterior dislocation
  - Closed reduction
  - Open reduction with soft tissue repair
  - Arthroplasty
  - Arthrodesis
- Inferior dislocation, Luxatio erecta
  - Closed reduction
  - Open reduction with soft tissue repair

Acromioclavicular joint
- Types 1 to 6
  - Closed treatment
  - Open reduction and ligament reconstruction

Scapulothoracic joint
- Scapular ostectomy
- Tendon transfers for snapping scapula

Sternoclavicular joint
- Anterior dislocation
  - Open reduction
  - Closed treatment
- Posterior dislocation
  - Open reduction with thoracic/vascular/cardiac support

Clavicle
- Shaft
  - Closed treatment
  - IM Nail
  - ORIF w/wo ICBG
  - Associated AC separation
  - ORIF

Scapula
- Glenoid
  - ORIF
  - Closed treatment
- Neck
  - ORIF
  - Closed treatment
- Body
  - ORIF
  - Closed treatment

ESSENTIAL/UNCOMMON
COMPLEX
11. Infections/Bites

**DISEASES/CONDITIONS**

**BROAD**
- Microbiology and pathology of human bites
- Microbiology and pathology of dog bites
- Microbiology and pathology of cat bites
- Microbiology and pathology of snake bites
- Microbiology and pathology of spider bites
- Microbiology and pathology of bites of other animals
- Microbiology and pathology of viral (Herpetic) infection
- Microbiology and pathology of Sporothrix infections
- Microbiology and pathology of tick bites

**Microbiology**
- Gram positive organisms
- Gram negative organisms
- Fungi
- Mycobacteriae
- Viruses
- Rickettsiae

**Diagnosis and Treatment**
- Cellulitis
- Abscess
- Acute paronychia
- Chronic paronychia
- Herpetic whitlow
- Septic flexor tenosynovitis
- Mycobacterial/chronic flexor tenosynovitis
- Radial/ulnar bursal infections
- Deep space infections
- Septic arthritis
  - Interphalangeal joint
  - Metacarpophalangeal joint
  - Septic bontonnière deformity
  - Septic Wrist
  - Septic Elbow
  - Septic Glenohumeral joint
  - Septic Sternoclavicular joint

**Osteomyelitis**
- Dog bites
- Cat bites
- Infections from marine organisms
- Human bites
- Spider bites
- Infections from parenteral drug use
- Pyogenic granuloma
- Retained foreign bodies
- Infected olecranon bursitis

**FOCUSED**
- Staphylococcal scalded skin syndrome
Necrotizing fasciitis/gas gangrene
Diagnosis and Treatment
Prosthetic implant infections

**OPERATIONS/PROCEDURES**

**ESSENTIAL/COMMON**
- Drainage of a felon
- Drainage of an acute paronychia
- Eponychial marsupialization
- Irrigation of tendon sheath for acute septic flexor tenosynovitis
- Incision and drainage of bursal infection
- Incision and drainage of a deep space infection
- Arthrotenomy for septic arthritis
  - DIP joint
  - PIP joint
  - MP joint
- Arthroscopic irrigation and debridement for septic arthritis
  - Wrist
  - Elbow
  - Shoulder
- Debridement of osteomyelitis
  - Curettage
  - Sequestrectomy
  - Saucerization
  - Diaphyseectomy
- Excision of retained foreign bodies
- Olecranon bursectomy
- Olecranon ostectomy
12. Injection/Extravasation

**DISEASES/CONDITIONS**

**BROAD**
Principles of treatment of injection injuries
- Oil-based
- Paint-based
- Water
- Air
Principles of treatment of extravasation injuries
- Chemotherapeutics
- Anti-epileptics
- Saline

**FOCUSED**

**OPERATIONS/PROCEDURES**

**ESSENTIAL/COMMON**
Irrigation, drainage and debridement of injection injuries
Amputation
Ray resection
Decompression and irrigation of extravasation injuries

**ESSENTIAL/UNCOMMON**
Graft or flap coverage of defects following extravasation

**COMPLEX**
13. Instability

**DISEASES/CONDITIONS**

**BROAD**

Biology and biomechanics of dense regular connective tissues
- Ligament
- Tendon
- Tendon-Bone interface

