CLINICAL PREDICTION RULES: DIAGNOSIS

Evidence-Based Clinical Prediction Rules Used in Physical Therapy Practice to Predict the Probability of a Specific Disease or Outcome

MSK CLINICAL PREDICTION RULES/DIAGNOSTIC CLUSTERS

REGION	JOINT	PATHOLOGY OR NEED FOR RADIOGRAPHS	CLUSTER
Upper Extremity	**Shoulder**	Anterior Instability	• (+) Apprehension Test • (+) Relocation Test • (+) Anterior Drawer Test
		Rotator Cuff Tear	• Age > 65 • Night pain • Weakness in external rotation
		Rotator Cuff Tear (Full-Thickness)	• Age > 60 • (+) Drop Arm Test • (+) Infraspinatus MMT • (+) Painful Arc
		Subacromial Impingement	• (+) Hawkins-Kennedy Test • (+) Infraspinatus MMT • (+) Painful Arc
	Wrist	Carpal Tunnel Syndrome	• Age > 45 • Shaking hands to relieve symptoms • Wrist-ratio index > 0.67 • Decreased sensation in thumb • Symptom Severity Scale > 1.9
Spine	**Cervical**	Canadian Cervical Spine Rules (need for radiographs)	**HIGH RISK FACTORS:** • Age > 65 • Dangerous MOI • Paresthesia in extremities **LOW RISK FACTORS:** • Simple rear-end MVA • Normal sitting posture in ER • Ambulatory since injury • Delayed onset of neck pain and absence of midline tenderness ***If (1) high risk factor or (2) low risk factors AND the inability to actively rotate the neck > 45° bilaterally are present, radiographs are indicated*
		Cervical Closed Fracture	• Age < 55 • Single • Trauma • Acute • ER visit
		Cervical Myelopathy	• Age > 45 • Gait deviation • (+) Hoffman's Test • (+) Inverted Supinator Test • (+) Babinski Test
		Cervical Radiculopathy	• (+) Distraction Test • (+) Spurling's Test • (+) ULTT A • < 60° rotation to involved side

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Spine	Lumbar	Compression Fracture	- Age > 52 - BMI < 22 - Female - No leg pain - No regular exercise OR - Age > 70 - Female - Significant trauma (major in young patients or minor in elderly patients) - Prolonged use of corticosteroids
		Spinal Stenosis	- Age > 48 - Bilateral leg symptoms - Leg pain > back pain - Pain during walking/standing - Pain relief upon sitting
Pelvis	Sacroiliac	Joint Pain	(+) Compression Test (+) Distraction Test (+) FABER Test (+) Gaenslen's Test (+) Sacral Thrust Test (+) Thigh Thrust Test
Lower Extremity	Hip	Osteoarthritis	- Squatting is aggravating factor (+) Scour Test - Passive hip IR < 25° - Active hip flexion causes lateral hip pain - Active hip extension causes hip pain
	Knee	MCL Tear	- Trauma by external force to leg - Rotational trauma - Pain with valgus stress test at 30° - Laxity with valgus stress test at 30°
		Meniscus Tear	- History of locking or catching - Joint line tenderness - Pain with forced hyperextension of knee - Pain with maximal passive knee flexion - Pain or audible click with McMurray's Test
		Ottawa Knee Rules (need for radiographs)	- Age > 55 - Tenderness at head of fibula - Isolated tenderness of patella during palpation - Inability to flex knee to 90° - Inability to WB immediately and in ER
		Pittsburgh Knee Rules (need for radiographs)	Blunt trauma or a fall AND (≥1): - Age < 12 or > 50 - Ambulate < 4 steps in ER
	Ankle/Foot	Ottawa Ankle Rules (need for radiographs)	Presence of post-traumatic ankle pain AND (≥1): - TTP at tip of distal 6 cm of the posterior aspect of either malleolus - Ambulate < 4 steps immediately and in ER
		Ottawa Foot Rules (need for radiographs)	Presence of post-traumatic midfoot pain AND (≥1): - TTP over proximal 5th metatarsal or navicular bone - Ambulate < 4 steps immediately and in ER

PATHOLOGY	CLUSTER
Deep Vein Thrombosis (DVT)	**(+1)** Active cancer (patient receiving treatment for cancer within the previous 6 months or currently receiving palliative treatment) **(+1)** Paralysis, paresis, or recent plaster immobilization of the lower extremities **(+1)** Recently bedridden for 3 days or more, or major surgery within the previous 12 weeks requiring general or regional anesthesia **(+1)** Localized tenderness along the distribution of the deep venous system **(+1)** Entire leg swollen **(+1)** Calf swelling at least 3 cm larger than that on the asymptomatic side (measured 10 cm below tibial tuberosity) **(+1)** Pitting edema confined to the symptomatic leg **(+1)** Collateral superficial veins (non-varicose) **(+1)** Previously documented DVT **(-2)** Alternative diagnosis at least as likely as DVT **0: Low Probability** | **1-2: Moderate Probability** | **> 3: High Probability**
Pulmonary Embolism (PE)	**(+1)** Age 65 years or over **(+2)** Surgery or fracture within 1 month **(+2)** Active malignant condition **(+2)** Haemoptysis **(+3)** Previous DVT or PE **(+3)** Unilateral lower limb pain **(+3)** Heart rate 75 to 94 bpm **(+4)** Pain on deep palpation of lower limb and unilateral edema **(+5)** Heart rate 95 or more bpm **< 4: Low Probability** | **4-10: Moderate Probability** | **> 10: High Probability**

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