eviCore healthcare 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.

PELVIS IMAGING GUIDELINES

Version 18.0; Effective 03-18-2016

This version incorporates accepted revisions prior to 12/31/15

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# PELVIS IMAGING GUIDELINES

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<td>CA-125</td>
<td>cancer antigen 125 test</td>
</tr>
<tr>
<td>CT</td>
<td>computed tomography</td>
</tr>
<tr>
<td>FSH</td>
<td>follicle-stimulating hormone</td>
</tr>
<tr>
<td>GTN</td>
<td>gestational trophoblastic neoplasia</td>
</tr>
<tr>
<td>HCG</td>
<td>human chorionic gonadotropin</td>
</tr>
<tr>
<td>IC/BPS</td>
<td>interstitial cystitis/bladder pain syndrome</td>
</tr>
<tr>
<td>IUD</td>
<td>intrauterine device</td>
</tr>
<tr>
<td>KUB</td>
<td>kidneys, ureters, bladder (frontal supine abdomen radiograph)</td>
</tr>
<tr>
<td>LH</td>
<td>luteinizing hormone</td>
</tr>
<tr>
<td>MRA</td>
<td>magnetic resonance angiography</td>
</tr>
<tr>
<td>MRI</td>
<td>magnetic resonance imaging</td>
</tr>
<tr>
<td>MSv</td>
<td>millisievert</td>
</tr>
<tr>
<td>PA</td>
<td>posteroanterior projection</td>
</tr>
<tr>
<td>PID</td>
<td>pelvic inflammatory disease</td>
</tr>
<tr>
<td>TA</td>
<td>transabdominal</td>
</tr>
<tr>
<td>TSH</td>
<td>thyroid-stimulating hormone</td>
</tr>
<tr>
<td>TV</td>
<td>transvaginal</td>
</tr>
<tr>
<td>UCPPS</td>
<td>Urologic Chronic Pelvic Pain Syndrome</td>
</tr>
<tr>
<td>WBC</td>
<td>white blood cell count</td>
</tr>
</tbody>
</table>
PV-1.1 General Guidelines - Overview

✓ A current clinical evaluation (within 60 days) is required before advanced imaging can be considered. The clinical evaluation may include a relevant history and physical examination, appropriate laboratory studies, and non-advanced imaging modalities such as plain x-ray or pelvic (CPT® 76856 or CPT® 76857) and/or transvaginal ultrasound (CPT® 76830).
  - The clinical evaluation may also include a gynecological and/or urological exam with appropriate laboratory studies such as blood count, tumor markers and endocrine evaluations.
  - Other meaningful contact (telephone call, electronic mail or messaging) by an established patient can substitute for a face-to-face clinical evaluation.

✓ Abdominal imaging begins at the diaphragm and extends to the umbilicus or iliac crest. Pelvic imaging begins at the umbilicus and extends to the pubis.

✓ Pregnant women can be evaluated with ultrasound or MRI without contrast to avoid radiation exposure.

Ultrasound

✓ Transvaginal ultrasound (TV) (CPT® 76830) is the optimal study to evaluate female pelvic pathology.

✓ Pelvic ultrasound (complete CPT® 76856 or, limited CPT® 76857) can be performed if it is a complementary study to the TV ultrasound. It may substitute for TV in pediatric patients or non-sexually active females.

✓ CPT® 76942 is used to report ultrasound imaging guidance for needle placement during biopsy, aspiration, and other percutaneous procedures.

Soft Tissue Ultrasound

✓ Pelvic wall, buttocks, penis and perineum—CPT® 76857

✓ Groin-- CPT® 76882

✓ Other soft tissue areas- CPT® 76999
**Scrotal Ultrasound**

See also:
- **PV-17~Impotence/Erectile Dysfunction**
- **PV-18~Penis-Soft Tissue Mass**

✓ CPT®76870 Ultrasound of scrotum and contents

**Other Ultrasound**

✓ CPT®93975 Duplex scan (complete) scan of arterial inflow and venous outflow of abdominal, pelvic, scrotal contents and/or retroperitoneal organs; complete study

✓ CPT®93976 Duplex scan (limited) of arterial inflow and venous outflow of abdominal, pelvic, scrotal contents and/or retroperitoneal organs; limited study

✓ CPT®93975 and CPT®93976 should not be reported together during the same session

**CT**

✓ CT pelvis with contrast is a possible modality unless there is a contrast allergy or the study is to look for a calculus in the distal ureter or bladder.