Biology and biomechanics of Muscle

The shoulder and elbow of the throwing athlete

Specific instabilities
- Interphalangeal joint collateral ligament laxity
- Locked metacarpophalangeal joint
- Metacarpophalangeal joint collateral ligament laxity
- Metacarpophalangeal joint volar plate avulsion
- Carpometacarpal joint instability
  - Ring and small finger
  - Thumb
- Scapholunate ligament instability
  - Occult (Predynamic)
  - Dynamic
  - Static
  - DISI
  - SLAC
- Lunotriquetral joint instability
  - Acute, dynamic
  - Chronic dynamic
  - Static
  - Acute perilunate instability
  - Chronic perilunate instability
  - Degenerative ulnocarpal abutment
- Ulnar translocation of the carpus
- Midcarpal instability
- Carpal instability adaptive
  - Intraarticular/extraarticular malunion of the distal radius
- Carpal instability Complex
  - Dorsal perilunate dislocation (lesser arc)
  - Dorsal perilunate fracture-dislocation
  - Palmar perilunate dislocation
  - Axial dislocation
  - Isolated carpal dislocation
- Essex-Lopresti injury
- Radioulnar dissociation
- DRUJ instability
- Elbow instability
  - MCL tear (chronic)
  - LUCL tear (chronic) (posterolateral rotary instability)
- Shoulder instability
  - Anterior (labral tear)
  - SLAP lesion
Inferior
Multidirectional instability
AC joint instability
Grade II/III
Sternoclavicular joint dislocation
Scapulothoracic instability

**FOCUSED**

**OPERATIONS/PROCEDURES**

**ESSENTIAL/COMMON**
Principles and practice of diagnostic arthroscopy
Wrist
Elbow
Glenohumeral joint
Proximal interphalangeal joint
Arthrodesis
Arthroplasty
Reduction of a CMC joint dislocation
Open
Closed
Thumb CMC volar ligament reconstruction (Eaton)
Wrist arthroscopy
  Diagnostic evaluation
    Radiocarpal
    Midcarpal
Ulnar shortening osteotomy
Lunotriquetral ligament
  Dorsal capsulodesis
  Lunotriquetral ligament repair
  Intercarpal arthrodesis
    LT
    CHLT
  Proximal row carpectomy
Scapholunate ligament
  Dorsal capsulodesis
  Scapholunate ligament repair
  Intercarpal arthrodesis
    Proximal row carpectomy
    Total wrist arthrodesis
Ulnar styloid ORIF
Glenohumeral instability
  Open Anterior reconstruction
  Open posterior reconstruction
  Arthroscopic anterior reconstruction
  Arthroscopic posterior reconstruction
  Reconstruction for MDI
  Treatment of Hill Sachs lesion, reverse Hill Sachs lesion
  Repair of SLAP lesion
Scapulothoracic fusion
ESSENTIAL/UNCOMMON
Principles and practice of diagnostic arthroscopy
   Thumb CMC joint
   MCP joints
Glenohumeral instability
   Treatment of glenoid insufficiency
Proximal interphalangeal joint
   Hemihamate athroplasty
   Collateral ligament repair
   Collateral ligament reconstruction
Wrist arthroscopy
   Arthroscopic TFCC debridement/repair
Lunotriquetral ligament
   Lunotriquetral ligament reconstruction
Scapholunate ligament
   Scapholunate ligament reconstruction
   Intercarpal arthrodesis
   SIT
   SC
Midcarpal stabilization
   Dorsal capsulodesis
   CHLT arthrodesis
Intraarticular-extraarticular distal radius osteotomy
Open reduction of a complete perilunate dislocation
Interosseous (radioulnar) reconstruction
DRUJ
   Ligament reconstruction
   Berger
   Hui-Linscheid
   Arthrodesis (Sauve Kapanji)
MCL of elbow repair/reconstruction
LUCL of elbow repair/reconstruction
Coracoclavicular ligament reconstruction
Scapulothoracic arthrodesis

