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Clinical Examples Used in this Book
AAPC believes it is important in training and testing to reflect as accurate a coding setting as possible to students and examinees. All examples and case studies used in our study guides and exams are actual, redacted office visit and procedure notes donated by AAPC members.

To preserve the real world quality of these notes for educational purposes, we have not re-written or edited the notes to the stringent grammatical or stylistic standards found in the text of our products. Some minor changes have been made for clarity or to correct spelling errors originally in the notes, but essentially they are as one would find them in a coding setting.
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Case 1

Preoperative Diagnosis:
1. History of esophageal cancer
2. Esophageal perforation

Postoperative Diagnosis:
1. History of esophageal cancer
2. Partial thickness esophageal perforation

Operation:
1. Esophagogastroduodenoscopy
2. Ivor-Lewis esophagectomy
3. Feeding jejunostomy

Anesthesia: General endotracheal

Indications for Procedure: Patient is a 67-year-old woman who has history of esophageal cancer. She has been treated with chemotherapy and radiation. Today, after eating, she experienced severe retrosternal pain associated with vomiting of blood. She became febrile and tachycardiac. She was diagnosed with esophageal perforation and was transferred.

Description of Operative Procedure: The patient was taken to the operating room immediately. She was placed under general endotracheal anesthesia. The flexible upper endoscope was introduced in the upper esophagus. The scope was advanced under direct inspection. There was some bruising of the esophageal wall from 30 to 40 cm. There was a stricture at the distal end of the esophagus around 45 cm from the incisor, but I was able to pass a scope through it without any problem. The stomach was entered. There was a lot of bile-stained fluid in the stomach which was aspirated. It was about 700 mL. The stomach was inspected. There was marked ascites. Otherwise, no other lesion. I was unable to pass the scope into the duodenum. The scope was then withdrawn after the stomach was deflated. The finding in the esophagus was noted again on withdrawal. The chest and abdomen were prepared with Chloraprep and draped in the usual sterile fashion with the patient supine on the operating table. The upper midline incision curving to the left side of the umbilicus was performed. A quick inspection of the abdomen showed no gross metastasis. However, there were a number of lymph nodes around the left gastric artery that were matted together. I palpated the gallbladder and did not see any gallstone. I mobilized the stomach. I first divided the gastrocolic omentum, ligating all the branches without damaging the gastroepiploic artery. The left side of the gastrocolic omentum was divided using endoscopic vascular stapler. The gastroesophageal omentum was similarly divided. The left triangular ligament of the liver was divided. The esophageal hiatus was dissected and the abdominal esophagus was encircled with a Penrose drain. The anterior portion of the esophageal hiatus was divided. The gastrohepatic omentum was divided. Then we came to the left gastric artery pedicle. There were a lot of lymph...
nodes and they were matted together. Initially, I tried to divide it using the endoscopic GIA stapler, but it was not successful because of the bulk of the tissue. There was some bleeding and I controlled it with a Satinsky clamp. Finally, the bleeding was controlled by running 3-0 and 4-0 Prolene. Then the Kocherization of the second portion of the duodenum was performed. A pyloroplasty was performed by incising longitudinally through the pylorus and then sewing this defect in a transverse fashion using interrupted 3-0 silk stitches. Then the omentum was used to cover this pyloroplasty incision. Then a jejunostomy was performed by placing a size 16 red rubber catheter through the left upper quadrant into the abdomen, into the antrum and anti-mesenteric border of the proximal jejunum, about 20 cm distal to the jejunoduodenal junction. The red rubber catheter was secured to the jejunum using one stitch of 3-0 Vicryl and then a 4-0 silk pursestring. Then the groin portion of the jejunum was anchored to the abdominal wall using interrupted 4-0 silk. Hemostasis was ascertained. The peritoneal cavity was irrigated with warm Ancef containing saline. The abdominal fascia was closed with #1 looped PDS from the top and from the bottom, and tied in the middle. The patient was then turned to the left lateral decubitus position. The right chest was prepared with Chloraprep and draped in the usual sterile fashion. A right posterolateral thoracotomy was performed. The latissimus dorsi muscle was incised and the serratus retracted anteriorly. The fifth intercostal space was entered. There was about 100 mL of yellowish tepid fluid in the right chest that was sent for various studies. The mediastinum appeared to be somewhat swollen and edematous. I mobilized almost the entire thoracic esophagus. The last group of subcarinal lymph nodes sent for permanent section. After mobilizing the esophagus, I did not see any gross full thickness perforation. The stomach was delivered in the chest. Then the lesser curve of the stomach was prepared for resection. The cardia of the stomach was resected using three firings of the GIA75 mm blue stapler. Then the upper thoracic esophagus was divided using a size 29 mm EEA stapler. The anvil was inserted into the proximal esophagus and then a pursestring was performed of the free edge of the esophagus using running 3-0 Prolene. The most proximal portion of the new lesser curve was inverted using interrupted seromuscular 4-0 silk stitches. Then the lesser curve was opened for a distance of about 2.5 cm and the body of the EEA stapler was inserted with the spike coming out of the stomach near the greater curve. Then the anvil was shunted to the body of the stapler which was then closed and the stapler was fired. I asked the anesthesiologist to pass the nasogastric tube down into the body of the stomach and gastroscopy was closed with running 3-0 Prolene. The right chest was then irrigated with a copious amount of saline and then insufflated with continuous saline. Two On-Q pain pump catheters were threaded in the paraspinal position to traverse two intercostal spaces above and below the level of thoracotomy. A 28 French apical and a 28 French basal chest tube inserted. The right lung was reinflated. The rib cage was closed with four figure-of-eight #2 Vicrys. The serratus anterior latissimus dorsi muscle was closed with running #1 Vicryl and the subcutaneous tissue closed with running 2-0 Vicryl. The skin was closed with stapler. The patient tolerated the procedure well. She was then transferred to the intensive care unit in stable condition.

ICD-10-CM code(s)  

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Case 2

Operative Report

Preoperative Diagnosis: Bladder tumor

Postoperative Diagnosis: Bladder tumor

Procedure: Cystoscopy with transurethral resection of bladder tumor, and left retrograde pyelogram

Anesthesia: General endotracheal

Justification for Procedure: This is a 68-year-old male patient with a history of a right nephroureterectomy who on surveillance cystoscopy was found to have a small tumor near the right ureteral orifice or the site of a former right ureteral orifice. He is here for resection of this mass and left retrograde pyelogram.

Description of Procedure: The patient was identified in the holding area, marked and taken to the operating room. A timeout was taken, and subsequently he was prepped and draped in the usual sterile fashion after receiving general endotracheal anesthesia. Using the 22.5 French cystoscope, the bladder was entered. Findings showed a large prostate, larger than 6 centimeters in length, and a prominent medium lobe was identified, protruding into the bladder. Once in the bladder, the bladder showed a tumor in the area of the right trigone. Once the initial cystoscopy was performed with the 12-degree lens, then the 12 degree lens was removed and the 70 degree lens was inserted. With the 70 degree lens, a good view of the trigone showed the left ureteral orifice in orthotopic position with clear efflux. On the right side, there was a scar from the resection of the right nephroureterectomy and just lateral to that there was approximately a 0.8 centimeters tumor, papillary in appearance. Once the cystoscopy had been performed using an Albarran bridge, a Pollack catheter was introduced into the left ureteral orifice, and a left retrograde pyelogram was shot.

Interpretation of Left Retrograde Pyelogram: Left retrograde pyelogram showed a normal caliber left ureter, nondilated. No filling defects and no extravasation of contrast. As the contrast passed into the renal pelvis it showed a normal renal collecting system. No dilation of the renal calyces on the left side, and there were no filling defects.

Once the retrograde pyelogram was performed, then the cystoscope was removed and the resectoscope sheath was inserted using a visual obturator. Once in place, the visual obturator was removed and the resectoscope was inserted with a 90 degree loop and the 12 degree lens. Using the cut function of the electrocautery, the tumor was resected and the base of this lesion was burned using the coagulation function. Then, the specimen was extracted out of the bladder and sent to pathology for permanent section. Then, the resectoscope was removed and once meticulous hemostasis was obtained, and then a 16 French Foley catheter was inserted into the bladder. The patient was extubated and transferred to the recovery room in stable condition.

Pathology report confirms malignant neoplasm of the bladder.

ICD-10-CM code(s) ________________________________
Case 3

Chief Complaint: Bilateral lower extremity pain, feet numbness, and hand numbness.

History of Present Illness: The patient is a 53-year-old female who presents today for follow-up of a lumbar epidural steroid injection that was performed over a month ago. The patient states that she got approximately one month’s worth of relief with the injection; however, her pain has returned. She rates it as a 9 to a 10/10 today. It starts in her low back with bilateral leg pain. She also states that the entire feet are numb. She is now complaining of new onset of bilateral hand numbness. No complaints of bowel or bladder dysfunction. She takes Vicodin as needed from her primary care physician. She takes approximately 2 to 3 per day.

