Evolent Clinical Guideline 2000 for Abdomen Pelvis Computed Tomography (CT)

Guideline Number: Evolent_CG_2000	**Applicable Codes**	
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc. 		
Original Date: September 1997	**Last Revised Date:** July 2025	**Implementation Date:** January 2026

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STATEMENT

General Information

- *It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.*
- *Where a specific clinical indication is not directly addressed in this guideline, medical necessity determination will be made based on widely accepted standard of care criteria. These criteria are supported by evidence-based or peer-reviewed sources such as medical literature, societal guidelines and state/national recommendations.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

Purpose

Abdomen and Pelvis Computed Tomography (CT) uses radiation to generate images of the organs and structures in the abdomen and pelvis.

INDICATIONS FOR ABDOMEN/PELVIS CT

Evaluation of Abdominal Pain of Unknown Etiology

- After initial workup of abdominal pain including laboratory evaluation and initial imaging has not revealed a cause when results of the following are provided [(1)]:
    - Appropriate laboratory testing (chemistry profile, complete blood count, and/or urinalysis) for the patient's presentation (e.g., suprapubic pain – UA, suspected pancreatitis – amylase/lipase etc.) **AND**
    - Initial imaging (such as ultrasound, barium study, nuclear medicine, or scope study) appropriate to the symptoms
        - E.g., for gastrointestinal (GI) bleeding, Complete Blood Count (CBC) and a scope study would be appropriate initial testing (however, a UA and ultrasound would not be)

NOTE: Not all of the above tests need to be performed, but both labs and initial imaging need to be performed

- For acute abdominal pain in a patient over the age of 65 [(2)]
- Initial evaluation of abnormal findings seen on other imaging, such as ultrasound (US) or x-ray, both the abdomen and pelvis are likely affected, and CT is the most reasonable next step for that diagnosis

Inflammatory Bowel Disease [3–5]

- For evaluation of Inflammatory Bowel Disease (IBD) such as Crohn's or Ulcerative Colitis (includes CT enterography, however, MRI should be considered for age < 35 to reduce radiation exposure)
  - For suspected inflammatory bowel disease after complete work up including physical exam, labs, and recent colonoscopy
  - Known inflammatory bowel disease with recurrence or worsening signs/symptoms requiring re-evaluation or for monitoring therapy

Evaluation of Inflammation and Infection

Peritonitis

Suspected or known recent peritonitis **AND** at least one of the following [6,7]:

- Rebound, guarding (not voluntary) or rigid abdomen, **OR**
- Severe tenderness to palpation present over entire abdomen

Diverticulitis or Acute Appendicitis [8,9]

- Suspected diverticulitis or acute appendicitis for initial imaging with at least **ONE** of the following [10]:
  - WBC Elevated
  - Fever
  - Anorexia
  - Nausea and vomiting

NOTE: If CT is requested for a pregnant woman with suspected appendicitis, ultrasound needs to be insufficient and a contraindication to MRI provided [11]

- Suspected appendicitis in a child (< age 18) [12] when ultrasound is inconclusive or cannot be completed (due to body habitus or inability to cooperate) **OR** when peritoneal signs are present (guarding, rebound) or other red flags
- Suspected diverticulitis when [13]:
  - Pain is present in the LLQ (< 3 months duration), medical records note suspicion for diverticulitis, the patient has no prior history of diverticulitis **AND** either:
    - LLQ tenderness is present on exam; **OR**
    - Patient is immunocompromised; **OR**
    - Patient has a history of diverticulitis, symptoms are similar to prior episodes, **AND** patient has failed treatment currently (treatment could be liquid diet or antibiotic)
- Complications of diverticulitis (diagnosed either clinically or by imaging) with severe abdominal/pelvic pain or severe tenderness or mass not responding to antibiotic

treatment [9]

Pancreatitis [14]

Suspected or known acute pancreatitis when there is a reason to suspect extension beyond abdomen into pelvis and one or more of the following:

- Initial imaging for suspected acute pancreatitis due to epigastric pain with elevated amylase and/or lipase:
  - Mild presentation when symptom improvement is not seen after 72 hours of treatment and either:
    - Ultrasound has been performed and did not show an abnormality such as gallstones, dilated bile duct
    - Ultrasound suggests complications (such as fluid collection)
  - Severe presentation (such as fever, elevated WBC)
  - Decline in clinical status and/or suspected complication
- Known necrotizing pancreatitis requiring follow-up
- Pancreatitis by history (including pancreatic pseudocyst) with continued abdominal pain, early satiety, nausea, vomiting, or signs of infection greater than 4 weeks from initial presentation