COMPLEX
14. Medical Conditions

Diabetes Mellitus

Vasculitides
- Polyarteritis nodosa
- Thromboangiitis obliterans/Buerger’s disease
- Raynaud’s syndrome
- Churg-Strauss disease
- SclerodermaCREST syndrome
- Wegener’s granulomatosis
- Kawasaki disease, Takayasu arteritis, Giant cell arteritis

Sickle cell anemia

Seropositive arthritides
- RA/JRA

Seronegative arthritides
- Osteoarthritis
- Seronegative RA/JRA
- Gout
- CPPD
- Septic arthritis
- Psoriatic arthritis
- SLE
- Scleroderma
- Reiter’s syndrome
- Inflammatory bowel disease/enteropathic arthropathy
- Hemochromatosis

Neurologic disease
- Cerebral Palsy
- Multiple sclerosis
- Charcot Marie Tooth
- Amyotrophic lateral sclerosis, Guillain Barre, Myasthenia gravis

Pharmacology
- Antibiotics
- Corticosteroids
- NSAIDs
- Cox2 inhibitors
- Acetaminophen
- Ketorolac
- Opioids/narcotics
- Local anesthetic agents
- Sedation agents
- Antihypertensive agents
- Thyroid medications
- Cholesterol lowering agents
- Insulin
- Oral hypoglycemic agents
- Tricyclic antidepressants
- Gabapentin and Lyrica
- Anticoagulant agents

Hypertension
Hypothyroidism
Hypercholesterolemia
Coronary artery disease
Renal disease
Peripheral Vascular Disease
Ehlers Danlos syndrome
Fibromyalgia
15. Osteonecrosis

**DISEASES/CONDITIONS**

**BROAD**
Lunate AVN – Kienbock’s disease
Scaphoid AVN – Preiser’s disease
Capitate AVN
Metacarpal head AVN

**FOCUSED**

**OPERATIONS/PROCEDURES**

**ESSENTIAL COMMON**
Lunate
- Cast immobilization
- Radial shortening osteotomy
- Scaphoid excision and four corner fusion
- Proximal row carpectomy
- Wrist arthrodesis
Scaphoid
- Cast immobilization
- STT fusion
- Scaphoid excision and four corner fusion
- Proximal row carpectomy
- Wrist arthrodesis
Capitate
- Cast immobilization
- Midcarpal arthrodesis
- Wrist arthrodesis
Metacarpal Head
- Cast immobilization
- Curettage and bone graft
- MCP arthrodesis

**ESSENTIAL/UNCOMMON**
Lunate
- Ulnar lengthening osteotomy
- Capitate shortening osteotomy
- Capitate-hamate arthrodesis
- Core decompression
- Wrist denervation
Scaphoid
- Core decompression
- Wrist denervation
Capitate
- Capitate head resection arthroplasty
- Capitate-hamate arthrodesis
- Core decompression
- Wrist denervation
Metacarpal Head
MCP arthroplasty

**COMPLEX**

Lunate
- Radial dome osteotomy
- Vascularized graft

Scaphoid
- Vascularized graft

Capitate
- Vascularized graft

Metacarpal head
- Metacarpal flexion osteotomy
16. Peripheral Nerve

**DISEASES/CONDITIONS**

**BROAD**

Neuroanatomy
- Brain
- Spinal Cord
- Brachial Plexus
- Peripheral Nerve
- Nerve endings

Neurobiology
- Normal
- Abnormal
  - Compression
  - Laceration
  - Repair
  - Grafting
  - Transfers
    - Motor
    - Sensory

Compression syndromes
- Medial nerve
  - Carpal tunnel syndrome
  - Pronator syndrome
- Ulnar nerve
  - Cubital tunnel syndrome
  - Guyon canal compression
- Radial nerve
  - Radial tunnel syndrome
  - Wartenberg’s syndrome
  - PIN compression
- Axillary nerve
  - Quadrilateral space
- Suprascapular nerve
  - Notch
  - Spine
- Musculocutaneous nerve
  - Motor
  - LABCN

**FOCUSED**

**OPERATIONS/PROCEDURES**

**ESSENTIAL/COMMON**

Compressions
- Median
  - Carpal tunnel release, open
  - Redo open carpal tunnel release
- Ulnar
  - Ulnar nerve in situ decompression, open
Ulnar nerve transposition, subcutaneous
Ulnar nerve transposition, intramuscular
Ulnar nerve transposition, submuscular