**MRI**

✓ Can be used as a more targeted study or for patients allergic to iodinated contrast
  - Pelvis MRI without contrast (CPT®72195) is the usual modality
  - Pelvic MRI without and with contrast (CPT®72197) to evaluate the ovary or retroperitoneum
  - Pelvis MRI with contrast only (CPT®72196) is rarely performed.
PV-2.1 Abnormal Uterine Bleeding (AUB)

- Initial evaluation includes any of the following:
  - Pelvic ultrasound (CPT® 76856 and/or CPT® 76857) and/or Transvaginal ultrasound (CPT® 76830), saline infusion sonohysterography (CPT® 76831), hysteroscopy, D&C and/or endometrial biopsy.

- MRI is not recommended except in the evaluation of leiomyomas. For leiomyomas, MRI pelvis without contrast (CPT® 72195) or MRI pelvis without and with contrast (CPT® 72197) is appropriate for the following:
  - Guide the treatment of myomas in an enlarged uterus with multiple myomas and/or precise myoma mapping is of clinical importance (for surgical planning), or
  - When myomectomy is planned, before uterine artery embolization.

- CT is not generally warranted for evaluating AUB since uterine anatomy is limited due to soft tissue contrast resolution.
  - An abnormal endometrium found incidentally on CT should be referred for TVUS for further evaluation.

Abnormal Uterine Bleeding – Practice Notes

Premenopausal women should be treated conservatively with hormone therapy. If there is failure to respond to this treatment, evaluation by biopsy and/or hysteroscopy is indicated.

Postmenopausal women can be evaluated by biopsy and/or hysteroscopy.

Sonohysterography is superior to transvaginal US in the detection of intracavitary lesions and thickening of the endometrium.

References

PV-3.1 Amenorrhea

To identify etiology of genital and urinary tract abnormalities, the first step is the following:

- Ultrasound, Pelvis (CPT® 76856 or CPT® 76857) and/or TV (CPT® 76830), hysterosalpingogram and/or hysteroscopy

The results of test(s) above determine the next steps, which may include:

- If ultrasound is indeterminate or equivocal for Asherman’s Syndrome, Polycystic Ovary Syndrome, or Androgen Secreting Ovarian Tumor, then MRI pelvis without contrast (CPT® 72195) or without and with contrast (CPT® 72197).

- Hormonally active adrenal tumor suspicion should be evaluated by criteria in AB-16~Adrenal Cortical Lesions in the Abdomen Imaging Guidelines.

- Patients with absent uterus of foreshortened vagina should have karyotype evaluation. Advance imaging is generally not indicated.

- See also: HD-19~Pituitary in the Head Imaging Guidelines.

PV-3.2 Amenorrhea - Delayed Puberty

Delayed puberty can be further evaluated with thyroid function tests, bone age study, LH, FSH and prolactin.

- Ultrasound, Pelvis (CPT® 76856 or CPT® 76857) and/or TV (CPT® 76830), hysterosalpingogram and/or hysteroscopy

- MRI brain without and with contrast (CPT® 70553) can be performed if:
  - LH and FSH are low, or within the reference range and bone age study is normal, or
  - Prolactin levels are elevated
  - Advanced imaging of the abdomen/pelvis is not indicated

Practice Notes

Normal uterus and normal puberty can be further be evaluated with an endocrine work-up (TSH, LH, FSH, and prolactin) and pregnancy test.
**PV-4~ADENOMYOSIS**

**PV-4.1 Adenomyosis**

- Pelvic (CPT® 76856 or CPT® 76857) and/or TV Ultrasound (CPT® 76830) along with color Doppler ultrasound (CPT® 93975 or CPT® 93976) is the diagnostic procedure of choice for the initial evaluation of suspected adenomyosis.

- MRI Pelvis without contrast (CPT® 72195) or MRI pelvis without and with (CPT® 72197) is considered a second-line when:
  - Inconclusive US and the patient has failed several months (3 months) of hormone suppression; or
  - Enlarged uterus or with coexisting fibroids and further delineation would affect patient management

**Adenomyosis – Practice Notes**

Adenomyosis is when endometrial tissue, which normally lines the uterus, moves into the outer muscular walls of the uterus. Adenomyosis is a histologic diagnosis and is suspected by history and physical examination. Ultrasound findings of adenomyosis include heterogeneous myometrium, myometrial cysts, asymmetric myometrial thickness, and subendometrial echogenic linear striations.

