Brown-Folse Radiology Group, LLC

Routine Views

Routine views have been established by the Radiologist. Every effort should be made to achieve the highest diagnostic examination for interpretation.

CHEST:
EPA and left lateral views at 72 inches are taken on adults whenever possible. If a chest is requested and the patient cannot tolerate a routine procedure an AP or PA film is taken, erect if possible. If the patient is unable to come to the Radiology Department, a portable examination is done, erect if possible. One view, AP or PA, is taken on children unless otherwise ordered.

RIBS:
Bilateral: Four view of the ribs are taken 1) AP above the diaphragm 2) AP below the diaphragm 3) right oblique and 4) left oblique at 45 degree obliquity.
Unilateral: 1) AP above the diaphragm 2) AP below the diaphragm 3) Oblique of the affected side only

KUB:
Patient is placed in supine position and one film is taken centered at the iliac crest. (Additional film taken if all of pelvis not included)

ABDOMEN: (Flat and Erect)
A routine KUB is taken and an erect film of the abdomen centered 2 to 3 inches above the iliac crest. (to show both diaphragms)

SKULL:
Four views of the skull are taken routinely. These are subject to change due to injury or the patient's condition. If only two views are taken they will be AP and one lateral.
Townes projection: Patient is supine. Orbital-meatal line is perpendicular to film. Distance is 40 inches with an angle of 30 degrees caudal.
PA: The patient is positioned prone with the orbito-meatal line perpendicular to the film. Distance is at 40 inches with no angle.
Both Laterals: Skull positioned in the lateral position with interpupillary line perpendicular to the film. One film each done with right and left side down.

SINUSES:
Three views are routinely taken. If one view is ordered, Waters is taken.
All views are taken erect with an extension cone at 40-inch distance.
Caldwell: Prone, orbital meatal line perpendicular to the table, tube angled 12 degrees caudal.

Waters: Prone, orbital meatal line 37 degrees to plane of film, chin resting on table. No angle on tube unless needed to compensate for patient condition.
Lateral: One lateral taken with interpupillary line perpendicular to the film.

FACIAL BONES:
Caldwell, PA and lateral of affected side taken horizontal in the supine position without an extension cone.

NASAL BONES:
Waters: (see sinuses) taken horizontal in the prone position.
Both laterals: Detail screens tabletop for the nasal bone, both laterals on one film.

MANDIBLE:
PA: Patient prone on horizontal table, orbital meatal line perpendicular to the table at 40-inch distance.
Both Obliques: Patient up on shoulder with side down being viewed. Angle 15 to 25 degrees cephalic to visualize the ramus and body on each side.
Lateral: Both laterals taken with interpupillary line perpendicular to the film

ZYGOMATIC ARCHES:
When zygomatic arches are requested a waters (see facial bones) and "handle-bucket" view is done. For the tangential or "handle-bucket" view the patient is placed supine with a sponge or pillow under their shoulders. Their head is tilted back as far as they can without pain or difficulty. The film is placed in front of the patient's head so that the shadow of the nose and both arches are shown on the film. The tube is angled cephalic so that the central ray is parallel to the arches. Exposure is made using a screen technique.

CERVICAL SPINE:
If the patient has had trauma and is restrained on a backboard, the lateral must be taken without moving the patient and cleared with a physician before moving the patient.
Three views are taken routinely, oblique or flexion and extension views may be added if ordered.
AP: Patient is supine, 15-degree angle cephalic centered to the thyroid cartilage at 40-inch distance.
Odontoid: Open mouth, no angle, 30-inch distance.
Lateral: Patient standing, if possible, with tube at 72-inch distance perpendicular to the film. Weights are added to move the shoulders out of the field.
The lateral must include all seven vertebra on the film or a swimmers view is taken to see lower vertebra.

THORACIC SPINE:
AP: Patient supine, tube 40-inch distance perpendicular to the film. Patient breathing and long exposure time to blur sternum and ribs.
Lateral: Left lateral at 40-inch distance, perpendicular to the film. Patient breathing and long exposure time to blur lung tissue and ribs.

LUMBAR SPINE:
Three views are routinely taken. Both obliques may be added if ordered.
AP: Patient is supine, central ray is perpendicular to the spine.
Lateral: Left lateral is taken
L-5/S-1 Spot: Left lateral position, 5 to 8 degree angle caudal, cone to L-5/S1 joint.

PELVIS:
AP taken with toes rotated internally. Central ray is perpendicular to the film at 40-inch distance on 14 x 17 film.

HIP:
AP of the entire pelvis as above is routinely done with a frog leg lateral on 10 x 12 of the hip ordered using bucky technique.

FEMUR:
Routine views are AP and lateral to include both joints. Separate films may be taken if unable to include both joints on one film.

KNEE:
AP, lateral and medial oblique views are taken using bucky technique.

TIBIA:
AP and lateral is taken to include both joints using tabletop technique on detail screens. Separate films may be taken if unable to include both joints on one film.

ANKLE:
AP, lateral and medial oblique views are taken using tabletop technique on detail screens.

FOOT:
AP, lateral and medial oblique views are taken using tabletop technique on detail screens.

SHOULDER:
Internal and external rotation films are taken in the supine position using bucky technique.

CLAVICLE:
One AP projection is taken with a 10-degree cephalic angle to the shoulder.

HUMERUS:
AP and lateral views of the humerus are taken tabletop technique on detail screens.

ELBOW:
AP, lateral and external oblique views are taken using tabletop technique on detail screens.