Physical Examination: She is well developed, well nourished in no apparent distress, awake, alert and oriented times 3. Vital signs reveal Pulse 81, respirations 18, blood pressure 149/80. On musculoskeletal exam she has 5/5 strength in the lower extremities. Sensation is decreased to light touch over the lateral aspects of the calves and dorsal feet bilaterally. She has decreased sensation to a 128 hertz tuning fork in the feet bilaterally, intact in the wrist. +2 dorsalis pedis pulses. She has a well healed insertion site from previous epidural needle, non-tender to palpation over the lumbar paraspinal muscles, spinous processes or SI joints. She has positive Phalen’s sign at the wrists bilaterally at approximately 20 seconds.

Impression:
1. Lumbar spinal stenosis
2. Neurogenic claudication
3. Bilateral hand numbness

ICD-10-CM code(s)

Case 4

Operative Report:
Preoperative Diagnosis: Wound infection after kidney transplant
Postoperative Diagnosis: Wound infection after kidney transplant
Procedure: Debridement of wound infection
Anesthesia: General endotracheal

Justification for Procedure: The patient is a 76-year-old woman with a history of end-stage renal disease who is status post renal transplant in the last year. Her postoperative course was complicated by multiple issues including a mycobacterial wound infection. This has been managed as an outpatient in the clinic with both antibiotics and local debridements in the clinic. The wound is healing. However, it has never completely resolved.

Description of the Procedure: The patient was identified in the holding area. She was brought into the operating suite. She was placed supine on the table after adequate general anesthesia was achieved. A Foley catheter was placed. The patient was prepped and draped in the standard surgical fashion. The abdomen was palpated and an area of firm tissue was felt at the incision. Also of note, the incision
Coding Cases

was slightly opened with some firm granulomatous tissue that was erythematous. There was no active
drainage. First, using the cutting current of the Bovie electrocautery, we incised through the areas of
the old incision. This incision was carried out to the subcutaneous tissue to the layer of the fascia. As
we progressed through the incision, there were multiple discrete abscesses. These were probed with
a right angle and with a pair of tonsil forceps. Each tract was explored and incised with the Bovie
electrocautery. Ultimately, we took the incision down to the level of the fascia. The abscesses did not
extend into the fascia or below the fascia. We sent multiple culture swabs. There were multiple small
pockets of pus. These were also sent for culture. At this point, we identified all of the infected tissue
and began to remove it carefully using electrocautery and careful dissection. We also identified the
skin edges that appeared infected and incised these as well. Ultimately, we spent approximately 2
1/2 hours debriding the wound. Including the procedure and all of the skin involved, the skin and
subcutaneous tissue had been fully resected. This was done all the way down to the level of the fascia.
Hemostasis was obtained using the electrocautery as well. Once we were assured that all of the abscess
pockets had been opened and incised and that all of the infected and dead tissue had been removed,
we irrigated the wound first with normal saline and then with antibiotic irrigant. Next, we packed the
wound using a saline-soaked kerlix. We then covered this with dry 4x4’s and then foam tape.

ICD-10-CM code(s) ____________________________________________

Case 5

Chief Complaint: Presents for recheck of pain in left gluteal region and front thigh

History of Present Illness: He was originally seen with symptoms of severe pain in the left gluteal
region and front thigh. He said he was unable to lie on side. Classic “pins and needles” pain that
sometimes burned. Symptoms affected down legs and feet. There is no loss of bowel or bladder
function. EMG and X-ray: showed decreased nerve conduction velocity in left lower extremity. Patient
today’s states he is much improved after combination of rest, oxycodone, and NSAIDs initiated.

Physical Examination: Neuro and musculoskeletal exam both show improvement.

Impression: Lumbar radiculitis with improvement in symptoms.

ICD-10-CM code(s) ____________________________________________

Case 6

Chief Complaint: Patient presents for test results.

History of Present Illness: Beth was first seen for right wrist pain. She is an avid bicyclist and
began to notice decreased sensation in right ring and little fingers that progressed in to a burning
sensation. Now with decreased sensation.

Physical Examination: Shows positive Tinel’s sign on percussion over the ulnar nerve at the wrist.
Positive Phalen’s test with paraesthesiae in the right ring and little finger. Patient was sent for MRI
at last visit for definitive diagnosis. Informed patient, that test confirmed ulnar nerve lesion.

Impression: Right ulnar nerve lesion

ICD-10-CM code(s) ____________________________________________
Case 7

Preoperative Diagnosis: Lumbago

Postoperative Diagnosis: Lumbago

Procedure: Bilateral lumbar medial branch block under fluoroscopy for the L3, L4, L5 medial branches for the L4-L5, L5-S1 facets for diagnostic and therapeutic purposes.

Description of the Procedure: The patient was placed in the prone position on the fluoroscopy table and automated blood pressure cuff and pulse oximeter applied. The skin entry points for approaching the anatomic target points of the bilateral segmental medial branches or dorsal ramus of L3, L4, and L5 were identified with a 22.5 degree from perpendicular lateral oblique fluoroscopy view and marked. Following thorough Chloraprep preparation of the skin and draping and 1 percent lidocaine infiltration of the skin entry points and subcutaneous tissues, a 22 gauge 6” spinal needle was placed under fluoroscopic guidance down on the target point for each respective segmental medial branch or dorsal ramus. At each point 1 ml consisting of 0.5 percent bupivacaine and Depo-Medrol was injected. A total of 80 mg of Depo-Medrol was divided between all six spots.

The patient’s vital signs were stable throughout the procedure and were recorded in nursing records. Follow up plans and appointments were discussed with the patient.

The patient was instructed to keep careful note of how the usual pain was modified by these injections. Specifically, the patient was asked to keep a pain diary for the next 24 hours using a numeric pain scale of 0-10 and report these results at the follow up visit. Post procedure instructions were given as documented in the nursing records and the patient was discharged in the care of an identified driver.

Secondary to the patient’s size, rhizotomy may be difficult; therefore, we did add corticosteroids. I hope it gives her some longer lasting relief than just the local anesthetics. That is why we did not do purely diagnostic blocks. She will follow up with us in one month. She will call us tomorrow and let us know how she did after the diagnostic blocks.

ICD-10-CM code(s) ____________________________________________

Case 8

Preoperative Diagnosis: Cervical spine stenosis, myelopathy, cervical kyphosis.

Postoperative Diagnosis: Cervical spine stenosis, myelopathy, cervical kyphosis.

Operative Procedure: Partial C2, C3, C4, C5, and partial C6 laminectomy, and posterior segmental fusion C2 to C6 with vertex instrumentation, left C4–C5 foraminotomy and vertebral autograft, all with intraoperative SSEPs, EMGs, MEPs and intraoperative fluoroscopy.

Anesthesia: General.

Description of Procedure: The patient was taken to the operating room and underwent intravenous anesthetic and orotracheal intubation. His head was placed in a three pin Mayfield head rest. He was turned in the prone position on the four poster frame. All pressure points were carefully padded. The posterior cervical region was shaved, prepped and draped in the usual fashion. The patient received pre-incisional intravenous antibiotics.
A midline incision was made between C2 and C7 through skin and subcutaneous tissue, and the paraspinal muscles were dissected free of the spinous process, lamina and facet of C2 through C6 inclusively.

We proceeded to do a partial laminectomy involving the inferior half of C2, C3, C4, C5, and the top of C6. This was done with the double action rongeurs, Midas REX and the 2 millimeter Kerrison punch.

We then proceeded to do a left C4–C5 foraminotomy, again with the Midas REX and the 2 and 1 millimeter punch. We then brought it down and steriley draped the fluoroscope, and placed bilateral screws at C2, C3, C4, C5, and C6 from the vertex system.

We then decorticated the remaining facet joints, placed the vertebral autograft over these areas. We selected a rod which we placed over the heads of the screws and final tightened. A hemovac drain was placed. The wound was irrigated. The muscle was closed with 0 Vicryl. The fascia was closed with 0 Vicryl. The subcutaneous tissue was closed with 2-0 Vicryl and the skin was closed with staples.

ICD-10-CM code(s) .............................................................

Case 9
Preoperative Diagnosis: Myofascial pain syndrome
Postoperative Diagnosis: Myofascial pain syndrome
Operation Performed: Trigger point injections between the shoulder blades three points
Anesthesia: Local
Indications: This is a 70-year-old male who is known to us at the Pain Clinic. The patient was evaluated and diagnosed with myofascial pain syndrome. The patient is scheduled for the above mentioned procedure.

Description of Procedure: The patient was identified in the Pain Clinic. Risks and benefits of the procedure explained to the patient and informed consent was obtained. The patient was then put in the sitting position. The back was prepped and draped in the usual sterile standard fashion using Betadine solution. There were three points identified at the thoracic spine between the shoulder blades. Each point was injected with 1 cc of 0.25 percent Marcaine with 10 mg Kenalog. At the end of the procedure all of the needles were collected. Skin punctures covered with Band-Aids. The patient was then sent home with instructions after meeting discharge criteria.

ICD-10-CM code(s) .............................................................
Case 10

Preoperative Diagnoses:
1. Intrauterine pregnancy at 40 plus 1 weeks.
2. History of previous cesarean section.
3. Failure to progress.

Postoperative Diagnoses:
1. Intrauterine pregnancy at 40 plus 1 weeks.
2. History of previous cesarean section.
3. Failure to progress.

