



# CLINICAL GUIDELINES

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## Pediatric Pelvis Imaging Policy

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eviCore healthcare Clinical Decision Support Tool Diagnostic Strategies: This tool addresses common symptoms and symptom complexes. Imaging requests for individuals with atypical symptoms or clinical presentations that are not specifically addressed will require physician review. Consultation with the referring physician, specialist and/or individual's Primary Care Physician (PCP) may provide additional insight.

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## **PEDIATRIC PELVIS IMAGING GUIDELINES**

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## PEDIATRIC PELVIS IMAGING GUIDELINES

### **PEDPV-1~General Guidelines**

| <b>Procedure Codes Associated with Pelvis Imaging</b>                                 |             |
|---------------------------------------------------------------------------------------|-------------|
| <b>MRI</b>                                                                            | <b>CPT®</b> |
| Pelvis MRI without contrast                                                           | 72195       |
| Pelvis MRI with contrast (rarely used)                                                | 72196       |
| Pelvis MRI without and with contrast                                                  | 72197       |
| Unlisted MRI procedure (for radiation planning or surgical software)                  | 76498       |
| <b>MRA</b>                                                                            | <b>CPT®</b> |
| Pelvis MRA                                                                            | 72198       |
| <b>CT</b>                                                                             | <b>CPT®</b> |
| Abdomen/Pelvis CT without contrast                                                    | 74176       |
| Abdomen/Pelvis CT with contrast                                                       | 74177       |
| Abdomen/Pelvis CT without and with contrast                                           | 74178       |
| Pelvis CT without contrast                                                            | 72192       |
| Pelvis CT with contrast                                                               | 72193       |
| Pelvis CT without and with contrast                                                   | 72194       |
| CT Guidance for Needle Placement (Biopsy, Aspiration, Injection, etc.)                | 77012       |
| CT Guidance for and monitoring of Visceral Tissue Ablation                            | 77013       |
| CT Guidance for Placement of Radiation Therapy Fields                                 | 77014       |
| Unlisted CT procedure (for radiation planning or surgical software)                   | 76497       |
| <b>CTA</b>                                                                            | <b>CPT®</b> |
| Abdomen/Pelvis CTA                                                                    | 74174       |
| Pelvis CTA                                                                            | 72191       |
| <b>Nuclear Medicine</b>                                                               | <b>CPT®</b> |
| PET Imaging; limited area (this code not used in pediatrics)                          | 78811       |
| PET Imaging; skull base to mid-thigh (this code not used in pediatrics)               | 78812       |
| PET Imaging; whole body (this code not used in pediatrics)                            | 78813       |
| PET with concurrently acquired CT; limited area (this code rarely used in pediatrics) | 78814       |
| PET with concurrently acquired CT; skull base to mid-thigh                            | 78815       |
| PET with concurrently acquired CT; whole body                                         | 78816       |