Other Causes of Inflammation or Infection

- Any known infection that is clinically suspected to have created an abscess in the abdomen and pelvis
- For acute non-localized abdominal pain and fever [6]
- Any history of fistula that requires re-evaluation or is suspected to have recurred in the abdomen and pelvis
- Abnormal fluid collection seen on prior imaging that needs follow-up evaluation
- For suspected retroperitoneal fibrosis after labs and ultrasound have been completed and other etiologies for symptoms have been excluded (retroperitoneal fibrosis is a diagnosis of exclusion) [15,16]
- For known retroperitoneal fibrosis to determine extent of disease

Gastrointestinal

Suspected Small Bowel Obstruction

- Crampy pain, vomiting, distention, high pitched or absent bowel sounds, prior history of abdominal surgery, or based on initial x-ray [17]

Gastrointestinal Hemorrhage and Ischemia

- Suspected colonic or mesenteric ischemia (CTA also appropriate) [18]

- Suspected small bowel bleeding when endoscopy and capsule endoscopy are inconclusive or negative [19]

Genitourinary

Evaluation of Hematuria [20]

- Kidney Stone is **NOT** suspected **AND**
- Urinalysis is negative for infection **or** hematuria persists on urine microscopy following treatment of urinary tract infection **AND**
- At least one of the following:
  - Gross hematuria
  - > 25 RBC/hpf on urine microscopy
  - 3-25 RBC/hpf on urine microscopy **AND ONE** or more of the following:
    - >30 pack year smoking history
    - Male ≥ age 60
    - Abnormal renal ultrasound
    - Negative renal ultrasound and repeat sample shows persistence of ≥ 3 RBC/hpf

NOTE: There is not a separate CPT code for CT Urography (CTU); when needed this will be submitted as CT abdomen/pelvis. If a CT abdomen/pelvis has been done (with and without contrast), and a CTU is later requested, the previous CT must show a clear reason that additional delayed post-contrast images of the collecting system are needed.

Known or Suspected Kidney or Ureteral Stone [21–23]

- Acute flank pain (< 2 weeks) and high suspicion for stone
- Subacute or chronic flank pain and one of the following:
  - Abnormal ultrasound
  - Fever or WBC > 15,000
  - Inadequate analgesia
  - KUB shows possible kidney stone
- Known stones with recent indeterminate imaging (ultrasound or KUB) when additional imaging may change management

Preoperative Urinary Stone Planning [24]

- No recent CT has been performed within the past 6 weeks **OR**
- If passage or movement of stones is suspected and imaging may change management

Postoperative Urinary Stone Follow-up CT [25]

- Symptomatic patients following:
  - Ureteroscopic extraction of an intact stone
  - Ureteroscopy with lithotripsy/fragmentation of a radiolucent stone
  - Percutaneous Nephrolithotomy
- Further evaluation of hydronephrosis seen on post-operative ultrasound

Evaluation of Pyelonephritis [26,27]

When other imaging such as ultrasound is abnormal:

- For a patient who remains febrile after 72 hours of treatment or has deterioration in clinical status
- With the one following co-morbid conditions: personal history of stone disease or renal obstruction, recurrent pyelonephritis, vesicoureteral reflux, immune compromise, prior renal transplant with native kidneys in place, advanced age or lack of response to initial therapy (based on culture)

Evaluation of Complicated Urinary Tract Infection [26]

- **Women:** UTI is considered complicated (and therefore imaging (ultrasound and/or CT) is warranted) in any of the following situations (may be done after resolution of infection):
  - Immunocompromised host
  - Persistence of bacteria or symptoms after culture specific treatment
  - Rapid recurrence with same bacteria after treatment
  - Multidrug resistant bacteria
  - When there is suspicion of renal calculi or obstruction [28]
- **Men:** Any UTI is considered complicated due to high likelihood of anatomic abnormalities; therefore imaging (ultrasound and/or CT) is indicated [29]

