STANDARD ANATOMIC COVERAGE:

The major area of concern is contiguous body parts where clinical signs and symptoms may be coming from abnormalities involving either region, or different modalities can be considered to evaluate the same anatomy for the same clinical problem. These are areas where ordering multiple tests before the results of any of the tests are known lead to inappropriate imaging.

GENERAL CONSIDERATIONS:

Rapid breakthroughs in technology, with attendant rise of new imaging tests available to improve patient management, have created a dilemma for clinicians. Many factors in choosing the right test now come into play. One must consider basic data in the decision-making process. Considerations include the possible effect on patient management, the pretest probability that the patient is affected by a particular disease, the prevalence of the disease in the population, and the accuracy [sensitivity\ specificity] of the test. When a screening approach is adopted, rather than targeting the particular test or anatomic site with the highest pretest probability of success, the possibility of one or more of the tests being superfluous and not contributing meaningfully to patient management increases to an unacceptable level.

For this reason, simultaneous ordering of multiple examinations may subject these examinations to more intensive levels of review than would be the case if these same tests were ordered sequentially. Depending on the clinical situation, one or more of the requested studies might not meet medical necessity criteria until the results of the lead study are known.

COMMON DIAGNOSTIC INDICATIONS FOR MULTIPLE SIMULTANEOUS IMAGING REQUESTS:

- The initial diagnosis/staging or follow-up of oncology patients
- Follow-up of patients who have had operative procedures on multiple anatomic sites
- Patients in whom the suspected anatomic abnormality might extend into multiple regions, such as diverticulitis or suspected syringomyelia

COMMON INAPPROPRIATE MULTIPLE SIMULTANEOUS IMAGING REQUESTS:

- Brain MRA ordered routinely with brain MRI without vascular indications
- Brain CT ordered simultaneously with sinus CT for headache
- Multiple levels of spine MRI’s or CT’s for diffuse back pain or radicular symptoms
- Cervical spine and shoulder MRI’s ordered simultaneously for shoulder pain
- Pelvic or hip MRI’s ordered simultaneously with lumbar spine MRI for hip pain
- Pelvic CT ordered routinely with abdominal CT for suspected upper quadrant disease processes

REFERENCE/LITERATURE REVIEW:

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6. Hollingsworth W. and Jarvik J. G. Technology Assessment in Radiology: Rutting the Evidence in Evidence-Based Radiology. Radiology.: 244 (1) PAGES 31-38, July 1, 2007