|                                                                                                                                               |              |
|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Urinary Bladder Residual Study</b>                                                                                                         | <b>78730</b> |
| <b>Ureteral Reflux Study (Radiopharmaceutical Voiding Cystogram)</b>                                                                          | <b>78740</b> |
| <b>Testicular Scan – Vascular Flow and Delayed Images</b>                                                                                     | <b>78761</b> |
| <b>Radiopharmaceutical Imaging of Inflammatory Process Limited Area</b>                                                                       | <b>78805</b> |
| <b>Radiopharmaceutical Imaging of Inflammatory Process Whole Body</b>                                                                         | <b>78806</b> |
| <b>Radiopharmaceutical Imaging of Inflammatory Process SPECT</b>                                                                              | <b>78807</b> |
| <b>Ultrasound</b>                                                                                                                             | <b>CPT®</b>  |
| <b>Ultrasound, pelvic (nonobstetric), complete</b>                                                                                            | <b>76856</b> |
| <b>Ultrasound, pelvic (nonobstetric), limited or follow-up</b>                                                                                | <b>76857</b> |
| <b>Ultrasound, scrotum and contents</b>                                                                                                       | <b>76870</b> |
| <b>Duplex scan of arterial inflow and venous outflow of abdominal, pelvic, scrotal contents and/or retroperitoneal organs; complete study</b> | <b>93975</b> |
| <b>Duplex scan of arterial inflow and venous outflow of abdominal, pelvic, scrotal contents and/or retroperitoneal organs; limited study</b>  | <b>93976</b> |
| <b>Duplex scan of aorta, inferior vena cava, iliac vasculature, or bypass grafts; complete</b>                                                | <b>93978</b> |
| <b>Duplex scan of aorta, inferior vena cava, iliac vasculature, or bypass grafts; limited</b>                                                 | <b>93979</b> |
| <b>Duplex scan of arterial inflow and venous outflow of penile vessels; complete</b>                                                          | <b>93980</b> |
| <b>Duplex scan of arterial inflow and venous outflow of penile vessels; limited study</b>                                                     | <b>93981</b> |

## **PEDIATRIC PELVIS IMAGING GUIDELINES**

### **PEDPV-1~General Guidelines**

#### **PEDPV-1.1 Pediatric Pelvis Imaging Age Considerations**

Many conditions affecting the pelvis in the pediatric population are different diagnoses than those occurring in the adult population. For those diseases which occur in both pediatric and adult populations, minor differences may exist in management due to patient age, comorbidities, and differences in disease natural history between children and adults.

- ✓ Patients age <18 years old should be imaged according to the Pediatric Pelvis Imaging Guidelines, and patients age ≥18 years should be imaged according to the Pelvis Imaging Guidelines, except where directed otherwise by a specific guideline section.

#### **PEDPV-1.2 Pediatric Pelvis Imaging Appropriate Clinical Evaluation**

- ✓ A recent (within 60 days) face-to-face evaluation including a detailed history, physical examination, and appropriate laboratory studies should be performed prior to considering advanced imaging, unless the patient is undergoing guideline-supported scheduled follow-up imaging evaluation.
- ✓ Unless otherwise stated in a specific guideline section, the use of advanced imaging to screen asymptomatic patients for disorders involving the pelvis is not supported. Advanced imaging of the pelvis should only be approved in patients who have documented active clinical signs or symptoms of disease involving the pelvis.
- ✓ Unless otherwise stated in a specific guideline section, repeat imaging studies of the pelvis are not necessary unless there is evidence for progression of disease, new onset of disease, and/or documentation of how repeat imaging will affect patient management or treatment decisions.

#### **PEDPV-1.3 Pediatric Pelvis Imaging Modality General Considerations**

- ✓ Ultrasound
  - Ultrasound should be done prior to advanced imaging in most pelvic conditions to rule out those situations that do not require advanced imaging.
  - For those patients who do require advanced imaging, ultrasound can be very beneficial in selecting the proper modality, body area, image sequences, and contrast level that will provide the most definitive information for the patient.
  - CPT® codes vary by body area and presence or absence of Doppler imaging and are included in the table at the beginning of this guideline.

✓ MRI

- MRI of the pelvis is generally performed without and with contrast (CPT<sup>®</sup> 72197) unless the patient has a documented contraindication to gadolinium or otherwise stated in a specific guideline section.
- Due to the length of time for image acquisition and the need for stillness, anesthesia is required for almost all infants and young children (age <7 years), as well as older children with delays in development or maturity. In this patient population, MRI imaging sessions should be planned with a goal of avoiding a short-interval repeat anesthesia exposure due to insufficient information using the following considerations:
  - MRI should always be performed without and with contrast unless there is a specific contraindication to gadolinium use since the patient already has intravenous access for anesthesia.
  - If multiple body areas are supported by eviCore guidelines for the clinical condition being evaluated, MRI of all necessary body areas should be obtained concurrently in the same anesthesia session.
- The presence of surgical hardware or implanted devices may preclude MRI
- The selection of best examination may require coordination between the provider and the imaging service.