Procedure Performed: Repeat low transverse cesarean section via Pfannenstiel

Anesthesia: Spinal.

Operative Findings: Male infant in cephalic presentation with weight of 7 pounds 2 ounces. Apgars 8 and 9.

Infant discharged to nursery. Fluid was clear. Also noted were dense adhesions of the left rectus muscle to the anterior uterus.

Indications for Procedure: The patient is a 32-year-old G4, P2-0-1l-2 who presented with contractions. She did have history of previous cesarean section and desired a TOLAC. She did progress to 6–7 cm. However, from there she failed to progress and given her history of previous cesarean section, she was not appropriate candidate for augmentation. The patient also requested cesarean section at this time.

Description of Procedure: The patient was taken to the operating room where she was placed in the dorsal supine position with a leftward tilt. She was prepped and draped in the usual sterile fashion. Pfannenstiel skin incision was made and carried through to the rectus muscles. The fascia was densely scarred. Fascia was incised sharply. Rectus muscles were dissected off the fascia. At this time, entry into the peritoneum was made bluntly. There was a great deal of dense adhesions from the left rectus muscle to the anterior uterus. This was partially taken down. Bladder flap was made both bluntly and sharply. Bladder blade was inserted and uterine incision was made. No meconium noted. Infant's vertex was delivered to the incision without difficulty. Remainder of the infant was delivered. Cord was clamped and cut and the infant was handed off to the awaiting Pediatric team. Placenta was delivered spontaneously. Secondary to adhesions, the uterus was not able to be exteriorized. It was cleared off all clot and debris. The uterus was closed in 1 layer using 0 Monocryl in running locked suture. Secondary to the dense adhesions and proximity to the bladder, the second layer was unable to be placed. Hemostasis was noted. Urine at this time was noted to be clear. The fascia was closed with 0 Vicryl. This was after hemostasis was assured on the fascial edges as well as the rectus muscles. Skin was closed with staples.

There were 2 horizontal mattress sutures placed into the subcutaneous tissue. The patient tolerated the procedure well. Sponge, lap and needle counts correct x2. She was taken to recovery room in stable condition.

ICD-10-CM code(s) ________________________________________________
Case 11

Indications:
1. Abnormal stress test
2. Atrial fibrillation
3. Congestive heart failure

Clinical Summary: Patient is a 60-year-old gentleman with no previously known history of coronary artery disease but multiple other medical problems including hypertension, hyperlipidemia, diabetes, chronic atrial fibrillation and congestive heart failure who was recently seen in follow-up. He underwent a stress Cardiolite study, which was suboptimal because of poor exercise capacity. The patient also had markedly low LV function with EF of 28 percent. He is scheduled for elective cardiac catheterization.

Procedures:
1. Right and left heart catheterization
2. Selective coronary angiography
3. Left ventriculography

Catheters used:
1. 5Fr JL4 catheter
2. 5Fr JR4 catheter
3. 5Fr pigtail catheter

Technical Summary: Cardiac catheterization was performed by standard right femoral percutaneous approach using 5Fr arterial sheath and 7Fr venous sheath. Right heart catheterization was performed using 7Fr pulmonary capillary wedge catheter. Coronary angiography was performed using 5Fr JL4 and 5Fr JR4 catheters. Left ventriculography was performed using 5Fr pigtail catheter. At the end of the procedure, all catheters and sheaths were removed. Hemostasis was obtained with good distal pulses. No complications encountered.

Coronary Angiography:
1. Left main is normal.
2. Left anterior descending coronary artery is somewhat short-caliber artery and does not reach the apex. There is 40–50 percent ostial stenosis. First diagonal branch is a large-caliber artery, normal. Second diagonal branch is a small-caliber artery, normal.
3. Intermediate ramus is a medium-caliber artery, normal.
4. Left circumflex coronary artery has somewhat of a tortuous bend at its origin making interpretation of LV stenosis somewhat difficult. However, it appears to be normal. Obtuse marginal branches are normal.

Right coronary artery is a very large-caliber artery, dominant. It supplies the large area of myocardium, almost about 60–70 percent of the total myocardium. There is 20 percent stenosis in the midportion. PDA wraps around the apex and supplies distal left and apex of the left ventricle also, normal. PLV branch also is a large-caliber artery with multiple branches supplying the posterior wall.
Left ventriculography: LV was opacified in the RAO 30° projection using 30 cc of dye at 10 cc per second. There is global hypokinesis. Overall systolic function is estimated at 30 percent. LVEDP is 8 mm Hg. Left ventricular systolic pressure is 123. Aortic pressure on pullback is 125/82 for a mean of 99. No gradient across the aortic valve.

**Hemodynamic Data:**
1. Right atrial pressure is 8/8 for a mean of 7.
2. Right ventricular pressure is 27.
3. Pulmonary artery pressure is 35/8 for a mean of 18.
4. Pulmonary capillary wedge pressure is 12/12 for a mean of 9.
5. LVEDP is 8 mm Hg.
6. Cardiac output and cardiac index by Fick method is 6.4 and 2.7 respectively.

**Summary:**
2. LV systolic dysfunction with EF of 30 percent.
3. Normal right heart pressures.

**Recommendation:**
2. Evaluation for AICD placement for primary prevention of sudden cardiac death.

**ICD-10-CM code(s)**

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**Case 12**

**Subjective:** This patient is a 23-year-old male in excellent health, was suddenly seized in the middle of the night by a severe attack of "indigestion" accompanied by cramp-like pains above and around the umbilicus. He has no appetite and some nausea.

**Objective:** Exam room patient lying on his back with his right thigh flexed. Slightly increased temp of 99.60 F. The patient now localizes his pain to the lower right quadrant. On palpation of the abdomen, marked localized tenderness and some rigidity in the right iliac fossa are noted. Pressure with the fingertip shows the area of greatest tenderness is located near McBurney’s point. Psoas sign. Labs: elevated C-reactive protein level, elevated WBC count, and neutrophilia. CT scan confirmed acute appendicitis with localized peritonitis. The patient is taken to the OR for an appendectomy.

**ICD-10-CM code(s)**
Case 13

Reason for Procedure: Chronic cholecystitis without cholelithiasis

Procedure: Laparoscopic cholecystectomy

Brief Description: The patient was brought to the OR and anesthesia was induced. The abdomen was prepped and draped. Incision was made below the umbilicus and camera port was placed into the peritoneal cavity under direct visualization. Once insufflation was adequate, additional ports were placed. Upon visualization, it is noted that the gallbladder appears moderately edematous. The gallbladder was grasped and retracted. The cystic duct and cystic artery were circumferentially dissected and a critical view was obtained. The cystic duct and cystic artery were then doubly clipped and divided and the gallbladder was dissected off the liver bed with electrocautery and placed in an endo catch bag. The gallbladder fossa and clips were examined and looked good with no evidence of bleeding or bile leak. The ports were removed under direct vision with good hemostasis. The gallbladder in its endo catch bag was removed. The ports were closed. The patient tolerated the procedure well.

ICD-10-CM code(s) ____________________________

Case 14

Subjective: This is a 76-year-old patient seen for evaluation for right L4 selective nerve root block. Her chief complaint is right lower extremity pain and back pain. She has grade 2 L4 anterior spondylolisthesis without significant canal stenosis confirmed by outside MRI. She is being sent for an L4 selective nerve root block to rule out whether or not she would be a candidate for a TLIF at L4–5. The patient complains of pain along the anterior tibia and the right hip, which is burning, shooting, aching and constant in nature. Worse with standing and walking. She can walk about a block before her symptoms become debilitating.

Objective: Physical exam reveals mild lumbar paraspinous hypertonicity, which appears to be more prominent on the right. She has hypoactive, but elicitable upper and lower extremity reflexes; though no Achilles reflexes can be elicited.

Assessment: Spondylolisthesis, lumbar region, grade 2

ICD-10-CM code(s) ____________________________

Case 15

Subjective: Patient presents for anesthesia evaluation for anterior cervical decompression and fusion. Patient has C4–C5 spinal stenosis. Her symptoms of right greater than left upper extremity pain, weakness, paresthesias had been worsening after an incident when she thought she had exacerbated her conditions while lifting several objects. Patient filled out the pre-screening questionnaire and has no comorbid conditions, no prior hospitalizations, other than 2 previous vaginal deliveries. She denies chest pain, ankle swelling, palpitations, or recurrent infections. Patient does not smoke.
Objective: Upon exam, airways Class 1. Patient is ASA Class 1. From an anesthesia standpoint, patient is clear for surgery.

Assessment: C4–C5 spinal stenosis

ICD-10-CM code(s) __________________________________________

Case 16

Subjective: This patient is a 46-year-old male who presents today for follow up for his back pain. He has been experiencing the pain for more than 6 months. Diagnostic study up to this point has been negative. Patient states the pain is over his entire back, is constant and debilitating. Upon questioning, though, it does not really seem to affect his activities of daily living. He states that he has garnered a lot of attention from his family due to his pain.

Objective: Waddell signs are positive on examination. Prior X-rays and MRIs were reviewed and all negative.

