

Lectures covering concentrated Topics in Emergency Medicine (TEMs)

Section	Week	Title	Topics
Imaging	123	Introduction to Emergency Radiology	Bioeffects of x-rays, contrast, and ultrasound <i>Ex utero</i> <i>In utero</i> Imaging modalities Plain radiography Contrast radiography Computed tomography Magnetic resonance Nuclear scintigraphy Ultrasonography Image interpretation Adequacy Terminology General abnormalities on plain radiography Bones Lesions Periosteal reactions Osteoporosis Paget's disease Joints Arthritides Fluid and air Decision making Clinical Controversial

	124	XR: Hand, Fingers, and Thumb	<p>Anatomy Plain radiography Views Standard Finger Thumb Hand Supplemental for hand Supination oblique Brewerton Normal variants</p> <hr/> <p><u>Trauma</u> Plain radiography Abnormalities Dislocations Fractures Avulsion Ligament Tendon Other Carpal bones Long bone Diaphyseal Epiphyseal and metaphyseal Tuft of digit Clenched-fist and human-bite Foreign body High-pressure injection Interpretation errors Computed tomography Bony interpretation Soft-tissue interpretation Special populations Pediatric Geriatric Decision-making Clinical Controversial</p> <hr/> <p><u>Nontrauma</u> Plain radiography Abnormalities Arthropathies Avascular necrosis Osteomyelitis Interpretation errors Special populations Pediatric Geriatric Decision-making Clinical Controversial</p>
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	125	XR: Forearm and Wrist	<p>Anatomy</p> <p>Plain radiography</p> <p>Views</p> <p>Wrist</p> <p>Standard</p> <p>Bony interpretation</p> <p>Soft-tissue interpretation</p> <p>Supplemental</p> <p>Supination oblique</p> <p>Scaphoid</p> <p>Carpal tunnel</p> <p>Forearm [radius & ulna]</p> <p>Standard</p> <p>Supplemental</p> <p>Normal variants</p> <hr/> <p><u>Trauma</u></p> <p>Plain radiography</p> <p>Abnormalities</p> <p>Dislocations</p> <p>Carpal bones</p> <p>Wrist joint</p> <p>Fractures</p> <p>Complete</p> <p>Distal</p> <p>Shaft</p> <p>Incomplete</p> <p>Special</p> <p>Galeazzi</p> <p>Monteggia</p> <p>Interpretation errors</p> <p>Computed tomography</p> <p>Bony interpretation</p> <p>Soft-tissue interpretation</p> <p>Special populations</p> <p>Pediatric</p> <p>Geriatric</p> <p>Decision-making</p> <p>Clinical</p> <p>Controversial</p> <hr/> <p><u>Nontrauma</u></p> <p>Plain radiography</p> <p>Abnormalities</p> <p>Interpretation errors</p> <p>Special populations</p> <p>Pediatric</p> <p>Geriatric</p> <p>Decision-making</p> <p>Clinical</p> <p>Controversial</p>
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	126	XR: Arm and Elbow	<p>Anatomy Plain radiography Views Elbow Standard Bony interpretation Soft-tissue interpretation Supplemental Oblique Capitellum Olecranon Arm [humerus] Standard Supplemental Normal variants</p> <hr/> <p><u>Trauma</u> Plain radiography Abnormalities Dislocations Fractures Proximal radius Proximal ulna Distal humerus Epicondylar Supracondylar Diaphyseal Nursemaid's elbow Interpretation errors Computed tomography Bony interpretation Soft-tissue interpretation Special populations Pediatric Geriatric Decision-making Clinical Controversial</p> <hr/> <p><u>Nontrauma</u> Plain radiography Abnormalities Interpretation errors Special populations Pediatric Geriatric Decision-making Clinical Controversial</p>
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	127	XR: Clavicle, Scapula, and Shoulder	<p>Anatomy</p> <p>Plain radiography</p> <p>Views</p> <ul style="list-style-type: none"> Shoulder <ul style="list-style-type: none"> Anteroposterior Internal rotation External rotation Supplemental <ul style="list-style-type: none"> Lateral Y Posterior oblique Axillary Clavicle <ul style="list-style-type: none"> Standard Supplemental Scapula <ul style="list-style-type: none"> Standard Supplemental <p>Normal variants</p> <hr/> <p><u>Trauma</u></p> <p>Plain radiography</p> <p>Abnormalities</p> <ul style="list-style-type: none"> Dislocations <ul style="list-style-type: none"> Glenohumeral Acromioclavicular Sternoclavicular Scapulothoracic Fractures <ul style="list-style-type: none"> Clavicle Scapula <ul style="list-style-type: none"> Glenoid Acromion Coracoid Body Proximal humerus Interpretation errors <p>Computed tomography</p> <ul style="list-style-type: none"> Bony interpretation Soft-tissue interpretation <p>Special populations</p> <ul style="list-style-type: none"> Pediatric Geriatric <p>Decision-making</p> <ul style="list-style-type: none"> Clinical Controversial <hr/> <p><u>Nontrauma</u></p> <p>Plain radiography</p> <ul style="list-style-type: none"> Abnormalities Interpretation errors <p>Special populations</p> <ul style="list-style-type: none"> Pediatric Geriatric <p>Decision-making</p> <ul style="list-style-type: none"> Clinical Controversial