Abdominal Aortic Disease

Abdominal Aortic Aneurysm (AAA)

- Suspected or known **asymptomatic** abdominal aortic aneurysm (AAA) with **ALL** of the following:
  - Prior ultrasound is inconclusive or insufficient
  - The study is ordered at the appropriate AAA surveillance intervals [30]:
    - Aneurysm size 2.5-3 cm, every 10 years
    - Aneurysm size 3.0-3.9 cm, every 3 years
    - Aneurysm size 4.0-4.9 cm, annually

        - Aneurysm size 5.0-5.4 cm, every 6 months
- Known or suspected **symptomatic** AAA [30,31]
    - Symptoms may include:
        - Abrupt onset of severe sharp or stabbing pain in the chest, back or abdomen (could indicate possible aneurysm rupture)
        - Acute abdominal or back pain with a pulsatile or epigastric mass
        - Acute abdominal or back pain and at high risk for aortic aneurysm and/or aortic syndrome (risk factors include hypertension, atherosclerosis, prior cardiac or aortic surgery, underlying aneurysm, connective tissue disorder (Such as Marfan syndrome, vascular form of Ehlers-Danlos syndrome, Loeys-Dietz syndrome), and bicuspid aortic valve) [32]

Postoperative Follow-up of Aortic Repair [30,31]

Follow-up for post-endovascular repair (EVAR) or open repair of AAA or abdominal extent of iliac artery aneurysms at the following intervals (CT preferred for routine follow-up):

- Routine, baseline post-EVAR study with any **ONE** of the following:
    - Within 1 month of the procedure
    - Continued follow-up at the following intervals:
        - If no endoleak or sac enlargement is seen:
            - Annually with past inconclusive or insufficient ultrasound
            - Every 5 years (inconclusive or insufficient ultrasound not required at the 5-year interval)
        - If type II endoleak or sac enlargement is seen at any point in time:
            - Every 6 months x 2 years, then annually (does not require prior ultrasound)
- Routine follow-up after open repair of AAA with any **ONE** of the following:
    - Within 1 year postoperatively then
    - Annually with past inconclusive or insufficient ultrasound then
    - Every 5 years (inconclusive or insufficient ultrasound not required at the 5-year interval)

  NOTE: If symptomatic or imaging shows increasing or new findings related to stent graft, more frequent imaging may be needed as clinically indicated
- Suspected complication (such as, new-onset lower extremity claudication, ischemia, or reduction in ankle brachial index (ABI) after aneurysm repair)
- Evaluation of endovascular/interventional abdominal vascular procedures for luminal patency versus restenosis due to conditions such as atherosclerosis, thromboembolism, and intimal hyperplasia
- Evaluation of post-operative complications, such as pseudoaneurysms, related to

surgical bypass grafts, vascular stents, and stent-grafts in the peritoneal cavity

Hernia [33,34]

- Suspected hernia and one of the following:
  - Deep intraabdominal/pelvic hernia (post-Roux-en-Y, obturator, sciatic or perineal)
  - Non-midline ventral hernia (including Spigelian hernia)
  - Parastomal hernia
  - Occult, incisional, recurrent or umbilical hernia and exam **AND** ultrasound are non-diagnostic or equivocal
  - Inguinal hernia and exam **AND** ultrasound are non-diagnostic or equivocal **AND** reason upper abdominal imaging is needed is provided
  - Umbilical hernia and exam **AND** ultrasound are non-diagnostic or equivocal **AND** reason upper abdominal imaging is needed is provided
- Known or suspected hernia with suspected complications based on one or more of the following:
  - Symptoms such as severe pain, vomiting, diarrhea or blood in stool
  - Exam findings such as inability to reduce hernia, severe tenderness, guarding, rebound
  - Complication is suggested on prior imaging
- Known hernia and imaging is needed for surgical planning
  - Inguinal hernia needs reason upper abdominal imaging is needed (otherwise CT Pelvis is indicated)
  - Umbilical hernia needs reason pelvic imaging is needed (otherwise CT Abdomen is indicated)

Other Indications for Abdomen/Pelvic CT Combo [35]