Assessment: Chronic pain syndrome

ICD-10-CM code(s) __________________________________________

Case 17

Indications for Procedure: Patient presents for bilateral L5–S1 facet joint injections for L5–S1 disc degeneration. Informed written consent was obtained.

Description: The patient was placed in the prone position and the lumbar spine was prepped and draped in a sterile fashion. The right L5–S1 facet joint was identified under fluoroscopic imaging. The skin, underlying muscle, and fascial tissue were infiltrated and anesthetized with 5 cc of 1 percent Lidocaine. A 22-gauge spinal needle was then inserted under fluoroscopic guidance through the posterior joint capsule and into the joint. A 5 cc solution consisting of 6 mg of preservative-free Celestone, 2 cc of preservative-free 1 percent Lidocaine and 1 cc of preservative-free Marcaine was then injected into the right L5–S1 facet joint without complication. The same procedure was performed at the left L5–S1 facet joint without complications. The patient tolerated the procedure well and was observed in the PAC unit for approximately 30 minutes. The patient was then discharged home in stable condition.

ICD-10-CM code(s) __________________________________________
Case 18

**Subjective:** Patient presents with complaints of muscle soreness. States, “I have the most ridiculous tight muscles in my legs that I just can’t seem to shake.” Patient states that she does Insanity workouts and has no problem, but she did a triathlon 4 or 5 weeks ago and ever since then her muscles are “fried.” She has lessened her workout routine due to the myalgia. She is feeling better, but not fully recovered.

**Objective:** Exam reveals general soreness, but no major area intense pain. Patient able to ambulate well.

**Assessment:** Myalgia

ICD-10-CM code(s) ________________________________

Case 19

**Subjective:** This patient is a 73-year-old caucasian male who initially presented with complaints of bilateral constant hip pain. The pain was exacerbated by climbing stairs and in the morning after sleeping. He denied any history of trauma. He was treated symptomatically with acetaminophen with only some relief. He continued to complain intermittently of pain in his hips, and occasionally even in his elbows during the next 8 months.

**Objective:** Plain pelvic films showed no fracture or dislocation of the hips. Elbow films also showed no acute injury. MRA was performed on the lower extremities and showed abnormal enhancement in the trochanteric bursa of both femurs consistent with bursitis.

**Assessment:** Bursitis, bilateral hips

ICD-10-CM code(s) ________________________________

Case 20

**Subjective:** This patient is a 34-year-old male who had injured his left knee playing tennis. Although the injury to the knee was relatively minor, the resulting neurologic pain over a nine-month period was disabling and often kept the patient bedridden for days with shooting pain in the knee. Patient experiences myoclonic-type jerks of the legs at night. He is very frustrated.

**Objective:** On exam, there is restriction of joint movement with the left knee, hair loss, joint tenderness, edema, and soft tissue contracture. MRI positive for patchy thinning. Diagnosis of RSD of left lower leg was made. Prednisone trial was not successful.

**Assessment:** CRPS I

ICD-10-CM code(s) ________________________________
Case 21

**Indications for Procedure:** Patient presents for transforaminal epidural steroid blocks to left L4–5 and left L5–S1 under fluoro for left sciatica.

**Description:** After administration of Versed 2 mg IV, the L5 pedicle, the superior articular process of the L5-S1 facet, and the “neck of the scotty dog” were all visualized using the C-arm. After adequate local anesthesia, spinal needle was inserted using down-the-barrel-of-the-needle technique, advanced into the posterior aspect of the foramen, and then advanced anteriorly toward the 6 o’clock position on the pedicle. No paresthesias were noted. Depo-Medrol® 80 mg plus 1 cc of 4 percent preservative-free lidocaine was injected into the L5 nerve root. The needle was flushed and removed. I then went up to the L4–5 level, and using a similar technique, injected the patient transforaminally at the L4-5 level. Depo-Medrol® 80 mg plus 1 cc of 4 percent preservative-free lidocaine was injected at the L4–5 level just as at the L5–S1 level.

**ICD-10-CM code(s)**

_________________________________________

Case 22

**Indications for Procedure:** This patient is a 47-year old female presents for a repeat cervical epidural corticosteroid injection with fluoro. She suffers from degeneration of cervical disc at C6-7 level.

**Description:** The patient was placed prone on the fluoroscopy table and the cervical area was prepped with a Betadine solution and draped in the usual sterile fashion. Under fluoro, the C6-C7 interspace cervical vertebrae was identified in the AP position and skin infiltrated with 1 cc of 1 percent lidocaine. An 18-gauge Tuohy needle was used to enter the epidural space with loss of resistance technique under fluoroscopic guidance. No heme, CSF, or paresthesias were noted during needle placement. Total volume of 5 cc of 80 mg methylprednisolone and preservative free saline were injected with ease. Motor function was monitored by having patient move toes. The needle was removed without difficulty.

**ICD-10-CM code(s)**

_________________________________________

Case 23

The anesthesiologist is called to the recovery room because a patient reports difficulty breathing. Her O2 saturation is 87 percent. The patient had tonsillectomy 2 hours ago. She has now developed hypoxemia. Chest X-ray shows fluffy infiltrates. She has a productive cough with watery sputum. The patient is diagnosed with negative pressure pulmonary edema. The patient will be admitted overnight for observation.

**Assessment:** Negative pressure pulmonary edema

**ICD-10-CM code(s)**

_________________________________________
Case 24

A 80-year-old man present with a diagnosis of an 7 cm abdominal aortic aneurysm (AAA) requiring repair. The patient’s past medical history includes diabetes mellitus, hypertension, benign prostatic hyperplasia, and smokes a pack of cigarettes a day for the past 60 years. He has no known drug allergies. His medication list includes metoprolol, lisinopril, and lovastatin.

The patient is 5 ft 9 in tall and weighs 200 lbs. His neck is supple, his mouth opening is more than three fingers in breadths, and his airway is classed as a Mallampati 1. His lungs are clear and his heart rhythm is slow but without murmurs.

Given the age of the patient and the anatomy of the aneurysm, the surgeon has made the decision to schedule the placement of an endovascular aorto-bifemoral stent. An open repair of the patient’s abdominal aortic aneurysm will be performed if the endovascular repair cannot be performed successfully.

**Assessment:** Abdominal aortic aneurysm

**ICD-10-CM code(s)**

Case 25

An 85-year-old woman slipped on the wet bathroom floor yesterday and fractured her left hip. She is scheduled for an open reduction and internal fixation of the fracture. Her past medical history includes congestive heart failure and hypertension. On interview, she is noted to be mildly confused. She is oriented to time and place, but she thinks the year is 1970. The patient’s medications include metoprolol, aspirin, and lisinopril. The patient has no known drug allergies.

**Examination:** Elderly cachectic female, 5 ft 3 in, weight 135 lbs. Her vital signs include a BP 134/65 mm Hg, heart rate of 68, and respiratory rate of 16 with oxygen saturation of 97 percent on room air. She has mild limitation of mouth opening, and her airway is classed as a Mallampati 1. Her heart is regular and slow, and her lungs are clear.

**Assessment:** Fracture left hip

**ICD-10-CM code(s)**

Case 26

A 35-year-old woman presents for weight loss surgery. She is 5 ft 2 in and 250 lb, with a BMI of 45.7. She has tried for many years to lose weight through diet and exercise without success. She has a history of hypertension, type II diabetes mellitus, and gastroesophageal reflux disease. Her medications include lisinopril, omeprazole, and metformin. She has no known allergies.

**Assessment:** Morbid Obesity

**ICD-10-CM code(s)**
Case 27

**Preoperative Diagnosis:** History of bladder carcinoma

**Postoperative Diagnosis:** No recurrent bladder tumor

**Operative Procedure:** Review cystourethroscopy

**Anesthesia:** IV sedation

Indications: This is a 69-year-old male patient who is known to me in the past. The patient has a history of radical prostatectomy for prostate cancer and also had bilateral tumor for which he has been coming for review cystoscopy. The last review cystoscopy in October did not reveal any bladder tumor. The patient is now here for further review cystoscopy and he agreed to undergo the procedure and signed the consent form.

**Operative Procedure:** The patient was identified in the operating room. He underwent intravenous sedation. His genitalia were thoroughly cleaned with Betadine solution and he was draped. We instilled Lidocaine into his urethra and inserted a 22 French cystourethroscope and started inspecting. There was no evidence of any recurrent bladder tumor seen. There is slightly congested bladder mucosa, otherwise no significant findings were seen. The cystourethroscope was then removed after emptying the bladder. Rectal examination revealed no anastomotic thickening at the prostatectomy site. The patient tolerated the procedure well and was taken to the recovery room in stable condition. The patient denied having any pain or discomfort during the entire procedure.

**Further Treatment Plan:** The patient will be seen back in the office in five months’ time, for further review cystoscopy in six months’ time.