✓ CT

- CT of the pelvis typically extends from the iliac crest to the upper margin of the sacroiliac joints, and CT of the abdomen and pelvis extends from the dome of the diaphragm through the ischial tuberosities.
  - In general, CT of the pelvis is appropriate when evaluating solid pelvic organs.
  - In general, CT of the Abdomen and pelvis is appropriate when evaluating inflammatory or infections processes, hematuria, or conditions which appear to involve both the abdomen and the pelvis.
  - In some cases, especially in follow-up of a known finding, it may be appropriate to limit the exam to the region of concern to reduce radiation exposure.
- The contrast level in pediatric CT imaging is specific to the clinical indication, as listed in the specific guideline sections.
- CT of the pelvis or abdomen and pelvis may be indicated for further evaluation of abnormalities suggested on prior US or MRI Procedures.
- CT may be appropriate without prior MR or US, as indicated in specific sections of these guidelines.
- CT should not be used to replace MRI in an attempt to avoid sedation unless listed as a recommended study in a specific guideline section.
- The selection of best examination may require coordination between the provider and the imaging service.

✓ Nuclear Medicine

- Nuclear medicine studies are rarely used in imaging of the pediatric pelvis, but are indicated in rare circumstances, including the following:
  - Lymph system mapping (CPT<sup>®</sup> 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.

The guidelines listed in this section for certain specific indications are not intended to be all-inclusive; clinical judgment remains paramount and variance from these guidelines may be appropriate and warranted for specific clinical situations.

## **References**

1. Acr–Spr Practice Parameter For The Performance Of Computed Tomography (CT) Of The Abdomen And Computed Tomography (CT) Of The Pelvis at [www.acr.org/~media/ACR/Documents/PGTS/guidelines/CT\\_Abdomen\\_Pelvis.pdf](http://www.acr.org/~media/ACR/Documents/PGTS/guidelines/CT_Abdomen_Pelvis.pdf)
2. Acr–Spr Practice Parameter For The Performance And Interpretation Of Pediatric Magnetic Resonance Imaging (MRI) at [http://www.acr.org/~media/ACR/Documents/PGTS/guidelines/MRI\\_Pediatric.pdf](http://www.acr.org/~media/ACR/Documents/PGTS/guidelines/MRI_Pediatric.pdf)
3. Ing C, DiMaggio C, Whitehouse A et al, Long-term Differences in Language and Cognitive Function After Childhood Exposure to Anesthesia, *Pediatrics* 2012;130:e476-e485.
4. Monteleone M, Khandji A, Cappell J et al, Anesthesia in Children: Perspectives From Nonsurgical Pediatric Specialists, *J Neurosurg Anesthesiol* 2014;26:396-398.
5. DiMaggio C, Sun LS, and Li G, Early Childhood Exposure to Anesthesia and Risk of Developmental and Behavioral Disorders in a Sibling Birth Cohort, *Anesth Analg* 2011;113:1143-1151.
6. MacDonald A and Burrell S, Infrequently performed studies in nuclear medicine: part 2\*, *J Nucl Med Technol* 2009;37:1-13.
7. McNeill GC, Witte MH, Witte CL et al, Whole-body lymphangioscintigraphy: preferred method for initial assessment of the peripheral lymphatic system, *Radiology* 1989;172:495-502.

**PEDPV-2~Abnormal Uterine Bleeding**

- ✓ Abnormal uterine bleeding imaging indications in pediatric patients are very similar to those for adult patients. See **PV-2~Abnormal Uterine Bleeding** for imaging guidelines.
- ✓ Pediatric-specific imaging considerations include the following:
  - Transvaginal ultrasound is generally not appropriate in patients who have never been sexually active.
  - MRI of the pelvis (CPT<sup>®</sup> 72197) is indicated if ultrasound is inconclusive.