- For fever of unknown origin (temperature of ≥101 degrees for a minimum of 3 weeks) after all of the following has been completed and a source is not identified: complete blood count with differential, three sets of blood cultures, chest x-ray, complete metabolic panel, urinalysis, ESR, ANA, RA, serologic testing (EBV, EMV, HIV and hepatitis), tuberculin test. [36]
- For acute unilateral (or asymmetric) lower extremity edema with negative or inconclusive doppler US
- For chronic (greater than 3 months) unilateral (or asymmetric) lower extremity edema and suspicion of malignant cause [37]
- Suspected pelvic congestion syndrome (including May-Thurner and nutcracker syndromes) when ultrasound is indeterminate [38]
- For further evaluation of a new onset or non-reducible varicocele [39]

Transplants

- Prior to solid organ transplantation
- For initial workup prior to Bone Marrow Transplantation (BMT)

Trauma [40]

- Suspected retroperitoneal hematoma or hemorrhage based on lab or physical findings
- Blunt injury with suspicion of multisystem trauma and hematuria
- Penetrating abdominal injury with suspicion of multisystem trauma with or without hematuria

Suspected Malignancy

- Unconfirmed diagnosis of cancer, for further evaluation of indeterminate or questionable findings:
  - Initial evaluation of suspicious masses/tumors found by physical exam or imaging study, such as ultrasound (US) [41,42]
    - One follow-up exam to ensure no suspicious change has occurred in a tumor. No further surveillance imaging unless tumor(s) is/are specified as highly suspicious, or change was found on exam or last follow-up imaging.
  - Abnormal incidental abdominopelvic lymph nodes when follow-up is recommended based on prior imaging (initial 3-month FU) [43]
  - Follow-up of mesenteric panniculitis or lymphadenitis when another diagnosis is suspected or there is a failure of symptom resolution [44,45]
- Weight loss and **ONE** of the following:
  - Clinically significant unintentional weight loss i.e., ≥5% of body weight in less than 12 months (or ≥ 2% in one month), with signs or symptoms suggestive of an abdominal cause
  - Ongoing unexplained clinically significant weight loss i.e., ≥5% of body weight in less than 12 months (or ≥ 2% in one month) [46] after initial workup (Chest x-ray, age appropriate cancer screening (such as colonoscopy and mammography) and labs (including CBC, CMP, HbA1C, TSH, stool hemoccult, ESR/CRP, HIV, Hepatitis C)) has been completed, no cause identified, and second visit documenting further decline in weight [47]
- Documentation of concern for malignancy (i.e. lymphoma) and any one of the following B symptoms:
  - Fevers > 101°F
  - Drenching night sweats
  - Unexplained weight loss of > 10% body weight
- Suspected paraneoplastic syndrome (including dermatomyositis) when appropriate

workup has been done and there is a suspicion of malignancy

- Suspected Pheochromocytoma/Paraganglioma and elevated plasma or urine metanephrines and/or normetanephrines
- For suspected gestational trophoblastic disease when chest imaging suggests distant disease [48]
- Persistently elevated carcinoembryonic antigen (CEA) in a patient with no cancer history after completing clinical workup (including laboratory evaluation (including CBC, CMP, repeat CEA), initial imaging (ultrasound) and colonoscopy), no cause is identified and CEA is >10 ng/ml, or fails to drop below 5 ng/ml after 3-6 months intervals
- For evaluation of thrombocytosis or thrombocytopenia when one or more of the following are present:
  - Any additional cytopenia (i.e., leukopenia, anemia)
  - LDH elevation
  - Splenomegaly on exam or imaging
  - Palpable lymphadenopathy
  - Bone marrow biopsy has been completed and concern for myeloproliferative disorder persists
  - Genetic mutation increasing risk of myeloproliferative disorder (such as JAK-2 mutation) on peripheral smear or bone marrow biopsy [49]

Known Malignancy

Initial Staging or Recurrence

- Abdomen and Pelvis CT is appropriate for initial staging of the majority of malignancies when either biopsy proven or suspected based on prior imaging

Restaging

- Abdomen and Pelvis CT is indicated for restaging during active treatment (every 2-3 cycles of chemo or immunotherapy, following radiation and/or after surgery) for the majority of cancers
- Abdomen and Pelvis CT is indicated **in addition to PET** while on active treatment every 2-3 cycles of chemo or immunotherapy for the following:
  - Hodgkin Lymphoma [50]
  - Pediatric Aggressive Mature B-Cell Lymphomas [51]
  - Pediatric Hodgkin Lymphoma [52]