ICD-10-CM code(s) ____________________________________________

Case 28

**Preoperative Diagnosis:** Sleep apnea and recurrent chronic tonsillitis

**Postoperative Diagnosis:** Sleep apnea and recurrent chronic tonsillitis

**Name of Procedure:** Tonsillectomy, uvulopalatopharyngoplasty

**Findings:** Significant redundancy of the soft palate, uvula and hypertrophic tonsils with enlarged tongue.

**Technique:** The 38-year-old patient was brought to the room and placed in the supine position on the table. Anesthesia was administered via endotracheal tube. After the patient was adequately anesthetized, a gag was inserted into the oral cavity and suspended from a stand. A catheter was used to reflect the soft palate. Using Bovie dissection tonsils were dissected free from the underlying tonsillar fossa. Any prominent blood vessels were cauterizing during the removal of the tonsils. After this several Valsalva maneuvers were performed. The oral cavity was relaxed, then the mouth gag was reopened, and again there were no signs of active bleeding. At this point, the inferior margin of the soft palate and uvula were resected and the anterior and posterior tonsillar pillars were sutured together using 3-0 Vicryl. This improved the oropharyngeal air space but the tongue was still redundant and may continue to contribute to a narrowed oropharyngeal air
space. Again, there were no signs of active bleeding. Marcaine 0.25 percent was injected into the tonsillar fossa and sphenopalatine region. At this point, the procedure was terminated. The patient was awoke from Anesthesia, transferred from the operating room to the recovery room in stable condition without complications.

ICD-10-CM code(s) __________________________________________

Case 29
Operative Report
Preoperative Diagnoses: Plantar Fascitis L foot, Heel spur syndrome L foot

Postoperative Diagnoses: Plantar Fascitis L foot, Heel spur syndrome L foot

Procedures Performed: Plantar fasciitomy, Heel spur resection

Anesthesia: IV MAC with local. Pneumatic ankle tourniquet at 250 mm Hg.

Estimated Blood Loss: None.

Materials: 4-0 nylon suture.

Injectables: A total of 28 cc of 0.5 percent Marcaine plain and 1 cc of dexamethasone phosphate postoperatively.

Specimen: None.

Complications: None.

Description of the Procedure: The patient was brought into the operating room and placed on the operating room table in the supine position with intravenous sedation. A well-padded tourniquet was placed around the patient’s left ankle. Next, 22 cc of 0.5 percent Marcaine plain was used for local anesthesia injecting in the posterior ankle block. Next, after achieving local anesthesia, the left foot was scrubbed, prepped, and draped in the usual aseptic technique. Next, the left foot using Esmarch bandage was exsanguinated and the pneumatic ankle tourniquet was raised to 250 mm Hg which throughout the duration of the case. At this time, a skin marker was used to locate the inferior calcaneal tuberosity where symptoms were located. Following location of the inferior calcaneal tuberosity, a 2 cm linear incision was made on radial aspect of the foot using # 15 blade being careful to avoid all neurovascular structures in the process. The incision was carefully deepened down through blunt dissection with a curved hemostat and inferior and superior aspect of the plantar fascia was found and isolated using a freer elevator. Once this plane was created and the plantar fascia was isolated both superiorly and inferiorly using a curved Mayo scissors, the plantar fascia was transected in its entirety from medial to lateral. The entire plantar fascia was removed from its origin. At this time, C-arm fluoroscopy was used to locate a medial calcaneal spur, which was removed using a rasp until it was completely removed. This was confirmed by C-arm fluoroscopy. At this time, the area was copiously flushed with 0.9 percent normal saline with bacitracin and the area was closed using 4-0 nylon suture in a horizontal mattress technique and a simple interrupted technique. A dressing consisting of Adaptic, 4 x 4’s, and Webril was placed in a mildly compressive manner followed by Coban. At this time, a pneumatic ankle tourniquet was released and warmth and perfusion returned to the patient’s left foot and ankle with the
capillary refill time of less than three seconds to all five digits. The patient tolerated the anesthesia and procedure well and was brought from operating room into the recovery room with vital signs stable and vascular status intact to all digits of the left foot. The patient was discharged home with the oral and written instructions and will follow up as previously scheduled.

ICD-10-CM code(s) ________________________________

Case 30

Preoperative Diagnosis: Right bronchopleural fistula and ventilator dependency

Postoperative Diagnosis: Right bronchopleural fistula and ventilator dependency

Procedures: 1. Right thoracotomy with closure of bronchopleural fistula utilizing intercostal muscle flap and bovine pericardial pledgets. 2. Tracheostomy using an 8 French Shiley tube

Blood Loss: Minimal.

Findings at Operation: Horribly friable lung tissue.

Indication for Procedure: A 70-year-old white female smoker who underwent a right lower lobectomy for lung cancer. She developed bronchopleural fistula. This was closed 6 days ago. The patient is planning to start chemotherapy once she has healed from this surgery. She has been in respiratory failure on the ventilator on positive pressure in the bronchopleural fistula has recurred. She therefore needs repair of the bronchopleural fistula as well as tracheostomy and feeding tube placement.

Procedure: Patient was brought to operating room, placed in the supine position, placed under adequate general tracheal anesthesia. Using a two lumen endotracheal tube she was turned to the left lateral decubitus position. The right chest was prepped and draped in the usual sterile fashion. Explored through the lateral thoracotomy entering the fifth intercostal space. Intercostal muscle pedicle flap was taken down based on the posterior circulation. The lung was examined. The lung was very friable and mushy especially where I had repaired lung parenchyma with pericardial pledgeted sutures. They had all torn through. The lung was very consolidated and diseased. The area of the bronchial stump which I had closed with pledgeted sutures on the prior exploration had no air leak. Using the muscle flap to place over the diseased lung and having to use blunt liver needles I was able to close most of the air leaks with the intercostal muscle flap and liver chromic suture. I did use bovine pericardial pledgets so that they would not tear through the lung as felt pledgets would. I left her with a very small air leak which could not be closed in the lung parenchyma as I felt that we would tear more of the diseased lung. A 32 French chest tubes were placed. The lung was re-expanded. She has good tidal volumes. The ribs were approximated using heavy Vicryl sutures. Also chest wall, subcutaneous tissue and skin were closed using Vicryl sutures, Monocryl suture and then running nylon suture. Sterile dressings were placed. Patient turned to the supine position. Her neck was prepped and draped in the usual sterile fashion. A small incision was made over the sternal notch, carried down to the trachea. There was quite a bit of scarring from prior radiation and thyroidectomy. The trachea was identified. Two stay sutures using 2-0 Prolene suture were placed. A longitudinal incision was made in the anterior tracheal wall. The trachea was dilated and an 8 Shiley cuffed no- fenestrated tracheostomy tube was placed as the ET tube was removed. It was secured with nylon suture. The patient ventilated well. The skin
around the tracheostomy was closed with 3-0 nylon suture. Dressings were placed. Patient turned over to Anesthesia so that Dr. Jones could performed feeding tube placement.

ICD-10-CM code(s) ________________________________

Case 31

Preoperative Diagnosis: 1. Menorrhagia 2. Chronic pelvic pain

Postoperative Diagnosis: 1. Menorrhagia 2. Chronic pelvic pain


Anesthesia: General endotracheal

Indications for the Procedure: This is a 29-ycar-old, GRAVIDA 3 PARA 3, white female with a history of menorrhagia and chronic pelvic pain. She has failed medical management. The patient presents for scheduled elective surgery

Operative Findings: Examination under anesthesia demonstrated an eight weeks’ size, mobile, and antverted uterus with no adnexal masses. Hysteroscopic findings included normal tubal ostia bilaterally with normal endometrium and good char throughout following the ablation procedure. Laparoscopic findings included normal appendix, normal liver, normal uterus, and normal bilateral ovaries. However, there were some minimal adhesions of the anterior uterus consistent with the patient’s previous cesarean delivery. The bilateral ovarian fossae were normal. There was some left uterosacral nodularity and nodules in the posterior cul-de-sac on the left.

