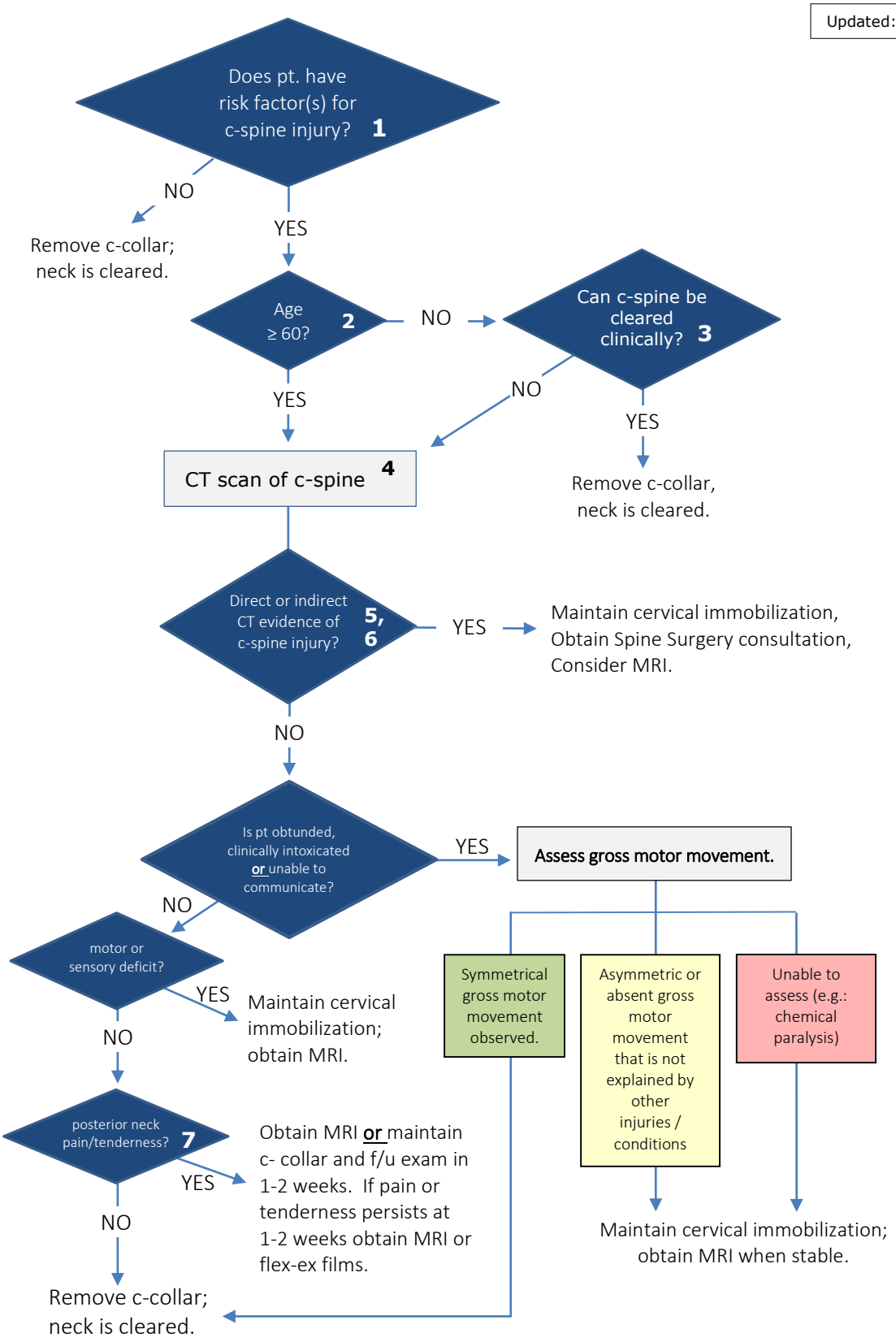
ALGORITHM for ADULT CERVICAL SPINE CLEARANCE (TGH, SJMC only)

Updated: MAY 2018



Algorithm notes - numbers refer to specific steps of the algorithm

1. Significant risk factors for c-spine injury include:
    a. Fall from > 1 meter or 5 stairs or fall from standing/sitting with head strike
    b. Axial load to head (e.g.: diving)
    c. Motor vehicle / motorcycle / ATV / bicycle crash
    d. Pedestrian struck by vehicle
    e. Significant blunt force injury to head (includes assaults)
2. Up to 21% of older patients have asymptomatic c-spine fractures [18]
3. All of the following must be met for clinical clearance:
    a. Pt is alert, cooperative and not clinically intoxicated (blood ETOH level need not be zero)
    b. No new extremity weakness, paresthesia or numbness
    c. No distracting injury (pt. able to focus on neck exam; no thoracic or lumbar spine fractures present or suspected)
    d. No posterior or posterolateral neck pain
    e. No posterior or posterolateral neck tenderness
    f. No pain on active neck ROM (flexion, extension, rotation)
4. CT scan from base of skull to T1. Add CTA of neck to rule out cerebrovascular injury or CT of T and L spine when clinically indicated.
5. The CT scan must be officially read and reported by the attending radiologist. Radiologic signs of soft tissue edema or unexplained misalignments, even in the absence of fracture, constitute a "positive" CT scan and should prompt maintenance of c-collar and further investigations.
6. Some degree degenerative spine osteoarthritis (aka "DJD") is present in nearly every patient over the age of 40 years. Patients with severe spine degenerative disorders such as rheumatoid arthritis, ankylosing spondylitis or Diffuse Idiopathic Skeletal Hyperostosis (DISH) should remain in cervical immobilization until a formal spine specialty consultation is obtained.
7. In the alert trauma patient with a negative CT scan of the neck but persistent and significant neck pain or tenderness, there are two options:
    a) MRI of neck to r/o ligament disruption. If the MRI is negative the neck is cleared and the cervical collar can be removed. Flexion-extension films immediately after injury are not recommended due to lack of data supporting their utility in the acute setting.
    b) Keep the patient in a rigid cervical collar with outpatient re-evaluation in two-three weeks. If neck pain or tenderness have resolved at two-three weeks' follow-up the neck is cleared and the cervical collar may be removed. If neck pain or tenderness persist at two-three weeks obtain flexion / extension films or an MRI.