Surveillance

Abdomen and Pelvis CT is indicated during surveillance for the following malignancies at the intervals defined below:

NOTE: For any patient with stage IV cancer (any type) that is either in remission or on a treatment break, Abdomen and Pelvis CT is indicated every 3-6 months

- Adrenocortical Carcinoma: every 3-12 months for 5 years then as clinically indicated [53]
- Anal Carcinoma: every 3-6 months for 1-2 years, then every 6-12 months for an additional year [54]
- Biliary Tract Cancers (Ampullary Adenocarcinoma, Cholangiocarcinomas and Gallbladder): every 3-6 months for 2 years then every 6-12 months for up to 5 years then as clinically indicated [55]
- Bladder Cancer [56]:
    - Non-muscle invasive:
        - Low risk and Intermediate risk: once at baseline at end of treatment then at clinically indicated
        - High risk: once at baseline then annually until 10 years from end of treatment then as clinically indicated
            - **NOTE:** High risk bladder cancer is defined as high grade (Grade 3) tumor **AND** any one of the following: associated CIS, T1, tumor > 3 cm or multifocal, BCG refractory (unresponsive to BCG), variant histology (micropapillary, plasmacytoid, small cell), presence of lymphovascular invasion, or prostatic urethral invasion
    - Muscle Invasive OR Urothelial carcinoma of the upper urinary tract, prostate or urethra: every 3-6 months for 2 years, then annually for up to 5 years then as clinically indicated
- Bone Tumors and Sarcomas (Chondrosarcoma, Chordoma, Giant Cell Tumor of Bone, Ewing Sarcoma, Soft Tissue Sarcoma, Osteosarcoma) [57,58]
    - Every 3-6 months for 5 years, then annually for an additional 5 years then as clinically indicated
- Colon Cancer [59]:
    - Stage II: every 6-12 months for 5 years, then as clinically indicated
    - Stage III: every 3 months for 2 years, then every 6-12 months for 3 years, then as clinically indicated
- Esophageal and Esophagogastric Junction Cancers: every 3-6 months for 2 years, then annually for up to 5 years [60]
- Gastric Cancer: every 6 months for 2 years, then annually up to 5 years then as clinically indicated [61]
- Gastrointestinal Stromal Tumors (GIST): every 3-6 months for 3-5 years, then annually [62]
- Hepatocellular Carcinoma: every 3-6 months for 2 years, then every 6 months indefinitely [63]
- Lymphoma (Follicular, Diffuse Large B-Cell, Burkitt, Hodgkin, Marginal Zone, T-Cell) and

Hairy Cell Leukemia [64–66]:

- Every 3-6 months for 2 years, then annually

- Melanoma: Cutaneous (stage II or higher): every 3-12 months for 2 years then every 6-12 months for 3 years, then as clinically indicated [67]
- Merkel Cell Carcinoma every 3-6 months for 3 years, then every 6-12 months indefinitely [68]
- Mesothelioma (Pleural and Peritoneal): every 3-6 months for 5 years then annually until 10 years, then as clinically indicated [69,70]
- Neuroblastoma: every 3 months for 1 year, then every 6-12 months for 2 years, then as clinically indicated [71]
- Neuroendocrine Tumors: every 3-6 months for 5 years then every 6-12 months for 5 years, then as clinically indicated [53]
- Occult Primary Tumors: follow indications based on how cancer is being treated (e.g. if treating as head and neck, defer to head and neck cancer guidance for all future requests). If tumor type is unclear: every 3-6 months for 2 years, then every 6-12 months for 3 years then annually [72]
- Ovarian cancer: every 3-6 months for 2 years then every 6-12 months for 3 years [73]
- Pancreatic cancer: every 3-6 months for 2 years, then every 6-12 months as clinically indicated [74]
- Penile cancer: Every 3-6 months for 2 years, then every 6-12 months for an additional 3 years, then as clinically indicated [75]
- Prostate Cancer: as clinically indicated [76]
- Renal Cell Carcinoma [77]:
  - Stage I: 1-3 months after treatment, then at 6 months and 12 months following treatment then annually
  - Stage II and higher: every 3-6 months for 3 years, then annually for 2 years, then as clinically indicated
- Rectal Cancer [78]:
  - Stage II, III: every 6-12 months for 5 years, then as clinically indicated
- Small Bowel Adenocarcinoma: every 6-12 months for 5 years then as clinically indicated [79]
- Small Cell Lung Cancer: every 2 months for the first year, every 3-4 months for years 2 and 3 then every 6 months during years 4 and 5 then annually [80]
- Soft Tissue Sarcoma: every 3-6 months for 2 years, then every 6-12 months for 3 years, then annually as clinically indicated [58]
- Testicular cancer: every 3 months for 1 year, then every 6 months for 1 year then annually for 2 years then as clinically indicated [81]