**Reference**

5.1 Suspected Adnexal Mass – Initial Evaluation in All Women

- Transvaginal (TV) ultrasound imaging (CPT® 76830) is the initial study of choice.\(^1,2\)
  - Pelvic ultrasound (CPT® 76856 or CPT® 76857) can be performed if requested as a complimentary study to the TV ultrasound.
  - Duplex (Doppler) scan (CPT® 93975 complete; CPT® 93976 limited) may be approved as an add-on to TV US (CPT® 76830)

- If ultrasound is indeterminate in identifying origin of pelvic masses (adnexal, uterine, or other in etiology)\(^1\), MRI pelvis without contrast (CPT® 72195), OR without and with contrast (CPT® 72197; CPT® 72195 if pregnant)

If a Complex Adnexal Mass is identified in a pre-menopausal woman, see: PV-5.2 Complex Adnexal Mass – Pre-Menopause

If a Complex Adnexal Mass is identified in a post-menopausal woman, see:

PV-5.3 Complex Adnexal Mass – Post-Menopause

For all other non-complex adnexal masses see PV-5.5 Other Adnexal Masses
PV-5.2 Complex Adnexal Masses – Pre-Menopausal

For women of reproductive age (Pre-Menopausal), evaluation includes a pregnancy test (a quantitative hCG may be necessary if an ectopic pregnancy is suspected), CBC, serial hematocrit measurements, and appropriate cultures.

Symptomatic patients often require immediate interventions (antibiotics, surgery, and/or expectant management)

Ultrasound characteristics usually suggest the diagnosis (ectopic pregnancy, functional cysts, tuboovarian abscess, hydrosalpinx, dermoid, endometrioma, hemorrhagic cyst and pedunculated fibroids) and direct the treatment.

✓ Follow up pelvic ultrasound (CPT® 76856 or CPT® 76857 and/or [transvaginal] CPT® 76830) in six weeks or following a menstrual cycle to evaluate for resolution. Duplex (Doppler) scan (CPT® 93975 complete; CPT® 93976 limited) may be approved as an add-on to TV US (CPT® 76830)
  o If follow-up imaging confirms a hemorrhagic cyst that has not completely resolved, a repeat ultrasound (CPT® 76856 or CPT® 76857 and/or CPT® 76830 [transvaginal]) can be performed in 6 months (sooner if signs or symptoms persist or if new symptoms occur).

✓ Advanced imaging may be considered for preoperative planning if requested by operating surgeon and if an ultrasound is indeterminate and/or malignancy is suspected: CT pelvis with contrast (CPT® 72193) or MRI pelvis (CPT® 72197 or CPT® 72195 if pregnant).

✓ Advanced imaging may be considered for elevated tumor makers if an ultrasound is indeterminate and/or ovarian malignancy is suspected.
  o CT abdomen and pelvis with contrast (CPT® 74177) as a pre-operative study to evaluate for metastatic disease when cancer is known or suspected
  o CT abdomen and pelvis (CPT® 74177) can detect omental metastases, peritoneal implants, pelvic and periaortic lymph node enlargement,
  o CT abdomen and pelvis without and with contrast (CPT® 74178) can be considered for suspected hepatic metastases and obstructive uropathy

✓ Advanced imaging may be indicated for an ovarian mass suspicious for metastatic disease (e.g. from breast, uterine, colorectal or gastric cancer) and should be evaluated based on the appropriate Oncology Imaging guideline.

Practice Note

- Germ cell tumors are more common in young women which can be confirmed by beta hCG, AFP, and LDH
- CA 125 tumor marker can confirm for other malignancy suspicion
PV-5.3 Complex Adnexal Masses – Post-Menopausal

For post-menopausal women, most pelvic complex cysts or solid masses should be evaluated for surgical intervention and have tumor markers (CA-125) measured.

✓ An ovarian mass suspicious for metastatic disease (e.g. from breast, uterine, colorectal or gastric cancer) should be evaluated based on the appropriate Oncology Imaging guideline.

✓ If ultrasound is indeterminate, advanced imaging may be appropriate for high risk treatment planning. Send for Medical Director review.
   - Some women for whom the usual management of a pelvic mass would include surgery may be at increased risk for perioperative morbidity and mortality. In such cases, repeat imaging may be a safer alternative than immediate surgery, although the frequency of follow-up imaging has not been determined.

PV-5.4 Screening for Ovarian Cancer

- See ONC-21~Ovarian Cancer in the Oncology Imaging Guidelines

PV-5.5 Other Adnexal Masses

✓ For endometrioma, initial follow-up ultrasound (CPT® 76856 or CPT® 76857 and/or CPT® 76830 [transvaginal]) can be performed at 6 to 12 weeks, and then every 6 months if not surgically resected.

✓ If pelvic ultrasound (CPT® 76857 or CPT® 76856 and/or transvaginal CPT® 76830) is indeterminate for Dermoid, the diagnosis can be confirmed by CT pelvis (contrast as requested) or MRI pelvis without contrast (CPT® 72195) or MRI pelvis without and with contrast (CPT® 72197)
   - If surgical resection is not performed, then follow-up pelvic ultrasound (CPT® 76856 or CPT® 76857 and/or CPT® 76830 [transvaginal]) for both pre- and postmenopausal women can be obtained once a year.

✓ For hydrosalpinxes or peritoneal cysts, individualized follow-up as clinically indicated. Advanced imaging is rarely indicated in these clinical scenarios but can be followed with ultrasound.