**Reference**

1. Cromer B, Abnormal Uterine Bleeding, *Nelson Textbook of Pediatrics*, eds Kliegman RM, Stanton BF, Schor NF, St. Geme JW III, and Behrman RE, 19<sup>th</sup> edition 2011, pp 688-690.

## **PEDIATRIC PELVIC SIGNS AND SYMPTOMS — FEMALE**

### **PEDPV-3~Pelvic Inflammatory Disease (PID)**

- ✓ Pelvic inflammatory disease imaging indications in pediatric patients are very similar to those for adult patients. See **PV-7~Pelvic Inflammatory Disease (PID)** for imaging guidelines.
- ✓ Pediatric-specific imaging considerations include the following:
  - Transvaginal ultrasound is generally not appropriate in patients who are pre-pubescent or victims of abuse.
  - MRI of the pelvis without and with contrast (CPT<sup>®</sup> 72197) is indicated if US is inconclusive
  - CT Pelvis with contrast (CPT<sup>®</sup> 72193) is indicated if MRI is not readily available.

### **Reference**

1. Burstein GR, Sexually Transmitted Infections, *Nelson Textbook of Pediatrics*, eds Kliegman RM, Stanton BF, Schor NF, St. Geme JW III, and Behrman RE, 19<sup>th</sup> edition 2011, pp 705-714.

**PEDPV-4~Amenorrhea**

- ✓ Girls with primary amenorrhea and any of the following should be evaluated initially with pelvic ultrasound (CPT<sup>®</sup> 76856 or CPT<sup>®</sup> 76857):
  - Normal pubertal development and negative pregnancy test
    - Transvaginal ultrasound (CPT<sup>®</sup> 76830) can also be approved if requested for better view of genitourinary anomalies in sexually active females.
  - Delayed puberty with follicle-stimulating hormone (FSH) or luteinizing hormone (LH) that is elevated for the patient's age and Tanner stage.
- ✓ MRI Pelvis (CPT<sup>®</sup> 72197) +/- Abdomen (CPT<sup>®</sup> 74183) without and with contrast are indicated for the following:
  - Evaluation of congenital anomalies of the uterus and/or urinary system identified on ultrasound (CPT<sup>®</sup> 76700 and CPT<sup>®</sup> 76856) in order to better define complex anatomy.
  - Preoperative planning in girls with distention of the vagina by fluid (hydrocolpos) or blood (hematocolpos) due to congenital vaginal obstruction.

**References**

1. Cromer B, Amenorrhea, *Nelson Textbook of Pediatrics*, eds Kliegman RM, Stanton BF, Schor NF, St. Geme JW III, and Behrman RE, 19<sup>th</sup> edition 2011, pp 686-688.
2. Cohen HL and Raju AD, Amenorrhea and abnormalities of puberty, *Caffey's Pediatric Diagnostic Imaging*, 12<sup>th</sup> edition, ed Brian Coley, Elsevier Saunders, Philadelphia PA, 2013.
3. Behr SC, Courtier JL, and Qayyum A, Imaging of Müllerian Duct Anomalies, *Radiographics* 2012; 32:E233-E250.

## **PEDIATRIC PELVIC SIGNS AND SYMPTOMS — FEMALE**

### **PEDPV-5~Endometriosis**

- ✓ Endometriosis imaging indications in pediatric patients are very similar to those for adult patients. See **PV-6~Endometriosis** for imaging guidelines.
- ✓ Pediatric-specific imaging considerations include:
  - Transvaginal ultrasound is generally not appropriate in patients who are pre-pubescent or have never been sexually active.

#### **Reference**

1. Cromer B, Dysmenorrhea, *Nelson Textbook of Pediatrics*, eds Kliegman RM, Stanton BF, Schor NF, St. Geme JW III, and Behrman RE, 19<sup>th</sup> edition 2011, pp 690-691.