- Wilm's Tumor: every 3 months for 2 years then every 6 months for 2 years then as clinically indicated [82]

When a cancer is not listed above, Abdomen and Pelvis CT is not routinely a part of surveillance for that cancer in an asymptomatic patient. There would need to be a sign or symptom of recurrence to consider Abdomen and Pelvis CT.

When the timeframe above for routine surveillance has elapsed, there would need to be a sign or symptom of recurrence to consider Abdomen and Pelvis CT.

PREOPERATIVE OR POSTOPERATIVE ASSESSMENT

When not otherwise specified in the guideline (see **preop/postop urinary stone**):

Preoperative Evaluation:

- Imaging of the area requested is needed to develop a surgical plan

Postoperative Evaluation:

- Known or suspected complications
- A clinical reason is provided how imaging may change management

NOTE: This section applies only within the first few months following surgery

FURTHER EVALUATION OF INDETERMINATE FINDINGS

Unless follow-up is otherwise specified within the guideline:

- For initial evaluation of an inconclusive finding on a prior imaging report that requires further clarification
- One follow-up exam of a prior indeterminate MR/CT finding to ensure no suspicious interval change has occurred. (No further surveillance unless specified as highly suspicious or change was found on last follow-up exam)

IMAGING IN KNOWN GENETIC CONDITIONS

- BHDS (Birt-Hogg-Dube): Annually starting at age 20 (or earlier with family history of renal tumors diagnosed before age 30 [77,83]
- FAP (Familial Adenomatous Polyposis): Annually [84]
- MEN1 (Multiple Endocrine Neoplasia type 1): annually starting at age 9 [85,86]
- STK11 (Peutz-Jeghers Syndrome): Annually starting at age 8 [87]

- William's Syndrome: Abnormal vascular exam or imaging findings (such as concern for renal artery stenosis, diminished pulses, bruits or signs of diffuse thoracic aortic stenosis) [88]
- Vascular Ehlers-Danlos (vEDS) **AND** acute abdominal pain [89]
- For other syndromes and rare diseases not otherwise addressed in the guideline, coverage is based on a case-by-case basis using societal guidance

Combination Studies for Known Genetic Conditions

NOTE: When medical necessity is met for an individual study **AND** conscious sedation is required (such as for young pediatric patients or patients with significant developmental delay), the entire combination is indicated.

Neck/Chest/Abdomen/Pelvis CT

- Hereditary PGL/PCC Syndromes (including SDHx mutations): Every 2 years (including at diagnosis) **AND** MRI is contraindicated or cannot be performed [77,90]

OTHER COMBINATION STUDIES WITH ABDOMEN PELVIS CT

NOTE: When medical necessity is met for an individual study **AND** conscious sedation is required (such as for young pediatric patients or patients with significant developmental delay), the entire combination is indicated.

Abdomen and Pelvis CTA / Abdomen and Pelvis CT

- When needed for clarification of vascular involvement from tumor (including suspected renal vein thrombosis)

Chest/Abdomen and Pelvis CT

- As numerous disease processes, including but not limited to malignancy, may affect the chest, abdomen and pelvis, this combination is indicated when the guideline criteria for **BOTH** Chest CT and Abdomen and Pelvis CT have been met.
- Documentation of concern for malignancy (such as lymphoma) and any **ONE** of the following B symptoms:
    - Fevers > 100° F
    - Drenching night sweats
    - Unexplained weight loss of > 10% body weight

Chest/Abdomen and Pelvis CT / PET

- CT of the original sites of disease is indicated **in addition to PET** while on active treatment every 2-3 cycles of chemo or immunotherapy for the following: Hodgkin Lymphoma, Pediatric Aggressive Mature B-Cell Lymphomas, Pediatric Hodgkin Lymphoma

Sinus/Chest/Abdomen and Pelvis CT / Brain MRI

- Prior to all types of Bone Marrow Transplantation

Combination Studies for Malignancy for Initial Staging or Restaging

Unless otherwise specified in this guideline, indication for combination studies for malignancy for initial staging or restaging:

- Concurrent studies to include CT or MRI of any of the following areas as appropriate depending on the cancer: Abdomen, Brain, Chest, Neck, Pelvis, Cervical Spine, Thoracic Spine or Lumbar Spine.