✓ For simple or thin walled cystic mass, follicular cyst (ovarian), tubular cystic mass (fallopian tube) on initial TV ultrasound (CPT® 76830):
   - Repeat TV ultrasound (CPT® 76830) and/or Pelvic ultrasound (CPT® 76857 or CPT® 76856)
   - According to the below schedule if ≤=10 cm
- CA 125 in all postmenopausal patients
- Cysts >10cm have not been studied and the current recommendation is to consider surgical intervention.
- Advanced imaging may be appropriate for preoperative planning if requested by the operating surgeon or elevated tumor marker(s). Requests will be sent to Medical Director review.

**PV 5.6: Simple Cyst Follow-Up**

<table>
<thead>
<tr>
<th>Size</th>
<th>Pre-Menopausal</th>
<th>Post-Menopausal</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;1cm-5cm</td>
<td>N/A</td>
<td>TV ultrasound (CPT®76830) and/or Pelvic ultrasound (CPT®76857 or CPT®76856) at 6 months</td>
</tr>
<tr>
<td>&gt;5cm-7cm</td>
<td>TV ultrasound (CPT®76830) and/or Pelvic ultrasound (CPT®76857 or CPT®76856) annually</td>
<td>TV ultrasound (CPT®76830) and/or Pelvic ultrasound (CPT®76857 or CPT®76856) or MRI pelvis without and with contrast (CPT®72197) for follow-up as clinically indicated; follow-up intervals may be adjusted on basis of degree of cyst change</td>
</tr>
<tr>
<td>&gt;7cm-10cm</td>
<td>TV ultrasound (CPT®76830) and/or Pelvic ultrasound (CPT®76857 or CPT®76856) every 6 months</td>
<td>MRI pelvis without and with contrast (CPT®72197)</td>
</tr>
</tbody>
</table>

**Practice Notes**

**Suspected Adnexal Mass – Tumor Markers**

The adnexa include the ovaries, Fallopian tubes, and ligaments that hold the uterus in place.

CA-125 is a tumor marker that is useful for the evaluation of adnexal mass:
- Elevation occurs with both malignant (epithelial cancer) and benign entities (leiomyoma, endometriosis, PID, inflammatory disease such as lupus, and inflammatory bowel disease).
- Increase in the markers over time occurs with malignancy only.
- Obtain CA 125 in all post-menopausal patients with simple cyst.
- Consider tumor markers patients with an abnormal US that is not a simple cyst.
- Other markers include Beta hCG, LDH, and AFP (germ cell tumors) and Inhibin A and B (granulosa cell tumor).

**Simple and Complex Adnexal Cysts**

Simple cysts are smooth walled and clear without debris. Simple cysts up to 10 cm in diameter as measured by ultrasound are almost universally benign and may
safely be followed with ultrasound, without intervention, even in postmenopausal women and pediatric patients with normal tumor markers.

Complex cysts can have solid areas or excrescences, and/or debris in them, greater than 3 mm irregular septations, mural nodules with Doppler-detected blood flow, and/or free abdominal/pelvic fluid.

References

**PV-6.1 Endometriosis**

- Pelvic (CPT® 76856 or CPT® 76857) and/or TV (CPT® 76830) US is then the first line diagnostic exam for pain or abnormality on exam
  - In most patients, US followed by medical treatment or laparoscopy should be considered prior to advanced imaging
  - Laparoscopy remains the definitive test for diagnosis and evaluation of endometriosis in most patients.

- MRI pelvis without contrast (CPT 72195) or without and with (CPT® 72197) is helpful when:
  - Rectal involvement, rectovaginal endometriosis, and cul-de-sac obliteration.
    - MRI has been shown to accurately detect rectovaginal endometriosis and cul-de-sac obliteration in the more than 90% of cases when sonographic gel was inserted in the vagina and rectum.
  - To characterize complex adnexal masses as endometrioma if ultrasound is indeterminate
  - MRI can also enable complete lesion mapping prior to surgical excision of known endometriosis that was diagnosed during a previous surgery.

**References**

PV-7.1 Pelvic Inflammatory Disease

- Pelvic (CPT® 76856 or CPT® 76857) and/or TV (CPT® 76830) US is the initial study for imaging of pelvic inflammatory disease (PID).

- CT abdomen and pelvis with contrast (CPT® 74177) or CT pelvis with contrast (CPT® 72193) when:
  - US is indeterminate, or
  - Extensive abscess formation as determined by ultrasound.

