

**MedSolutions, Inc.
Clinical Decision Support Tool
Diagnostic Strategies**

This tool addresses common symptoms and symptom complexes. Imaging requests for patients with atypical symptoms or clinical presentations that are not specifically addressed will require physician review. Consultation with the referring physician, specialist and/or patient's Primary Care Physician (PCP) may provide additional insight.

**PEDIATRIC AND CONGENITAL IMAGING GUIDELINES
ONCOLOGY and PET
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**MedSolutions, Inc. Clinical Decision Support Tool
for Advanced Diagnostic Imaging**

Common symptoms and symptom complexes are addressed by this tool. Imaging requests for patients with atypical symptoms or clinical presentations that are not specifically addressed will require physician review. Consultation with the referring physician may provide additional insight.

This version incorporates MSI accepted revisions prior to 11/30/08

PEDIATRIC AND CONGENITAL ONCOLOGY and PET IMAGING GUIDELINES

PACONC-1~GENERAL GUIDELINES

- The Oncology Imaging Guidelines are the same for both the pediatric population and the adult population, unless there are specific guidelines listed here in the Pediatric and Congenital Oncology Imaging Guidelines.
- A recent careful history and physical examination and appropriate laboratory studies should be performed prior to considering advanced imaging.
- For many pediatric tumors, adherence to adult guidelines, if applicable, is suggested.
- MedSolutions does not routinely preauthorize requests for CT or MRI scans associated with image-directed biopsy or radiation therapy treatment planning.
 - Imaging performed in support of radiation therapy treatment planning and interventional procedures should be reported with the corresponding interventional or therapeutic codes, not with diagnostic imaging codes.
- For pediatric patients suspected or confirmed to have a malignancy, Pediatric Oncology consultation without delay is strongly supported.
 - As with adult tumors, confirmation of malignancy via biopsy should proceed promptly. Excess delay in obtaining tissue confirmation of disease while awaiting imaging is frequently inappropriate.
 - Pediatric oncology patients enrolled or treated according to current Pediatric Oncology Group (POG) protocols should have imaging obtained in accordance with POG protocols.
 - Imaging obtained in accordance with such protocols should not be denied as being investigational, unless a specific investigational imaging technology is part of the protocol.
- **PET Imaging:** For Oncologic applications, the skull base to mid-femur (“eyes-to thighs”) procedure code for PET (CPT 78812 or 78815) is usually the most appropriate procedure to order.
 - **Exceptions for the use of CPT 78813 or 78816 (whole-body protocol) include the following:**
 - Pediatric malignancies, when requested by a pediatric oncology referral center
 - Malignant melanoma
 - Some unusual presentations of sarcomas and lymphomas
- The guidelines listed in this section for certain specific indications are not intended to be inclusive; broad clinical discretion is advised.

PACONC-2~PEDIATRIC MALIGNANCIES

PACONC-2.1 Leukemia

- While most leukemia patients do not require advanced imaging, brain MRI without and with contrast (CPT 70553) can be performed in high risk patients, patients exhibiting central nervous system (CNS) symptoms, and in patients found to have obvious positive CNS cytology.

PACONC-2.2 Lymphomas

- Imaging pathways for pediatric lymphomas are similar to adults (see ONC-26 Lymphomas in the adult Oncology guidelines), except imaging after each 2 cycles of chemotherapy is generally allowed, as per protocol guidance.
 - After the initial staging imaging studies, repeat imaging studies (such as after chemotherapy cycles) should be **either** CT scans, with contrast, of body areas previously positive **or** PET/CT **but not both**—this is especially important in the pediatric population due to radiation issues.

PACONC-2.3 Neuroblastoma

- Abdominal and pelvic CT or MRI, contrast as requested, with chest x-ray is indicated for the initial evaluation of any child less than age 5 with a palpable abdominal mass. Neuroblastoma should be in the differential diagnosis for young children who present with adrenal tumors.
 - Follow-up chest CT or MRI, contrast as requested, can be performed for any abnormality seen on the above studies.
 - Both CT and MRI may be necessary to fully evaluate patients with neuroblastoma.
 - MIBG and/or bone scan is the standard staging study to assess the possibility of skeletal disease.
 - MRI of skeleton or central nervous system (CNS) is not routinely indicated in the absence of signs or symptoms or strong clinical suspicion of disease in those systems.
- Re-staging studies can be repeated every 3 to 6 months post-therapy for the interval of time calculated to be (age at diagnosis in months) plus 9 months.

PACONC-2.4 Wilm's Tumor

- Abdominal and pelvic CT or MRI, contrast as requested, with chest x-ray is indicated for the initial evaluation of any child less than age 5 with a palpable abdominal mass.
 - CT chest can be performed upon verification of Wilm's tumor.
 - Brain MRI without and with contrast (CPT 70553) can be performed if the patient has the unusual variants of rhabdoid histology and clear cell sarcoma.
- Re-staging studies may be repeated every 3 to 6 months post-therapy for the interval of time calculated to be (age at diagnosis in months) plus 9 months.
 - Pelvic imaging is unnecessary for patients who have had no previous pelvic involvement.

PACONC-2.5 Pediatric Rhabdomyosarcoma

- **Pediatric rhabdomyosarcomas:** should be imaged according to current national protocol guidance.
 - Ultrasound is generally performed initially, followed by CT.
- Adult Guidelines, ONC-11~Soft Tissue Sarcomas and ONC-17~Bladder Cancer do **not** apply.

PACONC-2.6 Germ Cell Tumors

- See ONC-19 Testicular and Nonepithelial Ovarian (Germ Cell) Cancer in the adult Oncology guidelines and PET-12.5 Testicular and Nonepithelial Ovarian Cancer (Germ Cell Tumors) in the adult PET guidelines.

PACONC-2.7 Pediatric Central Nervous System Tumors

- See PACHD-12 Neuro-Oncology Brain Tumors in the Pediatric and Congenital Head guidelines.

PACONC-2.8 Parotid tumors

- **Parotid tumors:** In children, 75% of parotid masses are benign
 - Pleomorphic adenoma and mucoepidermoid cancer are the most common tumors.

PACONC-2.9 Chest Wall Tumors

- Ewing's sarcoma is high on the differential diagnosis.
- Chest MRI (CPT 71552) and chest CT (CPT 71260) may both be indicated to evaluate the chest wall and rule out lung metastases.

PACONC-2.10 Breast Mass

- Chest x-ray, ultrasound, and chest CT (either CPT 71250 or 71260) can be performed to evaluate a breast mass in the pediatric population, since malignancies such as lymphoma or rhabdomyosarcoma will need to be ruled out.