CODING AND STANDARDS

Codes

74176, 74177, 74178, +0722T

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

BACKGROUND

Paraneoplastic Syndromes

Suspected paraneoplastic syndromes with no established cancer diagnosis: laboratory evaluation and imaging.

The laboratory evaluation for paraneoplastic syndrome is complex. If the appropriate lab test results are suspicious for malignancy, imaging is indicated.

For SIADH (hyponatremia + increased urine osmolality), there is a high association with small cell lung cancer, therefore imaging typically starts with chest CT. If other symptoms suggest a different diagnosis other than small cell lung cancer, different imaging studies may be reasonable.

For hypercalcemia (high serum calcium, low-normal PTH, high PTHrP) it is reasonable to start with bone imaging followed by a more directed evaluation such as mammogram, chest, abdomen, and pelvis imaging as appropriate.

For Cushing syndrome (hypokalemia, normal-high midnight serum ACTH NOT suppressed with dexamethasone) abdominal and chest imaging is reasonable. If dexamethasone suppression test DOES suppress ACTH, pituitary MRI is reasonable.

For hypoglycemia, labs drawn during a period of hypoglycemia (glucose < 55, typically a 72 hour fast) (insulin level, C-peptide, and IGF-2:IGF-1 ratio) should be done to evaluate for an insulinoma. An elevated insulin level, elevated C-peptide and/or normal IGF-2:IGF-1 ratio warrant CT or MRI abdomen to look for insulinoma. A low insulin, low C-peptide and/or elevated IGF-2:IGF-1 ratio warrant chest and abdominal imaging.

When a paraneoplastic neurologic syndrome is suspected, nuclear and cytoplasmic antibody panels are often ordered to further identify specific tumor types. Results are needed prior to imaging. Because these tests are highly specific, if an antibody highly associated with a specific cancer is positive, then further imaging for that cancer is reasonable. For example, anti-Hu has a high association with SCLC and chest CT would be reasonable. Anti-MA2 has a high association with testicular cancer and testicular ultrasound would be a reasonable next step.

Contraindications and Preferred Studies

- Contraindications and reasons why a CT/CTA cannot be performed may include: impaired renal function, significant allergy to IV contrast, pregnancy (depending on trimester)
- Contraindications and reasons why an MRI/MRA cannot be performed may include: impaired renal function, claustrophobia, non-MRI compatible devices (such as non-compatible defibrillator or pacemaker), metallic fragments in a high-risk location, patient exceeds weight limit/dimensions of MRI machine

SUMMARY OF EVIDENCE

Imaging of acute pelvic pain [1]

Study Design: This document is a review article discussing the imaging of acute pelvic pain.

Target Population: Patients of all age groups presenting with acute pelvic pain.

Key Factors: The article highlights the differential diagnosis of acute pelvic pain, including gynecologic and non-gynecologic causes. It emphasizes the use of ultrasonography, CT, and MRI for fast and accurate diagnosis. The document also discusses specific conditions such as ovarian cyst rupture, pelvic inflammatory disease, ovarian torsion, myoma degeneration, and more.

ACR Appropriateness Criteria® Crohn Disease [4]

Study Design: This document is part of the ACR Appropriateness Criteria, focusing on Crohn disease.

Target Population: Patients with suspected or known Crohn disease.

Key Factors: The guideline covers three common clinical scenarios: initial evaluation of Crohn disease, evaluation for anticipated exacerbation, and monitoring therapy. It rates the appropriateness of various imaging modalities, including CT enterography, MR enterography, and standard CT and MRI.

ACR Appropriateness Criteria® Acute Nonlocalized Abdominal Pain [6]

Study Design: This document is part of the American College of Radiology (ACR) Appropriateness Criteria, which are evidence-based guidelines reviewed annually by a multidisciplinary expert panel.