Radial
- Decompression of superficial sensory branch
- Radial tunnel release

Injury and repair
Digital
- Digital nerve primary repair

Peripheral nerve
- Primary repair of major peripheral nerve (median, radial, ulnar)

Neuromas
- Neuroma excision, transposition and burial of nerve in bone, muscle

Reconstruction
- Nerve autograft harvest, sural

Tendon Transfers
Radial
- PT to ECRB, FCR to EDC, PL to EPL
- PT to ECRB, FCU to EDC, PL to EPL
- PT to ECRB, FDS4 to EPL and EIP, FDS3 to EDC

Median
- Low (opponensplaties)
  - Huber (ADQ)
  - FDS
  - EIP
  - Camitz (PL)
- High
  - BR to FPL
  - FDP side-to-side
  - ECRL to FDP

Ulnar
- Low
  - EIP to adductor pollicis
  - ECRB or BR plus tendon graft to adductor pollicis
  - FDS to adductor pollicis
  - Static tenodesis with graft to prevent MCP hyperextension
  - Modified Stiles-Bunnell (FDS) for clawing
    - Insertion: Zancolli lasso, proximal phalanx, or LB
  - FCR, ECRL, BR, or ECRB elongated with graft, for clawing
    - Insertion: Zancolli lasso, proximal phalanx, or LB
- High
  - FDP side-to-side

Median + Ulnar: Low
- Opponensplasty
  - FDS or EIP
  - Plus anichawing procedure
    - Static or active, noted above under low ulnar nerve palsy, with radial innervated donor MTU (ECRL, ECRB, BR)
    - Plus transfer to adductor pollicis for pinch, noted above under low ulnar nerve palsy (ECRL, BR, ECRB)
Median + Ulnar: High
  - Opponensplasty (EIP)
  - Static anti-clawing procedure
  - BR to adductor pollicis (with graft)
  - ECRL to FDP

**ESSENTIAL/UNCOMMON**

**Compressions**
- Median
  - Carpal tunnel release, endoscopic
  - Forearm release for pronator syndrome

**Injury and repair**
- Digital
  - Digital nerve repair with nerve graft, allograft
  - Digital nerve reconstruction with nerve graft, autograft

**Peripheral nerve**
- Reconstruction of major peripheral nerve (M, R, U) with autograft
- Internal microneurolysis of major peripheral nerve (M, R, U)

**Nerve Transfers**
- **Motor**
  - AIN to deep motor branch of ulnar nerve
  - Radial (ECU, EDQ branch) to deep motor branch of ulnar nerve
  - Ulnar nerve (FCU, PL, or FCR) to AIN, or ulnar nerve to MN
  - Median nerve (FCR, FDS, PL branch) to radial nerve (ECRB and PIN)

- **Sensory**
  - 3rd web portion of median to 1st web portion of median
  - 4th web portion of ulnar to 1st web portion of median
  - DCU to 1st web portion of median

**Neuromas**
- Reconstruction of neuroma with restoration of nerve continuity using autograft, allograft, or nerve tube

**Reconstruction**
- Major peripheral nerve reconstruction with cable grafts (M, R, U)
- Nerve autograft harvest, MABC
- Nerve autograft harvest, LABC
- Nerve autograft harvest, AIN
- Nerve Tubes (nerve tube reconstruction of neuroma or of digital nerve)

**Tendon Transfer**
- Musculocutaneous
  - Steindler flexorplasty
  - Latissimus transfer for elbow flexion with fascia lata graft
  - Pectoralis major transfer
    - Bipolar
    - Unipolar with fascia lata graft

**Accessory Nerve (CN11)**
- Suprascapular (SS+IS, SS only)

**COMPLEX**
Brachial Plexus
   Exploration of brachial plexus
   Intraplexal direct repair
   Intraplexal nerve grafting
   Intraplexal nerve transfer
   Extraplexal nerve transfers
      SA to suprascapular
      Intercostal to musculocutaneous
      Intercostal sensory to median
      Single or double fascicular transfer (Oberlin)
      Triceps to axillary
      Contralateral C7 to median
      Free functioning muscle transfer (gracilis)
Reconstruction
   Allografts (axogen allograft reconstruction of neuroma or of digital nerve)
   Vascularized ulnar nerve graft for median neurotization
Tendon Transfer
   Musculocutaneous
      Free functioning gracilis transfer
17. Psychological Aspects of Upper Extremity Conditions