Procedure in Detail: After obtaining informed consent, the patient was taken to the operating room where she was placed under general anesthesia. The patient’s legs were then placed in Allen stirrups. Examination under anesthesia was performed with the findings as noted above. The patient’s abdomen and perineum were then prepped and draped in the normal sterile fashion. A red rubber catheter was placed into the patient’s bladder. A sterile speculum was placed into the patient’s vagina. The anterior lip of the cervix was grasped with a single-tooth tenaculum. Then, 4 mL of 0.25 percent Marcaine with epinephrine was injected at the 5 and 7 o’clock positions. An additional 2 mL was injected at the 2 and 10 o’clock positions to complete the paracervical block. The uterus was then gently sounded to 9 cm. The cervix was gently dilated with Hanks dilators of advancing sizes. The diagnostic hysteroscope was introduced into the uterine cavity with normal saline running. Survey of the uterine cavity was performed with findings as above. The hysteroscope was removed from the uterus. Sharp curettage was performed. The endometrial curettings were placed into a specimen cup and sent to Pathology. The full uterine length was noted to be 5 cm. The NovaSure device was placed at the fundus. It was seated within the uterine cavity. The width was noted to be 5 cm. The integrity test was successfully performed. The NovaSure device was then activated for 1 minute and 27 seconds. The NovaSure device was then removed from the uterus, The hysteroscope was reintroduced into the uterine cavity. Survey of the uterus demonstrated good char throughout. The hysteroscope was removed from the uterine cavity. The ClearView uterine manipulator was placed into the uterus and secured with 10 cc of air. All other instruments were removed from the patient’s vagina. Attention was then turned to the patient’s abdomen where 2 mL of 0.25 percent Marcaine with epinephrine was injected at the umbilicus. A 5-nim skin incision was then made at this site with a knife. A 5-nun trocar was then placed.
The abdomen was insufflated with carbon dioxide until a pneumoperitoneum was achieved. An additional 2 mL of 0.25 percent Marcaine with epinephrine was then injected into the patient’s bilateral lower quadrants as well as the patient’s left midquadrant approximately 5 cm lateral to the umbilicus. Then, 5 mm skin incisions were made at these sites, and 5 mm trocars were placed at these sites under direct visualization of the laparoscope. A survey of the patient’s abdomen and pelvis was performed with findings as noted above. The peritoneum of the left uterosacral ligament was grasped with a blunt grasper. It was excised using sharp dissection with the Endoshears as well as cautery to completely remove the nodularity on the left uterosacral ligament. Excellent hemostasis was noted at the end of the dissection. Minimal adhesions in the posterior cul-de-sac were also taken down using sharp dissection with Endoshears as well as cautery. Again, excellent hemostasis was noted at the end of this dissection. The left ureter was visualized and noted to be peristalsing normally. All operative sites were noted to be hemostatic. The pelvis was thoroughly irrigated. All instruments were removed, and gas was released from the patient’s abdomen. The laparoscopic sites were closed with Dermabond, The ClearView uterine manipulator was removed from the patient’s cervix. The patient’s legs were removed from Allen stirrups and placed on the table.

Counts: Sponge, needle, and instrument counts were correct times two.

Pathology: Endometrial curettings, left uterosacral peritoneum.

Disposition: The patient tolerated the procedure well. She was examined prior to leaving the operating room.

ICD-10-CM code(s) _______________________________________________________________________

Case 32

Preoperative Diagnosis: Low back pain and lumbar radiculopathy secondary to a herniated nuclear pulposus at L5–S1

Postoperative Diagnosis: Same

Procedure Performed: The patient presents for left transforaminal epidural injection at L5–S1.

Complications: None

Description of Procedure: Patient was interviewed, consented. Patient was then brought to the treatment room in prone position. Betadine prep was done. Fluoroscopy was used at 15 degree oblique angle to open up the area for selective nerve block on the left side at L5–S1. A 25 gauge needle was utilized with 1 percent lidocaine with localization. Skin wheal was done followed by 3-1/2 inch 20 gauge spinal needle was utilized in an oblique angle. It was advanced. Lateral view was also checked and the needle was in the L5–S1 left neural foramen. At that time there was negative aspiration and 0.5 mL of Omnipaque dye was injected followed by injection with 1.5 mL of 0.25 percent bupivacaine with 4 mg of Kenalog was injected. Patient tolerated procedure. Patient was then brought to recovery in satisfactory condition. Patient will follow up in 7–10 days.

ICD-10-CM code(s) _______________________________________________________________________

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Case 33

Preoperative Diagnosis: Fibular fracture, left ankle

Postoperative Diagnosis: Fibular fracture, left ankle

Procedure Performed: Open reduction and internal fixation of fibular fracture, left ankle.

Anesthesia: General. Pneumatic thigh tourniquet set at 350 mm Hg.

Estimated Blood Loss: Minimal

Material Used: 2-0 Vicryl, 3-0 Vicryl, 3-0 nylon, 4-0 nylon, and one 3.5 x 20 mm partially threaded cortical screw and one 3.5 x 22 mm partially threaded cortical screw.

Injectables: 24 cc of 0.5 percent Marcaine plain and also 12 cc of 0.5 percent Marcaine

Complications: None

Specimens: None

Description of the Procedure: The patient was brought into the operating room and placed on the operating room table in the supine position. A 24 cc of 0.5 percent Marcaine plain was injected in an ankle block fashion to the left ankle. A well-padded thigh tourniquet was applied to her left thigh and then left foot and lower leg were scrubbed, prepped, and draped in the usual aseptic manner. At this time, a 5 cm linear incision was made laterally over the fibula and the area with the fracture. This incision was deepened down to bone with care taken to avoid all neurovascular structures. The periosteum was partially reflected and revealed a large spiral fracture with a large posterior fragment. Large amount of hematoma was noted in and around the fracture site. This was suctioned and removed. There was still quite a bit of swelling in the subcutaneous tissue. Otherwise, the fracture was significant, but only two pieces were noted. Again, all the hematoma was removed and then the fracture site was reduced back into alignment and fracture fragments held in position with two bone clamps. C-arm fluoroscopy was utilized with dorsal lateral and ankle view to ensure that the bony fragments were in proper position and they were. Using standard AO technique, one 3.5 x 20 mm partially threaded cortical screw was placed across the fracture site and then one 3.5 x 22 mm partially threaded cortical screw was also placed across the fracture site. This brought adequate reduction and closure of the fracture. The bone clamps were removed. The C-arm again was utilized with dorsal lateral and ankle view to ensure proper position of all screws and that proper alignment was maintained, and it was. The area was flushed copiously with normal saline and then closure was achieved using 2-0 Vicryl to close periosteum, 3-0 Vicryl for deep closure, and 3-0 nylon to close the proximal aspect of the skin incision and then 4-0 nylon to close the distal aspect of the skin incision. At this time, 12 cc of 0.5 percent Marcaine plain was injected and then around the incision site, and then dressing was applied consisting of Betadine soaked Adaptic, gauze, Kling, and a posterior mold applied in a mildly compressive manner. The thigh tourniquet was released and immediate warmth and perfusion was noted to all digits of the left foot. The patient was then transferred to recovery room with all vital signs stable and neurovascularily intact to the left foot. The patient will follow up as outpatient.

ICD-10-CM code(s) ________________________________
Case 34

Procedure: Ambulatory PH Study with Bravo Capsule

Indication: Gastroesophageal acid reflux

Description of Procedure: The Bravo capsule was placed 6 cm above the endoscopically localize squamocolumnar junction. A total recording time of 1 day, 22 hours and 42 minutes was obtained and analyzed. The patient did not take acid suppressive medication prior to and during the test.

In the aggregate, 75 episodes of esophageal acidification were noted. Two of those were prolonged with the longest one lasting for 22 minutes. The total acid exposure time was 63 minutes amounting to 2.2 percent of the recording time. There was diurnal as well as nocturnal reflux with 3 percent of the supine time demonstrating acid reflux as supposed to 1.7 percent of the time spent in the upright position. No episodes of symptoms with chest pain and heartburn.

Impression: No evidence for significantly increased gastroesophageal acid reflux.

ICD-10-CM code(s) ________________________________

Case 35

Preoperative Diagnosis: Acute appendicitis

Postoperative Diagnosis: Acute appendicitis

Procedure: Laparoscopic appendectomy

Details of Operation: After satisfactory prepping and draping of the patient’s abdomen, a subumbilical incision was made and a Veress needle was introduced in the abdominal cavity. Three liters of CO2 gas insufflated. A 5 mm Surgiport was introduced. Laparoscope was inserted under direct visualization; a 5 mm Surgiport was introduced in the suprapubic area and a 12 mm Surgiport was introduced in the right lower quadrant. Acute appendicitis was found. The GIA stapler was used to staple across the base of the appendix and staple across the mesoappendix. The appendix was removed. The fascia in the right lower quadrant was closed with 2-0 PDS suture. The wound was irrigated and all fluid was evacuated. The appendix was not ruptured.

ICD-10-CM code(s) ________________________________

Case 36

Anesthesia: General laryngeal

Preoperative: Left renal calculus

Postoperative: Left renal calculus

Name of Operation: Left extracorporeal shock wave lithotripsy
Operative Indications: The patient is a 50-year-old male with a left renal stone for lithotripsy.

Description of Procedure: After the appropriate permits were signed, the patient was taken to the operative suite. After the successful induction of general laryngeal anesthesia, the patient was placed in the supine position. The lithotripsy head was coupled to the left flank in the standard position. The stone was localized in tie tower pole vicinity of the kidney and was maintained in both the AP and the Oblique planes using fluoroscopy. Shockwave lithotripsy was then begun at a power setting of 3.0, increased after 150 shocks to 4.0, increased after 160 shocks to 5.0, and increased after 150 shocks to 6.0 where the remaining 2,050 shocks were delivered. The stone seemed to fragment and dispense as evidenced by fluoroscopy. The patient tolerated the procedure without difficulty and was awakened and taken to the recovery room in stable condition at the termination of the procedure.

ICD-10-CM code(s) ____________________________

Case 37

Preoperative Diagnosis: Right inguinal hernia

Postoperative Diagnosis: Right inguinal hernia

Name of Procedure: Right inguinal herniorrhaphy with mesh plug and overlay.

Anesthesia: General

Indications for Procedure: The patient is a very pleasant 64-year-old male that presents with a history of right inguinal hernia. Risks, benefits and alternative of repair were discussed with him in detail. He is agreeable for us to proceed.

Findings: The patient had an indirect and direct hernia defect that were repaired with mesh plug and overlay.