References


PV-8.1 Polycystic Ovary Syndrome

✓ Pelvic (CPT® 76856 or CPT® 76857) and/or TV US (CPT® 76830) should be performed based on exam and laboratory findings suspicious for this disease
  o Diagnosis is confirmed if ultrasound shows 12 or more small follicles measuring 2 to 9 mm in diameter in at least one ovary or a total ovarian volume of >10 cm

✓ Abdomen CT with (bolus arterial phase) contrast (CPT® 74160) only if elevated serum levels of androgens is found and an adrenal etiology is suspected.
  o See AB-16~Adrenal Cortical Lesions
  o Serum levels of androgens. Free testosterone level is thought to be the best measure.

Polycystic Ovary Syndrome – Practice Notes

Polycystic ovary syndrome is the most common hormonal disorder among women of reproductive age, and is one of the leading causes of infertility.

Ovaries are often enlarged and contain numerous small cysts located along the outer edge of each ovary. Signs and symptoms may include:
  o Anovulation resulting in infrequent or prolonged menstrual periods
  o Excessive amounts or effects of androgenic (masculinizing) hormones (e.g. excess hair growth)
  o Acne
  o Obesity

Reference
PV-9.1 Infertility Evaluation, Female

- Evaluation imaging can include:
  - Monthly pelvic ultrasound (CPT®76857 or CPT®76856) and/or Transvaginal ultrasound (CPT®76830), usually in the latter, luteal menstrual phase to evaluate whether ovulation has occurred
  - Hysterosalpingography
  - Laparoscopy
  - MRI pelvis without contrast (CPT®72195) or MRI pelvis without and with contrast (CPT®72197) only if: ultrasound defines a complex anomaly, is not definitive or requested for surgical planning

Infertility Evaluation, Female – Practice Notes

Some payors do not provide coverage for infertility evaluation and treatment.

References

PV-10.1 Intrauterine Device

- TV US (CPT®76830) if:
  - Abnormal pelvic exam prior to IUD insertion, such as pelvic mass, irregularly shaped uterus, or enlarged uterus.
  - Suspected complication at the time or immediately following IUD insertion:
    - Abnormal IUD position
    - Uterine perforation
    - Severe pain
    - Excessive bleeding
    - Inability to feel or see IUD string
  - Failure to improve with conservative treatment (7 days) such as antibiotics for cramping, light bleeding, and/or low grade fever following IUD placement
  - NOT as routine imaging to evaluate position prior to, immediately after and, for example, 6 weeks after insertion

- "Lost" IUD with negative or non-diagnostic US:
  - Plain x-ray should be performed if pregnancy test is negative.
  - Thereafter, CT pelvis without contrast (CPT®72192) or CT abdomen/pelvis without contrast (CPT®74176) or MRI pelvis without contrast (CPT®72195) can be considered when both ultrasound and plain x-ray are equivocal or non-diagnostic.

- If pregnancy test is positive:
  - Ultrasound can be performed to locate an intrauterine device (IUD) (CPT®76801 if a complete ultrasound has not yet been performed, CPT®76815 or CPT®76816 if a complete ultrasound was done previously, and/or CPT®76817 for a transvaginal ultrasound)

References

PV-11~Pelvic Pain/Dyspareunia, Female

PV-11.1 Pelvic Pain/Dyspareunia, Female

✓ For unexplained pelvic pain and/or dyspareunia, the initial imaging test should be Pelvic ultrasound (CPT® 76856 or CPT® 76857) and/or TV Ultrasound (CPT® 76830):
  o If ovarian torsion is suspected, add Duplex (Doppler) scan (CPT® 93975 or CPT® 93976) to TV US (CPT® 76830)
  o For chronic pain, add Duplex Doppler (CPT® 93975 or CPT® 93976)

✓ If initial ultrasound is normal, consider urological work-up, gastroenterology work-up or laparoscopic evaluation(s) in evaluation of pelvic pain. If the initial ultrasound is equivocal for unexplained chronic pelvic pain, or unexplained chronic pelvic pain and pelvic congestion is suspected, then the following can be considered:
  o CT pelvis with contrast (CPT® 72193) and/or CT abdomen and pelvis with contrast (CPT® 74177) for unexplained chronic pelvic pain
  o MRI Pelvis (CPT® 72195) and/or pelvis MRV (CPT® 72198), and/or CTV pelvis (CPT® 72191) for pelvic congestion

✓ If pelvic AVM is suspected, and if one of the following is present, then CTA pelvis (CPT® 72191) can be considered
  o Pulsatile pelvic mass
  o Incidental finding on prior imaging including ultrasound

✓ Pelvic Pain/Hip Pain—Rule Out Piriformis Syndrome
  o See PN-2~Focal Neuropathy in the PND Imaging Guidelines and
  o MS-24 - Hip in the Musculoskeletal Imaging Guidelines.