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	128	XR: Skull, Face, and Teeth	<p>Anatomy</p> <p>Plain radiography</p> <p>Views</p> <ul style="list-style-type: none"> Skull <ul style="list-style-type: none"> Standard Supplemental Face and teeth <ul style="list-style-type: none"> Standard Supplemental Mandible <ul style="list-style-type: none"> Standard technique Panoramic tomography Nasal bones Orbital bones Submental vertical <p>Normal variants</p> <hr/> <p><u>Trauma</u></p> <p>Plain radiography</p> <p>Abnormalities</p> <ul style="list-style-type: none"> Dislocations <ul style="list-style-type: none"> Mandible Teeth Fractures <ul style="list-style-type: none"> Skull Nose Orbit Zygoma Maxilla Mandible Teeth <p>Interpretation errors</p> <p>Computed tomography</p> <ul style="list-style-type: none"> Bony interpretation Soft-tissue interpretation <p>Special populations</p> <ul style="list-style-type: none"> Pediatric Geriatric <p>Decision-making</p> <ul style="list-style-type: none"> Clinical Controversial <hr/> <p><u>Nontrauma</u></p> <p>Plain radiography</p> <p>Computed tomography</p>
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	129	XR: Neck and Cervical Spine	<p>Anatomy</p> <p>Plain radiography</p> <p>Views</p> <ul style="list-style-type: none"> Cervical spine <ul style="list-style-type: none"> Standard <ul style="list-style-type: none"> Bony interpretation Soft-tissue interpretation Supplemental <ul style="list-style-type: none"> Odontoid [foramen magnum] Swimmer's Left & right oblique and pillar Flexion and extension Soft-tissue neck <ul style="list-style-type: none"> Standard Supplemental Normal variants <hr/> <p><u>Trauma</u></p> <p>Plain radiography</p> <ul style="list-style-type: none"> Abnormalities <ul style="list-style-type: none"> Foreign-body <ul style="list-style-type: none"> Ingestion Inhalation Fractures Interfacetal dislocations Subluxations Other abnormalities <ul style="list-style-type: none"> Foreign bodies Hyperossification Infections Malignancy Interpretation errors <p>Computed tomography</p> <ul style="list-style-type: none"> Bony interpretation Soft-tissue interpretation <p>Special populations</p> <ul style="list-style-type: none"> Pediatric Geriatric <p>Decision-making</p> <ul style="list-style-type: none"> Clinical Controversial <hr/> <p><u>Nontrauma</u></p> <p>Plain radiography</p> <ul style="list-style-type: none"> Abnormalities <ul style="list-style-type: none"> Foreign bodies Hyperossification Infections Malignancy Interpretation errors <p>Special populations</p> <ul style="list-style-type: none"> Pediatric Geriatric <p>Decision-making</p> <ul style="list-style-type: none"> Clinical Controversial
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	130	CT: Head, Face, and Neck	Trauma Head Face Neck
			Nontrauma Head Face Neck
	131	XR: Chest and Thoracic Spine	Anatomy Plain radiography Views Chest Standard Single-view AP portable Two-view PA & lateral Supplemental Decubital Expiratory Lordotic Rib detail Thoracic spine Standard Bony interpretation Soft-tissue interpretation Supplemental Normal variants
			Trauma Plain radiography Abnormalities Foreign-body Ingestion Inhalation Fractures and subluxations Ribs Sternum Spine Other Diaphragmatic Herniation Rupture Intraperitoneal air Mediastinum Esophagus Great vessels Heart Tracheobronchial tree Pleural cavities Hemothorax Pneumothorax Pulmonary contusion Interpretation errors Special populations Pediatric Geriatric Decision-making Clinical Controversial
			Nontrauma Plain radiography Abnormalities Diaphragmatic elevation