Target Population: Adults with acute nonlocalized abdominal pain.

Key Factors: The guideline provides imaging recommendations for various clinical scenarios, including patients with fever, recent abdominal surgery, or neutropenia. It discusses the use of CT, MRI, ultrasound, and other imaging modalities to evaluate infectious or inflammatory processes, abdominal and pelvic neoplasms, and ischemic or vascular etiologies.

Diagnostic imaging of acute abdominal pain in adults [8]

Study Design: This document is a review article discussing the diagnostic imaging of acute abdominal pain in adults.

Target Population: Adults presenting with acute abdominal pain.

Key Factors: The article outlines the differential diagnosis based on the location of pain and provides imaging recommendations for various conditions such as abscess, acute pancreatitis, appendicitis, cholecystitis, Crohn disease, diverticulitis, ectopic pregnancy, and more. It emphasizes the use of ultrasonography, computed tomography (CT), and magnetic resonance imaging (MRI) for different scenarios.

2022 ACC/AHA Guideline for the Diagnosis and Management of Aortic Disease: A Report of the American Heart Association/American College of Cardiology Joint Committee on Clinical Practice Guidelines [30]

Study Design: This document is a clinical practice guideline developed by the American Heart Association (AHA) and American College of Cardiology (ACC) Joint Committee on Clinical Practice Guidelines.

Target Population: Patients with aortic disease across multiple clinical presentation subsets (asymptomatic, stable symptomatic, and acute aortic syndromes).

Key Factors: The guideline provides recommendations for diagnosis, genetic evaluation, family screening, medical therapy, endovascular and surgical treatment, and long-term surveillance of aortic disease. It emphasizes shared decision-making, institutional interventional volume, and multidisciplinary aortic team expertise.

ANALYSIS OF EVIDENCE

Analysis [1,4,6,8,30]:

In summary, CT is a valuable imaging modality for diagnosing acute abdominal and pelvic pain, with high diagnostic accuracy and the ability to visualize various pathologies. The use of contrast-enhanced CT further enhances its diagnostic capabilities. However, MRI is recommended in specific scenarios, particularly for young and pregnant patients, due to its lack of ionizing radiation and higher specificity for certain conditions. The choice of imaging modality should be based on the clinical presentation, patient demographics, and the suspected diagnosis.

Shared Findings

- **Diagnostic Value of CT**: All articles emphasize the high diagnostic value of CT in evaluating acute abdominal and pelvic pain. CT is widely recognized for its ability to provide detailed images that help in diagnosing various conditions such as appendicitis, diverticulitis, and ovarian cysts. CT is particularly useful in cases where ultrasound findings are inconclusive or when urinary and gastrointestinal pathology is suspected.
- **Use of Contrast-Enhanced CT**: The use of contrast-enhanced CT is recommended for better visualization of structures and identification of pathologies. It helps in detecting inflammation, absences, and vascular issues. Contrast-enhanced CT is preferred for evaluating conditions like pelvic inflammatory disease, ovarian torsion, and renal abscesses.
- **Radiation Concerns**: There is a consensus on the need to minimize radiation exposure, especially in young and pregnant patients. MRI is suggested as an alternative imaging modality in such cases.

POLICY HISTORY

Date	Summary
July 2025	• Added a Summary of Evidence and Analysis of Evidence • Added note of medical necessity under combination studies for

Date	Summary
	known genetic conditions – guideline alignment
June 2025	• This guideline replaces Evolent Clinical Guideline 068 for Abdomen Pelvis CT • Added in general information statement regarding guideline criteria development by reputable sources, standard of care, and best practices • Hematuria, kidney stone and hernia sections revised • Genetic syndromes and cancer imaging updated • Applicable Line of Business adjusted – Medicare checked • Updated language in the preoperative/postoperative section • Segment added to combinations studies about if the required use of conscious sedation is needed the entire combination is indicated • Background shortened and integrated into indications • References updated
June 2024	• Combination studies section adjusted to make uniform with all other guidelines • Added Genetic Syndromes and Tumors Section • Added contraindications and preferred studies section • Moved sections/indications throughout for better indications grouping • Updated references and background

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

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Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established, we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.

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