✓ Work-up of interstitial cystitis/bladder pain syndrome (IC/BPS) should include history, physical exam, laboratory exam (urinalysis and urine culture), and measurement of post void residual urine by bladder catheterization or by ultrasound (CPT® 76856 or CPT® 76857 or CPT® 76830 [female]).
  o CT pelvis with contrast (CPT® 72193) and/or CT abdomen with contrast (CPT® 74160) may be indicated if ultrasound is equivocal for complicated interstitial cystitis/bladder pain syndrome (when ordered by Specialist) or uncomplicated
Pelvic Pain/Dyspareunia, Female – Practice Notes

Interstitial Cystitis/Bladder Pain Syndrome (IC/BPS) has an unpleasant sensation (pain, pressure, discomfort), perceived to be related to the urinary bladder. It is associated with lower urinary tract symptoms of more than six weeks duration, in the absence of infection or other identifiable causes.

References

1. ACOG Practice Bulletin No. 51: *Chronic pelvic pain*; March 2004 (Reaffirmed 2010)
PV-12.1 Leiomyomata

Leiomyomata are also known as “fibroids.”

✓ Pelvic (CPT® 76856 or CPT® 76857) and/or TV US (CPT® 76830) can be performed for the following:
  o Screening for leiomyomata
  o Pre-operative prior to myomectomy
  o Persistent or recurrent symptoms such as abnormal bleeding, pain, or pelvic pressure

✓ MRI pelvis without and with contrast (CPT® 72197), or without contrast (CPT® 72195;) can be used in the evaluation of leiomyomas for the following:
  o Guide the treatment of myomas in an enlarged uterus with multiple myomas and/or precise myoma mapping is of clinical importance (for surgical planning)
  o Equivocal sonohysterography or panoramic hysteroscopy with suspected submucous leiomyoma and imaging is needed for surgical planning
  o Indeterminate US prior to myomectomy
  o Leiomyoma necrosis is suspected
  o Arterial embolization is being considered
    • If MRI is indeterminate, MRA pelvis (CPT® 72198) or CTA pelvis (CPT® 72191) can be considered if requested by the interventional radiologist planning the arterial embolization

✓ There is no evidence to support interval MRI after embolization unless persistent or recurrent symptoms

References
PV-13.1 Periurethral cysts and urethral diverticula

Can be evaluated with any of the following, at providers’ request:

- Ultrasound (CPT® 76856 or CPT® 76857 and/or transvaginal CPT® 76830
- Urethrography, or CT Urethrography can be performed to evaluate any urethral abnormalities
- If ultrasound is indeterminate, MRI pelvis without and with contrast (CPT® 72197)
- Also see AB-40~Urinary Tract Infection

Periurethral cysts and urethral diverticula – Practice Note

Symptomatic infection of congenital periurethral glands can result in urethral diverticula. Symptoms include pain, urinary urgency, frequency of urination, recurrent urinary tract infection, dribbling after urination, or incontinence.

Reference

PV-14.1 Uterine Anomalies

✓ Pelvic ultrasound (CPT® 76856 or CPT® 76857) and/or TV ultrasound (CPT® 76830) is the initial imaging modality for the detection of uterine anomalies, particularly during infertility evaluation.

✓ Retroperitoneal ultrasound (CPT® 76770 or CPT® 76775) is indicated to evaluate for coexisting renal anomalies.

✓ Pelvis MRI without and with contrast (CPT® 72197):
  o Ultrasound defines a complex anomaly or is not definitive, or
  o Requested for surgical planning.

References

PV-15.1 Fetal MRI

✓ Fetal MRI may be considered for surgical planning (re: fetal anomalies) and/or if ultrasound is equivocal and additional information is needed for counseling purposes

✓ Fetal MRI (CPT® 74712; CPT® 74713 for each additional gestation)
  - Do not report CPT® 74712 and CPT® 74713 in conjunction with CPT® 72195, CPT® 72196, CPT® 72197
  - If only placenta or maternal pelvis is imaged without fetal imaging, use MRI pelvis (CPT® 72195)

References
PV-16.1 Molar Pregnancy and GTN

- Individuals should undergo brain imaging, preferably MRI brain without and with contrast (CPT®70553), CT abdomen and pelvis with contrast (CPT®74177), and chest x-ray as a metastatic work up.
  - Treatment is usually methotrexate
  - Weekly HCG tests are performed until they fall to zero.

Molar Pregnancy and GTN – Practice Note

A recurrent molar pregnancy is called gestational trophoblastic neoplasia (GTN). These cells are malignant and can metastasize to other organs such as lungs, brain, bone, and vagina.