			<ul style="list-style-type: none">Mediastinum<ul style="list-style-type: none">PneumomediastinumThoracic aortaHila<ul style="list-style-type: none">Increased vascularityLymphadenopathyPleural cavities<ul style="list-style-type: none">Airspace-filling disordersAtelectasisEffusionInterstitial disorders<ul style="list-style-type: none">Nodular patternsReticular patternsMass lesions<ul style="list-style-type: none">CavitarySolidPneumothoraxInterpretation errorsIndwelling equipment<ul style="list-style-type: none">Line, tube, and wire placement in the EDPreexisting catheters and devicesSpecial populations<ul style="list-style-type: none">PediatricGeriatricDecision-making<ul style="list-style-type: none">ClinicalControversial
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	132	XR: Abdomen and Lumbar Spine	<p>Anatomy Plain radiography Views Abdomen Standard Supplemental Cross-table lateral Upright abdomen Decubital Lumbar spine Standard Bony interpretation Soft-tissue interpretation Supplemental Normal variants</p> <hr/> <p><u>Trauma</u> Abnormalities Foreign-body ingestion Fractures Subluxations Interpretation errors Special populations Pediatric Geriatric Decision-making Clinical Controversial</p> <hr/> <p><u>Nontrauma</u> Plain radiography Abnormalities Abdominal aortic aneurysm Abscesses Hyperossification Ileus Infections Intramural and portal-venous gas Intraperitoneal gas Malignancy Obstruction Gastric outlet Small bowel Large bowel Pneumobilia Interpretation errors Special populations Pediatric Geriatric Decision-making Clinical Controversial</p>
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	133	US: Chest	<u>Trauma</u> Cardiac motion Cardiac tamponade Hemothorax Pneumothorax
			<u>Nontrauma</u> Cardiac motion Cardiac tamponade Pleural effusion Pneumothorax Pulmonary embolism
	134	US: Abdomen	<u>Trauma</u> Intraperitoneal cavity Retroperitoneal space Solid-organ injury
			<u>Nontrauma</u> Abdominal aorta Abscess Appendix Ascites Gall bladder Kidney
	135	MR: Emergency Applications	<u>Trauma</u> Brain Spinal cord
			<u>Nontrauma</u> Acute spinal cord compression Cauda equine syndrome Carotid dissection Epidural abscess Stroke

	136	US: Pelvis	<u>Trauma</u> Extraperitoneal pelvis Ruptured gravid uterus
			<u>Nontrauma</u> Female Ovaries Uterus Pregnancy First trimester Second trimester Third trimester Male Prostate Scrotum Testes Hernia
	137	CT: Chest	<u>Trauma</u> Bony structures Mediastinum Pleural cavities
			<u>Nontrauma</u> Heart Pleural cavities Pulmonary arteries Thoracic aorta

	138	CT: Abdomen and Pelvis	<p><u>Trauma</u> Bony structures Dislocations Fractures Pelvic ring disruptions Extraperitoneal space Hollo-organ injury Solid-organ injury Vascular injury Intraperitoneal cavity Hollow-organ injury Solid-organ injury</p> <hr/> <p><u>Nontrauma</u> Intraperitoneal cavity Appendicitis Ascites Cholecystitis Diverticulitis Hollow-organ perforation Inflammatory bowel disease Ischemic bowel disease Masses Abscesses Cysts Solid tumors Obstruction Gastric outlet Small bowel Large bowel Pancreatitis Volvulus Pelvic space Fournier's gangrene Prostate Ovaries Uterus Retroperitoneal space Abdominal aorta Aneurysm Dissection Rupture Urinary tract Obstruction Hydronephrosis Hydroureter Stone disease Nephrolithiasis Urterolithiasis</p>
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	139	XR: Pelvis, Sacrum, and Coccyx	<p>Anatomy</p> <p>Plain radiography</p> <p>Views</p> <ul style="list-style-type: none"> Pelvis <ul style="list-style-type: none"> Standard Supplemental <ul style="list-style-type: none"> Inlet Outlet Sacrum and coccyx <ul style="list-style-type: none"> Standard Supplemental Normal variants <p>Contrast radiography</p> <ul style="list-style-type: none"> Retrograde urethrogram Retrograde cystogram <hr/> <p><u>Trauma</u></p> <p>Plain radiography</p> <p>Abnormalities</p> <ul style="list-style-type: none"> Pelvis <ul style="list-style-type: none"> Individual bone fractures <ul style="list-style-type: none"> Avulsion Ilium Ischium Pelvic ring disruption <ul style="list-style-type: none"> Anteroposterior compression Lateral compression Vertical shear Mixed patterns Central acetabular fracture Sacrum <ul style="list-style-type: none"> Fractures <ul style="list-style-type: none"> Compression Distraction Coccyx <ul style="list-style-type: none"> Dislocations Fractures Interpretation errors <p>Special populations</p> <ul style="list-style-type: none"> Pediatric Pregnant Geriatric <p>Decision-making</p> <ul style="list-style-type: none"> Clinical Controversial <hr/> <p><u>Nontrauma</u></p> <p>Plain radiography</p> <ul style="list-style-type: none"> Abnormalities Interpretation errors <p>Special populations</p> <ul style="list-style-type: none"> Pediatric Pregnant Geriatric <p>Decision-making</p> <ul style="list-style-type: none"> Clinical Controversial