Procedure in Detail: After informed consent was obtained, the patient brought operating room, placed in supine position, general anesthesia was administered. The patient’s right inguinal area was shaved, prepped and made and extended from the area of pubic tubercle laterally a few centimeters, it was taken down through subcutaneous tissue with electrocautery. We dissected down through Scarpa’s layer down to external oblique aponeurotic Metzenbaum scissors was used to dissect this medially in the external ring and laterally a few centimeters. Cord contents were dissected out and the Penrose drain was placed under the cord contents, a very, very small indirect hernia sac was found and we twisted it. We placed a stitch in the neck of it and allowed it to retract into the peritoneal cavity. We placed a medium mesh plug into the internal ring hernia defect and sutured in into place with interrupted 0 Ethibonds. He had a large direct hernia defect. We used a piece of keyhole overlay and sutured the area of pubic tubercle and then inferiorly, we sutured to the shelving edge of the inguinal ligament. Superiorly, we sutured to transverse abdominis aponeurotic layer and then we brought the 2 leaves of the keyhole mesh around the internal ring and sutured it together with interrupted 0 Ethibond. The ilioinguinal nerve was protected during the procedure. Subq was irrigated. Scarpa’s layer was closed with running 3-0 Vicryl. Subcu was irrigated and closed with interrupted 4-0 Vicryl. Skin was a closed with staples. Dressing were applied. Bilateral testicles were descended at the end of the procedure.

ICD-10-CM code(s) ____________________________
Case 38

Preoperative Diagnosis: Lipoma

Postoperative Diagnosis: Lipoma

Procedure: Lower extremity lipoma excision

Anesthesia: Local with MAC

Procedure in Detail: Patient placed supine with left leg flexed, abducted. Time out performed and IV sedation was given. After prepping the inner thigh, a final verification was done and local analgesia was infiltrated. An incision was made over the lump and using sharp and blunt dissection, the lipoma was removed and sent to path. The wound was irrigated and there was no bleeding seen. The wound was closed using absorbable stitches, counts were correct at the end of the case. She was taken to the pacu in stable condition.

ICD-10-CM code(s) ________________________________

Case 39

Preoperative: Open midline abdominal wounds

Postoperative: Open midline abdominal wounds

Procedure: Application of AlloDerm human tissue allograft to open abdominal wound

Anesthesia: General

Indications for Procedure: An 83-year-old gentleman with a long surgical history, underwent operation for bowel obstruction, developed a postoperative lead, returned to the operating room for closure of the lead, abdominal wound was left open because of contamination. He now has an open granulating wound in the midportion of the abdomen measuring approximately 10 cm x 5-1/2 cm. This is being treated with a wound VAC. This essentially is exposed bowel. It is clean, granulating, no evidence of ongoing infection. He is her for first stage of delayed primary closure.

Procedure Details: The patient was brought to the operating room, placed on the operating table in supine position. Satisfactory general anesthesia was obtained. The old wound VAC was removed. The wound was explored. Fascial edges were visualized around probably ¾ of the wound. In several areas the bowel was densely adherent to the fascia, and rather than risk injury to the bowel, subcutaneous tissue was incised and the fascia was separated from the overlying skin, leaving an intact seal with the underlying bowel. A piece of AlloDerm human tissue graft was pi-crusted with several incisions in its midpoint, was laid directly onto the granulating area and sutured to the fascia with multiple interrupted 2-0 Vicryl sutures. In areas where the fascia was adherent to the bowel it was sutured to the subcutaneous tissue overlying the small slip of fascia. Graft was spread so that it lay comfortably without tension directly on the open granulation. The wound was then redressed with a wound VAC cut to an appropriate size and placed directly on top of the AlloDerm. Plan will be to return to the operating room in a few days once granulation has established itself in the AlloDerm and then cover that with a skin graft for final closure of the abdominal wound. The patient tolerated the procedure well and left the operating room in stable condition.

ICD-10-CM code(s) ________________________________
Case 40

Preoperative Diagnosis: Abscess with foreign body, left foot

Postoperative Diagnosis: Abscess with foreign body, left foot

Procedures: Irrigation and debridement of abscess. Removal of foreign body 3 cm in length.

Anesthesia: Mask

Procedure in Detail: This patient presents with a deep foreign body and abscess in left foot. This has failed conservative care and she presents at this time for surgical removal of the foreign body and debridement of the abscess. Risks and benefits were discussed with the patient’s mother including infection, neurovascular injury, recurrent infection, and need for additional surgery. The patient’s mother states she understands and wished to proceed at this time.

Description of Procedure: The patient was brought to OR room 6 and underwent a mask anesthetic. After adequate level of anesthesia had been obtained, the patient’s left lower extremity was prepped using DuraPrep and draped into a sterile field. A longitudinal incision was made plantarly over the midfoot. There was a deep purulent abscess. Cultures were obtained. This was irrigated with normal saline. There was a 3 cm long splinter that was removed in one piece of foreign body. There were no residual foreign bodies. There was good beefy granulation tissue at the base of the wound. After irrigation and debridement, the wound was left open. The wound was covered with antiseptic, orthopedic sponges, Kling, and Coban. The patient was then taken to PACU in stable condition.

ICD-10-CM code(s) ________________________________

Case 41

Preoperative Diagnosis: Cubital tunnel syndrome, left

Postoperative Diagnosis: Cubital tunnel syndrome, left

Operative Procedure: Subcutaneous ulnar nerve transposition, left

Anesthesia: General

Operative Findings: This is a 44-year-old female with clinically cubital tunnel syndrome. She has nerve conduction studies that confirmed. She has got no motor weakness, but does have numbness in the ulnar one and a half digits. It is now constant. She presents for ulnar nerve transposition. Risk and benefits have been discussed. She understands she could get worse and that this is certainly not a foolproof operation in terms of improvement. She wishes to proceed. I will plan on a subcu transposition. She has a good soft tissue envelope superficial to the muscle belly. I do not think she needs to have it submuscularly.

Operative Procedure: The patient was brought to the operating room; and after the uncomplicated induction of general anesthesia, the left arm was prepped and draped steriley. A time-out was called to confirm the patient, procedure, side, and site. Clindamycin was given intravenously. The elbow was prepped and draped steriley. A curvilinear incision was made posterior to the medial epicondyle. Subcutaneous tissues were divided bluntly. The fascial plane was readily identified. The ulnar nerve was identified posterior to the medial intermuscular septum and moved the nerve
anteriorly. I closed the retinaculum behind the elbow including Osborne ligament to keep the nerve from subluxating posteriorly again. I brought the elbow through range of motion. It had no tendency towards subluxation, and I thus did not make a harness for it. I packed the wounds with a clean moist lap and released the tourniquet. There was good hemostasis, with a little bleeding that was cauterized. I was very pleased with the bed. I closed in layers and then injected Marcaine. I placed a soft dressing and transferred the patient to recovery, awake, alert, and in stable condition. There were no apparent complications.

ICD-10-CM code(s) ____________________________

Case 42
Preoperative Diagnosis: Nonunion, lumbar spine

Postoperative Diagnosis: Nonunion, lumbar spine

Procedure Performed: Revision of lumbosacral instrumentation, augmentation of the graft with allograft bone and InFuse instrumentation with GSO implants, including iliac folds.

Anesthesia: General

Procedure: Under general anesthesia, the patient was placed prone on the OR table using the Wilson frame. Back was prepped and draped in a sterile manner. The caudal end of the previous incision was elipsed and removed. The lumbar instrumentation was exposed from approximately T12 to the sacrum. The GSO and array implants were removed. The wound was inspected, and a nonunion at L5-S1 was observed. After removal of all the scar tissue over the bone, iliac screws were placed bilaterally, as well as bilateral S1 screws, L4 screws and L3 on the right, S1 and L3 on the left. All screws were tested with ENG. The wound was pulse lavaged. Intraoperative imaging showed good position of implants. Bleeding was controlled with thrombin, Gelfoam and FloSeal. BMP was repaired and placed over the proposed fusion are at 15-Si followed by 80 ml of allograft bone. The wound was then closed in layers over a drain using Vicryl suture. The skin was closed with running 3-0 Monocryl. A dry dressing was applied over Steri-Strips and the patient was transferred to the Recovery Area after having tolerated the procedure well.

ICD-10-CM code(s) ____________________________
Case 43

Preoperative: Fractured left patella

Postoperative: Fractured left patella

Procedure Performed: Open reduction and internal fixation of left patella fracture

Description of Procedure: Under general anesthesia, the patient in supine position, via LMA, a tourniquet was placed around the left upper thigh. The left knee, foreleg and foot were prepped and draped in the usual manner, elevated and Esmarched. Tourniquet inflated to 300 mm Hg. A short anterior longitudinal incision was made directly over the patella. It was carried down through skin and subcutaneous fat and fascia. In the parapatellar area, there was noted to be protuberant organized clot and thickened tissue. This was elevated exposing the fracture site, which was curetted of clot and debris. There was moderate amount of comminution. At the inferior pole there was a large contained fragment proximally. The patella was intact, which compromised the entire articular surface.