References

PV-17~Impotence/Erectile Dysfunction

PV-17.1 Impotence/Erectile Dysfunction

✓ Imaging depends on the suspected disease:
  o Hypogonadism - Brain MRI without and with contrast (CPT®70553) should be restricted to hypogonadism as documented by low bio-available/free testosterone of <20 ng/dl or total serum testosterone of less than 80% of the lower limit of normal (i.e. <150 ng/dl is lower limits for most labs), or patients with elevated prolactin.
    • Also see HD-19~Pituitary in the Head Imaging Guidelines
  o Peyronie disease - Duplex ultrasound (CPT®93980) can be used to assess penile vasculature in Peyronie’s disease
  o Erectile dysfunction is frequently an early symptom of peripheral vascular disease.
  o Penile Doppler ultrasound (CPT®93980) can be performed for the evaluation of erectile dysfunction

✓ Functional MRI or PET studies are considered investigational for this indication

References

PV-18~Penis–Soft Tissue Mass

PV-18.1 Penis-Soft Tissue Mass

✓ Soft-tissue lesions of the penis should be evaluated initially penile ultrasound (CPT®76857).

✓ MRI of the pelvis without and with contrast (CPT®72197) can be performed:
  o Penile ultrasound (CPT®76857) is equivocal (not clearly benign, simple cyst or Peyronie’s disease), or
  o Primary penile cancer is suspected

References

For prostatitis, acute or chronic transrectal ultrasound (CPT® 76872) after failure to improve with 2 weeks of antibiotics
  o Pelvis CT with contrast (CPT® 72193) may be used to differentiate between abscess and tumor if ultrasound is equivocal

For hematospermia, transrectal ultrasound (TRUS) (CPT® 76872) can be the initial imaging study in all cases
  o Pelvis MRI without contrast (CPT® 72195) can be considered to evaluate:
    • Suspected hemorrhage within the seminal vesicles
    • Radiation injury, neoplasia
    • Failure of conservative treatment, or (2 weeks)
    • Abnormal findings on transrectal ultrasound.

For chronic urological pelvic pain, imaging is rarely necessary in the evaluation of chronic pelvic pain with the exception of:
  o Transrectal ultrasound (CPT® 76872) for prostate evaluation
  o MRI of the lumbar spine without contrast (CPT® 72148) and/or sacral plexus MRI without contrast (CPT® 72195) after indeterminate evaluation
  o Urology consultation is helpful

For Interstitial Cystitis/Bladder Pain Syndrome (IC/BPS), evaluation is the same as in females, see: PV-11

For suspected pudendal neuralgia, Pudendal Nerve Terminal Motor Latency Test and Quantitative Sensory Threshold Test should be performed prior to considering advanced imaging

Pelvic Pain Syndrome, Men – Practice Notes

Inflammatory condition of the seminal vesicles or prostate, demonstrating blood in the semen, and is rarely malignant.

Urologic chronic pelvic pain syndrome (UCPPS) is a symptom-based umbrella term for interstitial cystitis/painful bladder syndrome (IC/PBS) and chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS) in men
References

PV-20.1 Scrotal Pathology

✓ Initial evaluation of acute scrotal pain, masses, trauma, inguinal hernia, varicocele, or inflammation should be evaluated by Duplex (Doppler) scan ultrasound (CPT® 76870 and/or CPT® 93975 or CPT® 93976) of the scrotum.
  o MRI of the pelvis without and with contrast (CPT® 72197) if ultrasound is inconclusive
  o There is no consensus on appropriate follow-up imaging if testicular microlithiasis is found. Most commonly, annual ultrasound (CPT® 76870) is recommended

✓ For undescended testis, see PACPV-15 in the Pediatric and Congenital Pelvis Imaging Guidelines

Scrotal Pathology – Practice Note

Testicular microlithiasis co-exists with testicular tumors in 5%-10% of patients. It is unknown whether there is an increased risk of tumor development in patients with pre-existing microcalcifications.

Reference

PV-21.1 Fistula In Ano

✓ MRI pelvis without and with contrast (CPT® 72197) is indicated for the assessment of complex or recurrent fistulas.
  o Preoperative MRI frequently alters the surgical approach and MRI guided surgery can significantly decrease postoperative recurrence in complex cases by 75%.

Practice Note

Ideally, MRI pelvis without and with contrast should also be performed with rectal contrast consisting of ultrasound gel for optimum characterization and pre-operative planning

References

PV-22.1 Urinary Incontinence – Initial Imaging

✓ Initial Imaging, associated with other evaluations, are:
  o Non-Neurogenic Incontinence
    • Measurements of post void residual urine by bladder ultrasound (CPT® 76856 or CPT® 76857 or CPT® 76830 [female]). Bladder catheterization and/or urodynamic studies may be authorized if requested.
  o Neurogenic Incontinence
    • Ultrasound of the urinary tract (CPT® 76770 or CPT® 76775) and/or urodynamic studies

PV-22.2 Urinary Incontinence – Further Imaging

✓ CT abdomen and/or pelvis, contrast as requested, can be performed for the following:
  o Non-diagnostic ultrasound or abnormality on ultrasound that requires further evaluation
  o Complicated incontinence
  o Suspected fistulae
  o Detecting ectopic ureters if ultrasound is nondiagnostic
  o Pre-operative planning when ordered by the operating physician