## **PEDIATRIC PELVIC SIGNS AND SYMPTOMS — FEMALE**

### **PEDPV-6~Adenomyosis**

- ✓ Adenomyosis imaging indications in pediatric patients are very similar to those for adult patients. See **PV-4 Adenomyosis** for imaging guidelines.
- ✓ Pediatric-specific imaging considerations include:
  - Transvaginal ultrasound is generally not appropriate in patients who are pre-pubescent or have never been sexually active.

#### **Reference**

1. Cromer B, Dysmenorrhea, *Nelson Textbook of Pediatrics*, eds Kliegman RM, Stanton BF, Schor NF, St. Geme JW III, and Behrman RE, 19<sup>th</sup> edition 2011, pp 690-691.

## **PEDIATRIC PELVIC SIGNS AND SYMPTOMS — FEMALE**

### **PEDPV-7~Suspected Adnexal Mass**

- ✓ Suspected adnexal mass imaging indications in pediatric patients are very similar to those for adult patients. See **PV-5~Suspected Adnexal Mass** for imaging guidelines.
- ✓ Pediatric-specific imaging considerations include the following:
  - Transvaginal ultrasound is generally not appropriate in patients who are pre-pubescent or have never been sexually active.
  - Adnexal masses with a solid component in patients, age  $\geq 15$  years, should be imaged according to guidelines in **PEDONC-10~Pediatric Germ Cell Tumors**.

### **Reference**

1. Kilburn LB, Siegel SE, and Steuber CP, Clinical Assessment and Differential Diagnosis of the Child With Suspected Cancer, *Principles and Practice of Pediatric Oncology*, eds Pizzo PA and Poplack DG, 6<sup>th</sup> edition 2011, pp. 123-137.

## **PEDIATRIC PELVIC SIGNS AND SYMPTOMS — FEMALE**

### **PEDPV-8~Pelvic Pain/Dyspareunia, Female**

- ✓ Pelvic Pain/Dyspareunia imaging indications in pediatric patients are identical to those for adult patients. See **PV-11~Pelvic Pain/Dyspareunia, Female** for imaging guidelines.

## **PEDIATRIC PELVIC SIGNS AND SYMPTOMS — FEMALE**

### **PEDPV-9~Polycystic Ovary Syndrome**

- ✓ Polycystic ovary syndrome imaging indications in pediatric patients are identical to those for adult patients. See **PV-8~Polycystic Ovary Syndrome** for imaging guidelines.

## **PEDIATRIC PELVIC SIGNS AND SYMPTOMS — FEMALE**

### **PEDPV-10~Leiomyomata**

- ✓ Leiomyomata imaging indications in pediatric patients are identical to those for adult patients. See **PV-12~Leiomyomata** for imaging guidelines.

**PEDPV-11~Periurethral Cysts and Urethral Diverticula**

- ✓ Periurethral cysts and urethral diverticula imaging indications in pediatric patients are identical to those for adult patients. See **PV-13~Periurethral Cysts and Urethral Diverticula** for imaging guidelines.

## **PEDIATRIC PELVIC SIGNS AND SYMPTOMS — FEMALE**

### **PEDPV-12~Fetal MRI**

- ✓ Fetal MRI indications in pediatric patients are identical to those for adult patients. See **PV-15~Fetal MRI** for imaging guidelines.

**PEDPV-13~Undescended Testis**

Boys with a history of cryptorchidism (undescended testis) have a several fold risk increase of testicular cancer. It is important to diagnose and treat this condition either by bringing the undescended testis into the scrotum, or resecting the testis.