Diagnosis
- Malingering
- Factitious disorders
- Conversion Reaction

Psychologic Disorders
- Depression
- Anxiety
- Substance abuse
  - Outside of medical/surgical care
  - Pain medication abuse/dependence
- Post-traumatic stress disorder
- Hypochondriasis

Factitious disorders
- Factitious lymphedema
- Factitious ulceration
- Secretan’s (dorsal hand trauma self-inflicted)
- Dysfunctional posturing
18. Soft Tissue Defects

**DISEASES/CONDITIONS**

**BROAD**
- Biology of Wounds and Wound Healing
- Skin grafts
- Skin flaps
- Principles of Microsurgery
  - Equipment
  - Set-Up
- Principles of Transplantation
  - Principles of immunology relevant to composite allograft transplantation
  - Immunosuppressants

**FOCUSED**

**OPERATIONS/PROCEDURES**

**ESSENTIAL/COMMON**
- Split and Full-thickness grafts: auto
- VAC

- Flaps
  - Local
    - Random (transposition, Limberg, peninsular, bipeninsular, rotation)
    - Axial
  - Distant
    - Random (Abdomen, chest)
    - Axial (Groin)
  - Named: Flag, kite, Moburg, Atasoy, Kutler, Brand, reverse adipofascial, cross finger, reverse cross finger
  - Lower Extremity Coverage
    - Gastrocnemius

**ESSENTIAL/UNCOMMON**

- Flaps
  - Local
    - Island (PIA, RFFF, RPRFF)
  - Free Tissue Transfer
    - Fasciocutaneous (Lateral arm, Anterolateral thigh, temporoparietal)
    - Myocutaneous (Latissimus, Gracilis, Rectus Abdominis)
    - Muscle (Latissimus, Gracilis, Rectus Abdominis)
    - Osseous (Fibula)
  - Lower Extremity Coverage
    - Soleus

**COMPLEX**

- Split and Full-thickness grafts: allo, xeno

- Flaps
  - Axial
    - Named: Neurovascular island, reverse MC artery island
  - Free Tissue Transfer
Osteocutaneous (Fibula)
Composite (hallux, wrap around, second toe, multiple toes, dorsalis pedis)

Lower Extremity Coverage
Perforator, Cross Leg, Free Flap, Reverse Sural
19. Tendon: Atraumatic conditions (tenosynovitis)

**DISEASES/CONDITIONS**

**BROAD**

Biology

Principles of rehabilitation
  - Muscle physiology
  - Exercise physiology
  - Splinting
  - Modalities

Shoulder
  - Rotator Cuff
    - Tendinopathy
    - Small tears
    - Large tears
    - Massive tears
    - Subscapularis tears
  - Impingement
    - Internal
    - External
    - Subcoracoid
  - Biceps
    - Tendinitis
  - Labrum
    - SLAP tear

Elbow
  - Biceps tendinitis/tenosynovitis
  - Triceps tendinitis/tenosynovitis
  - LTEs
  - MTEs
  - Olecranon bursitis

Extensor forearm/hand
  - AbPL/EPB tendinitis/tenosynovitis (DeQuervaine’s)
  - EPL tendinitis/tenosynovitis
  - EDC tendinitis/tenosynovitis
  - EDQ tendinitis/tenosynovitis
  - ECU tendinitis/tenosynovitis
  - Swan neck/Boutonniere
    - Traumatic
    - Atraumatic
    - Fixed
    - Flexible

Flexor forearm/Hand
  - FCR
  - FCU
  - Carpal tunnel
  - Trigger
  - Flexor tendinitis/tenosynovitis