FOREARM:
AP and lateral views are taken using tabletop technique on detail screens.

WRIST:
AP, lateral and oblique are taken using tabletop technique on detail screens.

HAND:
PA, lateral and oblique are taken using tabletop technique on detail screens. Fan lateral of the fingers is taken if possible especially if fingers are involved in injury.

SKELETAL SURVEY: (Metastatic Series)
AP and lateral skull, cervical spine, thoracic spine, lumbar spine, pelvis, ribs above and below diaphragm and AP and lateral both arms and legs.

FLUOROSCOPIC EXAMINATIONS

ESOPHAGUS:
Table is erect with patient standing behind the fluoroscopic screen in the left posterior oblique position. The patient will be instructed to drink the prepared barium while being fluoroscoped taking digital images at different intervals. The table will be laid down during the procedure and the esophagus visualized from the RAO position. This procedure takes about 2½ to 3 minutes.

UPPER GI SERIES:
The table is erect with the patient standing behind the fluoroscopic screen in a left posterior oblique position. The patient will be instructed to drink the prepared barium while fluoroscoped taking digital images at different intervals. The table will be laid down during the procedure to visualize the stomach in several positions. This procedure takes about 2½ to 3 minutes.

SMALL BOWEL SERIES:
The patient is given 2 prepared doses of barium to drink and an initial film is taken as soon as the patient has finished drinking. Abdominal films are taken at

30-minute intervals to include the entire small bowel until the barium reaches the terminal ileum. Digital imaging of the terminal ileum is taken. The radiologist will determine when the study is sufficient if the terminal ileum is not evident.

AIR CONTRAST BARIUM ENEMA:
Any order for barium enema is done with air contrast unless otherwise indicated due to patient history or condition. Prepared air contrast enema kits with special air contrast tips are used with water added. The patient is placed on the horizontal table on their left side for insertion of the lubricated tip. The cuff on the tip is inflated with the cuffilator supplied with the kit unless excessive pain is experienced. The patient is covered at all times to assure their privacy. The patient is turned to the supine position with the fluoroscope screen over them. The patient will be instructed while the barium and air are administered during the procedure and digital images taken at different intervals.
The examination takes 4 to 5 minutes. After the fluoroscopic examination is complete, the technologist will take AP and both obliques to include the entire colon on 14 x 17 films. The valve is open to allow the barium and air to drain into the sealed container. The cuffilator is deflated before removal. The patient is helped to the bathroom with instructions to evacuate as much of the barium as possible. Post evacuation film is taken in the AP projection.

SOLID COLUMN ENEMA:
When air contrast is contraindicated, either diluted barium or water-soluble contrast is used at the determination of the physician or radiologist. If water-soluble determined a mixture of one bottle of Hypaque-Cysto and 4 bottles of Hypaque are mixed in a bag with water enough to make 2000 cc of liquid. The patient is placed on the horizontal table on their left side for insertion of the lubricated tip. The cuff is inflated with the cuffilator supplied with the kit unless excessive pain is experienced. The patient is covered at all times to assure their privacy. The patient is turned to the supine position with the fluoroscope screen over them. The patient will be instructed during administration of the liquid during the procedure and digital images at different intervals. The examination takes 3 to 4 minutes. After the fluoroscopic examination is complete, the technologist will take AP film(s) to include the entire colon on
14 x 17 films. The liquid is drained into the sealed container to relieve the patient, the cuff in deflated and the tip removed. The patient is assisted to the bathroom and instructed to evacuate as much liquid as possible. Post evacuation film is taken in the AP projection.

IVP:
The patient is informed about the procedure and detailed history is taken as to possible allergy to contrast and other pertinent factors. Determination is made by this history as to which contrast should be used. Consent is signed by the patient or their authorized representative. Blood values for BUN and creatinine levels are obtained determining normal levels before injecting with contrast. The

injection of contrast in contraindicated by history of allergic reaction to contrast or elevated blood levels.
The x-ray table is horizontal with the patient supine. A scout film is taken on a 14x17 is taken to include all of the kidneys and bladder. Separate film is taken if all is not included. The technologist injects 50 CC of Hypaque or Omnipaque 300 intravenously. After injection films are taken at 5, 10, and 15 minute intervals. If films are adequate to visualize the entire system for diagnosis a post void film is taken. If necessary oblique films are done to visualize the entire urinary system. The procedure may continue until diagnosis is made in the case of obstruction of the system.

HYPERTENSIVE IVP:
The same procedure is followed as for an IVP except that films are taken immediately following injection and at 1, 2 and 3 minutes in addition to the routine.

CYSTOGRAM:
An indwelling catheter is placed in the patient's bladder by the nursing staff or attending physician. Following a scout film of the entire abdomen, the patient's bladder is filled with contrast media. The patient may receive from 50 to 400 CC of contrast media according to their tolerance. As the contrast media enters the bladder, it is observed under fluoroscope and digital images are taken in the AP and oblique positions. Both ureters are checked for reflux and documentation is made if visualized. The bladder is drained until the pressure is relieved catheter is then removed after deflating the bulb on the catheter. The patient is instructed to finish emptying their bladder in the bathroom. Post void film is taken of the entire abdomen to document residual contrast and reflux into the ureters if any.

VOIDING CYSTOGRAM:
The same procedure is followed as the cystogram except that spot films are taken of the urethra while the patient is voiding. The catheter is removed while the patient is on the table with absorbent padding or urinal placed to catch voided contrast.