- ✓ Suspected undescended testis is an indication for urgent referral to a surgical subspecialist who should make the decision on necessary imaging studies.
- ✓ The following imaging is indicated for boys with suspected undescended testis based on a recent detailed physical exam.
  - Scrotal ultrasound (CPT<sup>®</sup> 76870) if concerned for retractile or inguinal testis. If inconclusive,
    - If ultrasound is inconclusive, either of the following may be approved:
      - MRI Abdomen (CPT<sup>®</sup> 74183) and Pelvis (CPT<sup>®</sup> 72197) without and with contrast, however MRI has a high false negative rate.
      - CT Abdomen/Pelvis with contrast (CPT<sup>®</sup> 74177)

**References**

1. Kolon TF, Herndon CDA, Baker LA et al, Evaluation and Treatment of Cryptorchidism: AUA Guideline, Copyright © 2014 American Urological Association Education and Research, Inc. <sup>®</sup>, available at: <https://www.auanet.org/education/guidelines/cryptorchidism.cfm>.
2. Kanaroglou N, To T, Zhu J et al, Inappropriate Use of Ultrasound in Management of Pediatric Cryptorchidism, *Pediatrics* 2015;136:479-486.
3. Elder JS, Disorders and Anomalies of the Scrotal Contents, *Nelson Textbook of Pediatrics*, eds Kliegman RM, Stanton BF, Schor NF, St. Geme JW III, and Behrman RE, 19<sup>th</sup> edition 2011, pp 1858-1864.
4. Poppas DP and Medina C, Undescended Testicle or Cryptorchidism. Cornell University Institute for Pediatric Urology, <https://www.cornellurology.com/clinical-conditions/pediatric-urology/cryptorchidism>, accessed 7/1/2015.
5. Krishnaswami S, Fannesbeck C, Penson D, and McPheeters ML, Magnetic Resonance Imaging for Locating Nonpalpable Undescended Testicles: A Meta-Analysis, *Pediatrics* 2013;131:e1908-e1916.
6. Aggarwal H, Rehfuess A, and Hollowell JG, Management of undescended testis may be improved with educational updates for referring providers, *J Pediatr Urol* 2014;10:707-711.

## **PEDIATRIC PELVIC SIGNS AND SYMPTOMS — MALE**

### **PEDPV-14~Scrotal Pathology**

- ✓ Scrotal pathology imaging indications in pediatric patients are very similar to those for adult patients. See **PV-20~Scrotal Pathology** for imaging guidelines.
- ✓ 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.
- ✓ Pediatric-specific imaging considerations include the following:
  - Scrotal US (CPT® 76870) with Doppler (CPT® 93976) is indicated for concerns of testicular torsion.
  - MRI of the pelvis without (CPT® 72195) or without and with contrast (CPT® 72197) is indicated if ultrasound is inconclusive or insufficient for preoperative planning.

### **References**

1. Hartman MS, Leyendecker JR, Friedman B et al, Acute Onset of Scrotal Pain—Without Trauma, Without Antecedent Mass, *ACR Appropriateness Criteria*®, 2014:1-7.
2. Elder JS, Disorders and Anomalies of the Scrotal Contents, *Nelson Textbook of Pediatrics*, eds Kliegman RM, Stanton BF, Schor NF, St. Geme JW III, and Behrman RE, 19<sup>th</sup> edition 2011, pp 1858-1864.
3. MacDonald A and Burrell S, Infrequently performed studies in nuclear medicine: part 2\*, *J Nucl Med Technol* 2009;37:1-13.
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[http://www.uroweb.org/fileadmin/tx\\_eauguidelines/2009/Full/Paediatric\\_Urology.pdf](http://www.uroweb.org/fileadmin/tx_eauguidelines/2009/Full/Paediatric_Urology.pdf).

## **PEDIATRIC PELVIC SIGNS AND SYMPTOMS — MALE**

### **PEDPV-15~Penis-Soft Tissue Mass**

- ✓ Penile soft tissue masses are very rare in pediatric patients, and imaging indications are identical to those for adult patients. See **PV-18~Penis–Soft Tissue Mass** for imaging guidelines.