**FOCUSED**
OPERATIONS/PROCEDURES
ESSENTIAL/COMMON

Shoulder
  Rotator Cuff
    Tendinopathy
    Small tears (repair open, arthroscopic)
    Large tears (repair open, arthroscopic)
    Massive tears (repair open, arthroscopic, muscle transfers)
    Subscapularis tears (repair open, arthroscopic)
  Impingement
    Internal (decompression open, arthroscopic)
    External (decompression open, arthroscopic)
    Subcoracoid (decompression open, arthroscopic)
  Biceps
    Tenotomy
    Tenodesis
  Labrum
    SLAP repair

Elbow
  Biceps debridement
  Triceps debridement
  LTES debridement, reattachment
  MTES debridement, reattachment
  Olecranon bursa excision

Extensor forearm/hand
  DeQuervaine's release
  EPL transposition
  EDC tenosynovectomy
  EDC tenosynovectomy
  ECU tenosynovectomy, transposition
  Swan neck/Boutonniere
    Release
    Reconstruction
    Arthroplasty
    Arthrodesis

Flexor forearm/Hand
  FCR tunnel release
  FCU debridement
  Carpal tunnel tenosynovectomy
  Trigger finger release
  Flexor tenosynovectomy

ESSENTIAL/UNCOMMON

COMPLEX
20. Tendon: Traumatic Conditions

DISEASES/CONDITONS

BROAD

Biology
  - Dense regular connective tissue healing, nutrition
  - Biomechanics of tendon repair

Principles of rehabilitation
  - Biology
  - Methods
  - Splinting

Shoulder
  - Rotator Cuff
    - Tendinopathy
    - Small tears (repair open, arthroscopic)
    - Large tears (repair open, arthroscopic)
    - Massive tears (repair open, arthroscopic, muscle transfers)
    - Subscapularis tears (repair open, arthroscopic)

Elbow (Biceps, triceps; extensor origin, flexor origin)
  - Repair
  - Rehabilitation

Extensor forearm/hand
  - Swan neck/Boutonniere/mallet
  - Zones of injury
  - Repair, rehabilitation

Flexor forearm/Hand
  - Repair (Zone 1, Zone 2, other)
  - Graft (intrasynovial, extrasynovial)
  - Tenolysis
  - Reconstruction (silastic rod, grafting, lysis)

FOCUSED

OPERATIONS/PROCEDURES

ESSENTIAL/COMMON

Shoulder
  - Rotator Cuff
    - Small tears (repair open, arthroscopic)
    - Large tears (repair open, arthroscopic)
    - Massive tears (repair open, arthroscopic, muscle transfers)
    - Subscapularis tears (repair open, arthroscopic)

Elbow (Biceps, triceps; extensor origin, flexor origin)
  - Repair

Extensor forearm/hand
  - Swan neck/Boutonniere/mallet repair
  - Zones of injury 1 to 8 repair and immobilization
  - Repair

Flexor forearm/Hand
  - Repair (Zone 1, Zone 2, Zones 3, 4, 5)

ESSENTIAL/UNCOMMON
Flexor forearm/Hand
  Graft (intrasynovial, extrasynovial)
  Tenolysis
  Reconstruction (silastic rod, grafting, lysis)

COMPLEX
21. Trauma, Critical Care
ATLS/ PALS
Penetrating Trauma
  - Principles of resuscitation
  - Nerve care
  - Fracture care
  - Extremity care, including decompressive fasciotomy
22. Tumors

**DISEASES/CONDITIONS**

**BROAD**

Skin/soft tissue/nerve/vascular/bone and joint

Classification

Individual Diagnoses

**SKIN**

- Basal Cell Carcinoma
- Bowen’s Disease
- Dermatofibroma/Histiocytoma
- Digital fibrokeratoma/Acral fibrokeratoma
- Glomus Tumor
- Keratoacanthoma/Distal digital keratoacanthoma
- Keratoses
- Lentigines
- Lymphangiosarcoma
- Melanocytic nevi/Moles
- Melanoma
- Merkel Cell Carcinoma
- Pyogenic granuloma
- Seborrheic keratosis
- Squamous Cell Carcinoma
- Sweat gland tumors
- Warts/Verruca vulgaris

