CANADIAN ASSOCIATION OF RADIOLOGISTS’ REFERRAL GUIDELINES
- EXPERIENCE AND REFLECTIONS -

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D.I. GUIDELINES

- CAR Referral Guidelines
- Evidence
- Guideline format and medium
Referral Guidelines

The 2012 CAR Diagnostic Imaging Referral Guidelines are intended for physicians and are aimed at assisting them in making decisions in regard to appropriate imaging studies for specific cases. These Referral Guidelines are not intended as a means of restricting the physician's role in the process of decision-making in regard to the imaging studies to be requested. The Referral Guidelines are evidence-informed and are based on expert opinion or case studies. They should not be used to diminish in any way the freedom of attending physicians to determine and order imaging studies for their patients for whom they have the ultimate responsibility. Discussion between the radiologist and the physician, particularly during multidisciplinary team meetings, must always take precedence.

A reference guide will soon be available to outline the recommendations, level of evidence and dose.

Each set of guidelines below was prepared by an expert advisory working group. The CAR gratefully acknowledges the many individuals that were consulted in the revision of these guidelines.

2012 CAR Diagnostic Imaging Referral Guidelines

- Section A: Central nervous system
- Section B: Head and neck
- Section C: Spine
- Section D: Musculoskeletal system
- Section E: Cardiovascular
- Section F: Thoracic
- Section G: Gastrointestinal system
- Section H: Urological, adrenal and genitourinary systems
- Section I: Obstetrics and gynaecology
- Section J: Trauma
- Section K: Cancer
- Section L: Pediatrics
- Section M: Breast disease
## Section L: Pediatrics

<table>
<thead>
<tr>
<th>Clinical/Diagnostic Problem</th>
<th>Investigation</th>
<th>Recommendation (Grade)</th>
<th>Dose</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>L01. Suspected congenital malformation of the brain</strong></td>
<td>MRI</td>
<td>Indicated [B]</td>
<td>0</td>
<td>MRI is the definitive examination for suspected congenital malformation of the brain, providing the best definition of brain anatomy.</td>
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<tr>
<td></td>
<td>CT</td>
<td>Indicated [B]</td>
<td>☀☀</td>
<td>In suspected congenital malformation of the skull, CT is required for the evaluation of bony anatomy. 3-D reconstruction is indicated for patients with craniosynostosis and craniofacial syndromes.</td>
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</tbody>
</table>
EVIDENCE FOR D.I. GUIDELINES

- GRADE (Grading of Recommendations Assessment, Development and Evaluation)
- Oxford Centre for Evidence-Based Medicine
EVIDENCE FOR D.I. GUIDELINES

• GRADE
  – Quality of the evidence
  – Strength of the recommendation
    • Quality of the evidence
    • Benefits and harms
EVIDENCE FOR D.I. GUIDELINES

• GRADE – Diagnostic studies
  – Clinical outcomes
  – Accuracy
  – Randomized control trials
EVIDENCE FOR D.I. GUIDELINES

• Roles of Diagnostic Imaging
  – Primary diagnosis
  – Management of disease
  – Screening
  – Interventional radiology
EVIDENCE FOR D.I. GUIDELINES - PRIMARY DIAGNOSIS -

• Is there a role for Diagnostic Imaging?
• Which is the best imaging modality to use?
CLINICAL EFFICACY OF DIAGNOSTIC IMAGING: LOVE IT OR LEAVE IT

Thornbury, JR. AJR 1994;162:1-8

A Hierarchical Model of Efficacy

- Level 1. Technical efficacy
- Level 2. Diagnostic-accuracy efficacy
- Level 3. Diagnostic-thinking efficacy
- Level 4. Therapeutic efficacy
- Level 5. Patient-outcome efficacy
- Level 6. Societal efficacy
EVIDENCE FOR D.I. GUIDELINES
- PRIMARY DIAGNOSIS -

- Is there a role for Diagnostic Imaging?
  - Will it affect management?
  - If it will, is it justified? – Pre-test probability
    - Clinical Decision Rules

- Which is the best imaging modality to use?
D.I. GUIDELINES

• Format
  – ACR Appropriateness Criteria
  – Diagnostic Imaging Pathways
  – RCR/CAR
D.I. GUIDELINES

• Medium
  – Book/booklet
  – C.D
  – Internet
  – Computerized Order Entry Systems (CPOEs)
D.I. GUIDELINES

• Computerized Order Entry Systems
  • Divergence
    – Format
  • Convergence
    – D.I. Guidelines
    – Clinical Practice Guidelines
D.I. GUIDELINES

• CAR Referral Guidelines
• Evidence
• Guideline format and medium
  – CPOEs