

Body and Orthopedic Imaging

Clinician's Guide to Ordering CT Imaging Studies

HOW and WHEN DO I ORDER CONTRAST?

- Almost always, CTs ordered should be ordered “with” OR “without’ only – NOT BOTH.
- A ‘with and without’ protocol is generally needed only for exams to assess hematuria, or known masses of the liver, kidneys and pancreas.
- CT of the abdomen and pelvis (with the exception of a CT stone study and CT angiography) will receive an oral contrast prep.
- General survey exams for pain or other non-specific symptoms can be performed either “with IV contrast only” or “without IV contrast only” but **should not** be “with and without” as such a scan increases patient radiation dose and generally without added diagnostic value.
 - Common indications that do not require the use of IV contrast: diverticulitis, hernia.
 - Appendicitis is best assessed with IV contrast but can be done without if necessary.
- CT Chest for possible or follow up nodules should be ordered WITHOUT contrast.
- Any CT for assess vascular pathology, abscess or neoplasm (known or suspected) should be performed with IV contrast if possible.
- Orthopedic and musculoskeletal CT is performed WITHOUT contrast.

* IF YOU HAVE ANY QUESTIONS ON A PARTICULAR CASE SCENARIO, PLEASE DO NOT HESITATE TO CALL ONE OF OUR RADIOLOGISTS *



Body and Orthopedic Imaging

Clinician's Guide to Ordering MRI Imaging Studies

DO I NEED TO ORDER CONTRAST?

- * General principle – All MRIs ordered with contrast should be ordered “without and with”
- * General principle – If the patient’s GFR is below 30, contrast should not be given

* IF YOU HAVE ANY QUESTIONS ON A PARTICULAR CASE SCENARIO, PLEASE DO NOT HESITATE TO CALL ONE OF OUR RADIOLOGISTS *

STUDY YOU WOULD LIKE TO ORDER:

| | |
|---|------------------|
| ABDOMINAL MRI | WITHOUT AND WITH |
| PELVIC MRI (excluding prostate) | WITHOUT AND WITH |
| THORACIC | WITHOUT AND WITH |
| ANY Orthopedic/Musculoskeletal examinations in the absence of a known or palpable mass. | WITHOUT |
| ANY Orthopedic/Musculoskeletal examinations to assess a known or palpable mass. | WITHOUT AND WITH |

Neuroradiology

Clinician's Guide to Ordering MRI Imaging Studies

DO I NEED TO ORDER CONTRAST?

- * General principle – All MRIs ordered with contrast should be ordered “without and with”
- * General principle – If the patient’s GFR is below 30, contrast should not be given

* IF YOU HAVE ANY QUESTIONS, PLEASE DO NOT HESITATE TO CALL ONE OF OUR RADIOLOGISTS *

STUDY YOU WOULD LIKE TO ORDER:

| | |
|---|--|
| <p>MRI BRAIN</p> <p>Order “without and with” if the following apply → Otherwise, order “without only”</p> | <ul style="list-style-type: none"> - Known hx of cancer, metastatic disease - Known hx of any brain mass - Vertigo/tinnitus (MRI IACs) - Known multiple sclerosis - Specific cranial neuropathy - Pituitary or hormonal imbalance (MRI Pit) |
| <p>MRA BRAIN</p> <p>Order “without and with” if the following apply → Otherwise, order “without only”</p> | <ul style="list-style-type: none"> - Known hx of aneurysm <u>clipping/coiling</u> - Known AVM |
| <p>MRA NECK</p> | <p>ALWAYS WITHOUT AND WITH</p> |
| <p>MRI NECK</p> | <p>ALWAYS WITHOUT AND WITH</p> |
| <p>MRI BRACHIAL PLEXUS</p> | <p>ALWAYS WITHOUT AND WITH</p> |
| <p>MRI ORBITS</p> | <p>ALWAYS WITHOUT AND WITH</p> |
| <p>MRV BRAIN</p> | <p>ALWAYS WITHOUT AND WITH</p> |
| <p>MRI CERVICAL SPINE</p> <p>Order “without and with” if the following apply → Otherwise, order “without only”</p> | <ul style="list-style-type: none"> - Known hx of cancer, metastatic disease - Known hx of any spinal cord mass - Known multiple sclerosis - High suspicion for epidural abscess or discitis/osteomyelitis |
| <p>MRI THORACIC/LUMBAR SPINE</p> <p>Order “without and with” if the following apply → Otherwise, order “without only”</p> | <ul style="list-style-type: none"> - Known hx of cancer, metastatic disease - Known hx of any spinal cord mass - Known multiple sclerosis (MRI TSpine only) - Previous spinal surgery - High suspicion for epidural abscess or discitis/osteomyelitis |

Neuroradiology

Clinician's Guide to Ordering CT Imaging Studies

DO I NEED TO ORDER CONTRAST?

* General principle – Almost always, all CTs ordered with contrast should be ordered “with” only, not “without and with”

* IF YOU HAVE ANY QUESTIONS, PLEASE DO NOT HESITATE TO CALL ONE OF OUR RADIOLOGISTS *

STUDY YOU WOULD LIKE TO ORDER:

| | |
|--|--|
| CT BRAIN Order “ without and with ” <u>only if</u> → Otherwise, almost always order “without only” | <ul style="list-style-type: none"> - Specifically assessing for metastatic disease in a patient contraindicated for MRI |
| CT CERVICAL/THORACIC/LUMBAR SPINE | ALWAYS WITHOUT |
| CT ORBIT Order “ with only ” if the following apply → Otherwise, order “without” | <ul style="list-style-type: none"> - Clinical suspicion for infection - Known history of orbital tumor (if MRI contraindicated) |
| CT NECK Order “ without and with ” <u>only if</u> → Otherwise, order “ WITH ONLY ” | <ul style="list-style-type: none"> - Specifically looking for salivary gland stone <p style="text-align: center;">Otherwise, ALWAYS WITH ONLY</p> |
| CTA HEAD | ALWAYS WITH ONLY |
| CTA NECK | ALWAYS WITH ONLY |