**SOFT TISSUE/BONE:**

- Aneurysmal Bone Cyst
- Angiosarcoma
- Carpometacarpal boss
- Chondroblastoma
- Chondrosarcoma
- Clear Cell Sarcoma
- Dermatofibrosarcoma Protuberans
- Desmoids
- Enchondroma, Multiple enchondromatosis (Ollier), Maffucci’s
- Epidermal Inclusion cyst
- Epithelioid Sarcoma
- Ewing’s Sarcoma
- Fibromatoses
- Fibrosarcoma
- Fibrous Dysplasia
- Ganglion cyst (Volar, dorsal, radial, ulnar)
- Giant Cell tumor
- Giant Cell tumor of tendon sheath (PVNS)
- Granular Cell tumor
- Leiomyosarcoma
- Lipomas
- Lipofibromatous Hamartomas
- Liposarcoma
- Lymphoma of bone
Malignant Fibrous Histiocytoma
Metastatic lesions
Mucous cyst
Myeloma
Neurofibromas
Neurofibrosarcoma/Malignant Schwannoma
Nodular fasciitis/Dupuytren’s/Diabetic fibromatosis
Osteoblastoma
Osteochondroma, BPOP, Subungual Exostosis
Osteogenic Sarcoma
Osteoid Osteoma
Periosteal chondroma
Rhabdomyosarcoma
Schwannomas/Neurilemomas
Synovial Sarcoma
Unicameral Bone Cyst

FOCUSED
Biopsy: superficial, deep
   Skin
   Muscle
   Nerve
   Bone
Excision
   Benign, malignant, metastatic
   Superficial, deep
   Size
   Skin, Muscle, Nerve, Vascular, Bone, Cartilage, Mesenchymal (see list below)
   Location (Hand/Wrist/Forearm/Elbow/Arm/Shoulder)
Reconstruction

OPERATIONS/PROCEDURES
ESSENTIAL/COMMON
Amputation
Curettage and bone grafting

ESSENTIAL/UNCOMMON
Curettage and cementation
Curettage and cryotherapy
Incisional and Excisional biopsy
Skin grafting

COMPLEX
Mohs’ micrographic surgery
Wide excision and reconstruction
23. Vascular conditions

**DISEASES/CONDITIONS**

**BROAD**

Acute occlusive disease
  - Thrombus
  - Embolus

Chronic occlusive disease
  - Atherosclerotic disease
  - Buergers
  - Scleroderma
  - Dermatomyositis

Thrombophlebitis

Septic thrombophlebitis

Trauma
  - Laceration
    - Large vessel (A, V)
    - Small vessel (A, V)
  - Aneurysm
    - Large vessel (A, V)
    - Small vessel (A, V)

Vascular malformations
  - Adult
    - Arteriovenous malformation
    - Venous malformation
    - Hemangioma
    - Lymphatic malformation

Vasospasm, Raynauds
  - Medical treatment
  - Surgical treatment

Frostbite

**FOCUSED**

Angioplasty

Fogarty Catheterization
  - Indications

Vascular malformation
  - Congenital

Thoracic outlet syndrome (Dx methods)

**OPERATIONS/PROCEDURES**

**ESSENTIAL/COMMON**

- Repair laceration large artery
- Repair laceration large vein
- Vein graft artery laceration
- Vein graft vein laceration
- Repair aneurysm large artery
- Repair aneurysm small artery
- Excision aneurysm small artery
- Excision vascular mass
ESSENTIAL/UNCOMMON
Palmar sympathectomy
Digital sympathectomy
COMPLEX
Sources:
1) Textbook of Hand Surgery (Weiss, Burger)
2) ASSH Pocket Manual of Hand Surgery TOC (Hammert, Calfee, Bozentka, Boyer)
3) JHS Review Article TOC for three-year cycle (Scott Kozin)
4) Fellowship Case Log Categories
5) Trumble group code Categories for Hand Fellowship Case Log
6) Steyers et al, JHS(A) 15, 681-9 1985: A Role Delineation Study in Hand Surgery
7) Chang documents
8) Committee input (Doug Sammer, Kevin Lutsky, Tim Havenhill, Dawn Laporte, Ryan Calfee, Tamara Rozental, Angela Wang, MIB)
9) Council input

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