✓ MRI may be indicated for evaluation of the brain, spine, or other regions of the nervous system in neurogenic urinary incontinence

PV-22.3 Pelvic Organ Prolapse

✓ MRI abdomen (CPT® 74181 or CPT® 74183) and/or MRI Pelvis (CPT® 72195 or CPT® 72197) may be indicated for the following:
  o Pelvic floor anatomy and pelvic organ prolapse evaluations if exam and ultrasound are indeterminate
  o Equivocal results on CT
  o Pre-operative planning when ordered by the operating physician

✓ Dynamic MRI of abdomen (CPT® 74181 or CPT® 74183) and/or pelvis (CPT® 72195 or CPT® 72197) may be indicated for the following:
  o Pre-operative planning when ordered by the operating physician
  o Persistent incontinence following surgery
Urinary Incontinence – Practice Notes

Urinary incontinence can be "stress," "urgency," or mixed; neurogenic or non-neurogenic; and complicated or uncomplicated. Neurogenic incontinence can occur from cerebral, spinal or peripheral neurological diseases.

Complicated urinary incontinence includes:
- Failed conservative treatment
- Pain or dysuria
- Hematuria
- Recurrent infection
- Previous radical pelvic surgery
- Suspected fistula
- Suspected mass
- Previous pelvic or prostate irradiation

PV-22.4 Fecal Incontinence

This evaluation is similarly divided into those with suspected neurogenic (CNS or spinal cord) and non-neurogenic incontinence. Neurological Specialist evaluation will guide the specific imaging with neurogenic etiology.

✓ Non-Neurogenic imaging, associated with other evaluations, are:
  - Transanal, endoanal or transrectal ultrasound (CPT® 76872)
  - Anal manometry
  - Balloon Expulsion Test (BET)
  - Pudendal nerve terminal motor latency
  - EMG
  - Barium defecography (There are currently insufficient evidence-based data to generate appropriateness criteria for MR defecography)

✓ If the results of a recent ano-rectal manometry demonstrate: 1) weak pressures; and/or 2) an abnormal balloon expulsion test; and 3) a failure of a recent of trial of conservative treatment in anticipation of surgical management, MRI pelvis without and with contrast (CPT® 72197) can be considered when requested by the operating surgeon.

See AB 21: Diarrhea, Constipation and Irritable Bowel
Practice Notes

Diagnostic assessment of fecal incontinence:
- Determine the severity of the incontinence by using the Bristol Stool Scale, which includes frequency, leakage, and pressure of urgency
- Step 1- History and Physical, which should include digital rectal examination and perianal pinprick to help screen for neurogenic causes
- Step 2- Diagnostic testing; Ano-rectal manometry and BET (balloon expulsion test, where a balloon is insufflated to 50ml, and time to expel is measured, as well as an inability to hold it in)
- Step 3- Trial of conservative therapy (anti-diarrheal, etc.)
- Step 4- Pelvic floor and anal canal imaging as well as EMG should be considered for patients with decreased anal pressures who have failed conservative treatment, particularly if surgery is being considered. Imaging can be with endoanal ultrasound or MRI (MRI superior for seeing the external anal area for scarring and to identify anal sphincter atrophy).

References
PV-23~Patent Urachus

PV-23.1 Patent Urachus

✓ Umbilical discharge from persistent fetal connection between the bladder and the umbilicus can be evaluated by:
  o Initially, ultrasound (CPT® 76856 or CPT® 76857 and/or CPT® 76700 or CPT® 76705)
  o CT pelvis with contrast (CPT® 72193) if ultrasound is equivocal or if needed for surgical planning.

References

PV-24~Prostate

PV 24.1: Prostate – Abnormal Screening

✓ If abnormalities are detected on the digital rectal examination (DRE) or prostate-specific antigen (PSA) test, patients should undergo urologic evaluation with transrectal ultrasound-guided prostate biopsy.

Reference

PV-25~Nuclear Medicine

✓ Nuclear Medicine
  o Nuclear medicine studies are rarely used in imaging of the pelvis, but are indicated in some clinical circumstances, including the following:
    ▪ Lymph system mapping (CPT® 78195) is indicated for lower extremity lymphedema with recent negative Doppler ultrasound, or a history of Milroy’s disease or prior pelvic lymph node dissection
✓ Nuclear testicular imaging (CPT® 78761) is indicated for evaluation of scrotal pain when testicular torsion is suspected and recent Doppler ultrasonography is inconclusive or unavailable

✓ Radiopharmaceutical Voiding Cystogram (CPT® 78740) with Urinary Bladder Residual study (CPT® 78730) is indicated for suspicion of urinary retention and a recent non-diagnostic ultrasound