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	140	XR: Acetabulum and Hip	<p>Anatomy Plain radiography Views Hip Standard Anteroposterior “Frog leg” lateral Supplemental Cross-table “true” lateral Oblique Acetabulum Standard Supplemental Normal variants Computed tomography Bony interpretation Soft-tissue interpretation</p> <hr/> <p><u>Trauma</u> Plain radiography Abnormalities Dislocations Anterior Posterior Fractures Avulsions Acetabulum Proximal femur Subtrochanteric Intertrochanteric Neck Head Interpretation errors Computed tomography Bony interpretation Soft-tissue interpretation Special populations Pediatric Geriatric Decision-making Clinical Controversial</p> <hr/> <p><u>Nontrauma</u> Plain radiography Abnormalities Arthropathies Avascular necrosis Osteomyelitis Interpretation errors Special populations Pediatric Pregnant Geriatric Decision-making Clinical Controversial</p>
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	141	XR: Thigh and Knee	<p>Anatomy Plain radiography Views Knee Standard Supplemental Intercondylar “notch” or “tunnel” Patellar “sunrise” Thigh [femur] Standard Supplemental Normal variants Computed tomography Bony interpretation Soft-tissue interpretation</p> <hr/> <p><u>Trauma</u> Plain radiography Abnormalities Dislocations Knee joint Tibiofibular joint Patella Fractures Proximal fibula Proximal tibia Avulsion Ligaments Tendons Spine Plateau Anterior tubercle Patella Distal femur Condylar Supracondylar Special Insufficiency Stress Interpretation errors Special populations Pediatric Geriatric Decision-making Clinical Controversial</p> <hr/> <p><u>Nontrauma</u> Plain radiography Abnormalities Arthropathies Avascular necrosis Osteomyelitis Interpretation errors Special populations Pediatric Pregnant Geriatric Decision-making Clinical Controversial</p>
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	142	XR: Leg and Ankle	<p>Anatomy Plain radiography Views Ankle Standard Supplemental Leg [tibia & fibula] Standard Supplemental Normal variants Computed tomography Bony interpretation Soft-tissue interpretation</p> <hr/> <p><u>Trauma</u> Plain radiography Abnormalities Dislocations Ankle joint Tibiofibular joint Fractures Malleoli Shaft Complete Distal Shaft Incomplete Special Maisonneuve Pilon Talar dome Interpretation errors Special populations Pediatric Geriatric Decision-making Clinical Controversial</p> <hr/> <p><u>Nontrauma</u> Plain radiography Abnormalities Arthropathies Osteoarthrosis Interpretation errors Special populations Pediatric Pregnant Geriatric Decision-making Clinical Controversial</p>
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	143	XR: Foot and Toes	<p>Anatomy Plain radiography Views Standard Toe Foot Supplemental for heel Axial Lateromedial oblique Normal variants Computed tomography Bony interpretation Soft-tissue interpretation</p> <hr/> <p><u>Trauma</u> Plain radiography Abnormalities Dislocations Tarsal Tarsometatarsal Fractures Avulsion Ligament Tendon Other Tarsal Long bone Diaphyseal Epiphyseal and metaphyseal Tuft of digit Stress Plantar puncture wounds Foreign body Interpretation errors Special populations Pediatric Geriatric Decision-making Clinical Controversies</p> <hr/> <p><u>Nontrauma</u> Plain radiography Abnormalities Arthropathies Avascular necrosis Diabetic foot Osteomyelitis Interpretation errors Special populations Pediatric Pregnant Geriatric Decision-making Clinical Controversial</p>
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	144	US: Vascular	<u>Trauma</u> Arteriovenous fistula Hematoma
			<u>Nontrauma</u> Arterial occlusion Deep venous thrombosis