## **PEDIATRIC PELVIS IMAGING GUIDELINES (Not Otherwise Covered)**

### **PEDPV-16~Incontinence**

- ✓ Incontinence imaging indications in pediatric patients are very similar to those for adult patients. See **PV-22~Incontinence** for imaging guidelines.
- ✓ Radiopharmaceutical Voiding Cystogram (CPT<sup>®</sup> 78740) with Urinary Bladder Residual study (CPT<sup>®</sup> 78730) is indicated for suspicion of urinary retention and a recent non-diagnostic ultrasound.
- ✓ Pediatric-specific imaging considerations include the following:
  - MRI of the pelvis without and with contrast (CPT<sup>®</sup> 72197) is indicated if ultrasound is inconclusive.
  - CT Pelvis with contrast (CPT<sup>®</sup> 72193) is approvable if MRI is not readily available.

### **References**

1. Elder JS, Voiding Dysfunction, *Nelson Textbook of Pediatrics*, eds Kliegman RM, Stanton BF, Schor NF, St. Geme JW III, and Behrman RE, 19<sup>th</sup> edition 2011, pp 1847-1852.
2. Mandell GA, Eggli DF, Gilday DL, et al. Society of Nuclear Medicine, Procedure Guideline for Radionuclide Cystography in Children, version 3.0 approved January 25, 2003, available at: [http://interactive.snm.org/docs/pg\\_ch32\\_0703.pdf](http://interactive.snm.org/docs/pg_ch32_0703.pdf).
3. Peters CA, Skoog SJ, Arant BS et al, American Urological Association, Management and screening of primary vesicoureteral reflux in children: AUA guideline 2010, available at: <http://www.auanet.org/content/guidelines-and-quality-care/clinical-guidelines.cfm?sub=vur2010>.
4. Feticch J, Colarinha P, Fischer S et al, Paediatric Committee of the European Association of Nuclear Medicine, Guidelines for direct radionuclide cystography in children, available at: [http://www.eanm.org/publications/guidelines/gl\\_paed\\_drc.pdf](http://www.eanm.org/publications/guidelines/gl_paed_drc.pdf).

## **PEDIATRIC PELVIS IMAGING GUIDELINES (Not Otherwise Covered)**

### **PEDPV-17~Patent Urachus**

- ✓ Ultrasound of the pelvis (CPT<sup>®</sup> 76856) is indicated as the initial evaluation for patent urachus.
  - Any of the following are indicated if the ultrasound is inconclusive or insufficient for preoperative planning.
    - MRI Pelvis without contrast (CPT<sup>®</sup> 72195)
    - MRI Pelvis without and with contrast (CPT<sup>®</sup> 72197)
    - CT Pelvis with contrast (CPT<sup>®</sup> 72193)
- ✓ Repeat imaging of asymptomatic patients is not generally necessary, but is indicated for the following:
  - New or worsening symptoms
  - Preoperative planning

### **Practice Note**

The urachus is a “tube” connecting the fetal bladder to the umbilical cord. It is usually obliterated during fetal growth, but if it remains patent, there can be a connection between the bladder and the umbilicus.

### **References**

1. Berrocal T, Lopez-Pereira P, Arjonilla A, and Gutierrez J, Anomalies of the Distal Ureter, Bladder, and Urethra in Children: Embryologic, Radiologic, and Pathologic Features, *Radiographics* 2002; 22:1139-1164.
2. Little DC, Shah SR, St. Peter SD et al, Urachal anomalies in children: the vanishing relevance of the preoperative voiding cystourethrogram, *J Pediatr Surg* 2005; 40:1874-1876.
3. Yiee JH, Garcia N, Baker LA et al, A diagnostic algorithm for urachal anomalies, *J of Pediatr Urol* 2007;3;500-504.
4. Naiditch JA, Radhakrishnan J, and Chin AC, Current diagnosis and management of urachal remnants, *J Pediatr Surg* 2014;48:2148-2152.