We were able to do an open reduction and hold that with a towel clip in order to mark out drill holes for passing #2 fiber wire. We then took down the reduction and drilled holes along the longitudinal axis of the patella and passed a suture in a mattress fashion through the inferior pole and then in Kessler fashion across the patellar tendon, back up into the fracture site through the inferior pole and then reversed it using suture passer to pass the suture through the superior pole, across the quadriceps tendon and then back though the patella so that the knot could be buried in the fracture site. Holding the reduction with towel clips, the suture was tightened down reducing the patella. On either side of the patella in the retinaculum more free #2 fiber wire sutures were placed. We did place one more through bone laterally, which pulled the final fragments into position. Image intensifier was used to confirm in AP and lateral planes that we had an anatomic reduction.

The parapatellar fascia was closed with interrupted 0-Vicryl suture. The subcu layer was closed with interrupted 3-0 Vicryl suture and the skin itself was closed with Mastisol and Steri-Strips, 4x4, cast padding and Ace wrap were applied. Then the patient was placed back into her knee immobilizer. The tourniquet was deflated with immediate pinkening of the foot and toes. She was transferred onto a hospital stretcher in a supine position and taken to the recovery room without complications. Prior to application of the dressing, the knee itself was injected with 10 mL of 0.25 percent Marcaine with epinephrine.

ICD-10-CM code(s) __________________________________________
Case 44

Preoperative Diagnosis: Bladder outlet obstruction

Postoperative Diagnosis: Bladder outlet obstruction. Benign hypertrophy of Prostate with urinary obstruction

Operation: Cystoscopy with transurethral incision of the prostate

Anesthesia: General

Indications: A 70-year-old male patient with significant outlet obstruction, documented urodynamically with elevated voiding pressures and poor flow rate. He has a constellation of symptoms, including frequent urination, nocturia, urgency and diminished urinary stream. He presents now for the above procedures after thorough discussion about the risks and benefits. He has a history of elevated PSA. Previous prostate ultrasound done in May revealed a 40-gram prostate. His biopsies were all negative.

Technique: The patient was given prophylactic antibiotics. He was administered general anesthesia. He was then prepped and draped in lithotomy position. The 24 French resectoscope sheath was introduced with the Timberlake obturator. Using a 12 degree lens and a Collins knife, the incision was made at the 6 o’clock position after identifying the orifices and carefully avoiding them throughout the procedure. The incision was made from just inside the bladder neck and carried all the way to the verumontanum. This was a full-thickness incision through all muscle layers, which resulted in a wide-open outlet. Spot cautery was then used for any hemostasis. No significant bleeding was noted. A 22 French Foley catheter was introduced with a catheter guide. A leg bag was applied. The patient was taken back to the recovery room in stable condition.

ICD-10-CM code(s) ____________________________________________
Case 45

Preoperative Diagnosis: Adenocarcinoma of the prostate

Postoperative Diagnosis: Adenocarcinoma of the prostate

Anesthesia: General

Description of Procedure: The patient was taken to the operating room where general anesthesia was administered. The patient was transferred to low lithotomy position, and abdomen was shaved and prepped with Betadine solution and draped appropriately. All pressure points have been padded. He was draped appropriately. A Verres needle was introduced into the abdomen, and insufflations was achieved. 12 mm non-bladed trocar was inserted into the abdomen. Visualization of abdominal contents revealed no intra-abdominal injuries. Three 8 mm ports and a 12 mm port were then placed under direct visual guidance using non-bladed trocars. The bladder was taken down from the anterior abdominal wall using sharp and blunt dissection. Dissection was carried down to the endopelvic fascia on each side. Bilateral pelvic lymph node dissection was then performed. The limbs of this included the external iliac vein anteriorly, pelvic sidewall laterally, pubic ramus distally, obturatory nerve posterioly. Care was taken not to damage these structures. Endopelvic fascia was incised, and I dissected out the apex of the prostate. I then incised the anterior bladder neck and dissected down into the bladder. The posterior bladder neck was then incised. I dissected down to the seminal vesicles and vas deferens which were elevated and mobilized. Denonvilliers fascia was incised, and the rectum was displaced posteriorly. Care was taken not to damage the rectum. I incised the dorsal vein and then the urethra. The prostate was mobilized and placed into an EndoCatch bag. The dorsal vein was controlled with figure-of-eight 3-0 Vicryl suture. A double-armed 3-0 Monocryl suture was then placed in Denonvilliers fascia and attached to the posterior urethral plate and re-approximated in a running fashion. The second arm of the suture was then used to re-approximate the posterior bladder neck to the posterior urethral plate in a running fashion. The bladder neck was then re-approximated to the urethra with a double-armed 3-0 Monocryl suture starting posteriorly and tied anteriorly. This was a watertight closure. A 2D French Foley catheter was inserted in the patient’s bladder with 15 cc of saline. Hemostasis was excellent under low pressure. The robot was then de-docked. All ports were taken down under direct visual guidance, and hemostasis was excellent. The umbilical incision was enlarged, and the prostate was removed. The fascia was re-approximated in interrupted fashion with figure-of-eight 0 Vicryl sutures. The skin incision were closed with 4-0 Vicryl suture in running subcuticular fashion. DermaBond was placed on the incision. The patient tolerated the procedure well, was extubated in the operating room and taken to the recovery room in good condition.

ICD-10-CM code(s) ________________________________
Case 46

Preoperative Diagnosis: Questionably infected pump and intrathecal catheter

Postoperative Diagnosis: Questionably infected pump and intrathecal catheter

Procedure Performed: Removal of Medtronic pain pump and intrathecal catheter

Anesthesia: General

Indications: The patient is a 64-year-old female who about two and a half weeks ago underwent removal and replacement of Medtronic pain pump and catheter. The postoperative course was complicated by poor pain control. She eventually went home. She returned due to a cerebrospinal fluid leak. She was having unrelenting headaches and then developed some erythema at her flank incision. She was started on Vancomycin. Dr. Jones was asked to see the patient. Dr. Jones was concerned that the pump was infected and may lead to an ascending meningitis. This was discussed in great detail with the patient regarding the risks and benefits of this versus the worsening ability to get adequate pain control and she wished to go ahead and have her pump removed. The risks and benefits were discussed and she wished to proceed.

Findings: The back wound was opened. There was no evidence of gross infection. There was some fat necrosis. Aerobe and anaerobic cultures were taken. The intrathecal portion of the catheter was removed without difficulty. The cerebrospinal fluid was clear. The pump pocket was also opened. There was a large seroma without evidence of gross infection. A separate set of aerobe and anaerobic cultures were taken from this site. The pump and the remaining part of the catheter were passed off the field.

ICD-10-CM code(s) ____________________________________________

Case 47

Preoperative Diagnosis: Recurrent thyroid cancer

Postoperative Diagnosis: Recurrent thyroid cancer

Procedure: Debulking central compartment of neck of recurrent thyroid cancer.

The patient was brought to operating room where under general endotracheal anesthesia the patient’s neck was prepped and draped in a sterile fashion. Incision made through the old scar. Subplatysmal flaps were raised. The palpable disease had been identified and marked. We were able to successfully remove the anterior recurrence. This was involving the strap muscles. These were basically all resected on the right over to the sternocleidomastoid which was lifted off of the 6 cm mass. We continued on the right side where this was densely adherent to the jugular vein, but we were able to resect this basically taking all recurrent disease back down to the tracheoesophageal groove which on the right was really completely involved with tumor, which was unfortunately going down in the mediastinum and the tracheoesophageal unit was basically adherent to the posterior sternum. It was clear that we could not remove any more safely and we left a significant amount of disease involving the tracheoesophageal groove which was largely unrecognizable at this point. It was obviously invading into the larynx as well. The wound was then closed in layers with Vicryl and skin clips. Sterile dressings were applied. The patient was returned to the recovery room in satisfactory condition.

ICD-10-CM code(s) ____________________________________________
Case 48

Preoperative Diagnosis: Distal humerus fracture, right

Operative Procedure Performed: Percutaneous pinning with manipulation

Anesthesia: General

Indications for Surgery: Displaced T-shaped condyle fracture, distal humerus right side

Operative Technique: Patient was brought to the operating room, at which time a time-out was taken. The patient was then induced and general anesthesia administered via endotracheal tube. On examination of the elbow, there was moderated swelling. She had a palpable radial pulse. Fingers were warm. There was moderate swelling. Skin is intact. The obvious fracture fragment was the lateral condyle, which was mild to moderately displaced. The articulation of the humerus and the ulna did not appear right, but when I flexed and extended the elbow both on the AP and lateral view, the elbow appeared stable. I also applied some varus and valgus stress with a moderate amount of degree, and there was no obvious dislocation. Patient did have a fracture of the distal humerus about four years ago, which required pinning. According to the daughter, the fracture was also involved the lateral condyle to the medial as well as the proximal shaft. Under C-arm, 3 K-wires were passed across the fracture site into the humerus and medial condyle. X-ray using fluoro demonstrated the pins to be in satisfactory position. Jurgan balls were then placed at the base of the pins to prevent migration. At this point, a sterile dressing was applied. A cup was placed over the pins followed by a very well-padded long arm cast. Anesthesia was reversed. The patient was taken to the recovery room in stable condition.

ICD-10-CM code(s) _________________________________