SET-UP CHECKLIST FOR FLUORO OF THE GI TRACT

- BUCKY LOCKED AT FOOT END OF TABLE.
- FOOTBOARD SECURED TO TABLE.
- SUFFICIENT NUMBER OF FILMS AVAILABLE FOR OVERHEADS.
- FLUORO FOOT PEDAL IN POSITION.
- LEAD APRONS AND THYROID SHEILDS AVAILABLE.
- LEAD GLOVES AVAILABLE.
- COMPRESSION PADDLE AVAILABLE.
- CONTROL PANEL PROPERLY SET FOR FLUORO.
- FLUORO TIMER SET FOR FIVE (5) MINUTES.
- APPROPRIATE FLUORO KVP SET.
- SELECT THE PATIENT FROM THE RIS. MODIFY EXAM INFORMATION TO THE STUDY GOING TO BE PERFORMED.
- PROPER MIXTURES OF BARIUM AND RELATED SUPPLIES.
- OLD REPORTS AVAILABLE

MIXING BARIUM

To mix barium for upper GI studies:

1200 density
32 ounces of EZpaque
32 ounces of water

1400 density
48 ounces of EZpaque
8 ounces of water

Make sure to mix well, the barium will fall to the bottom of the container.

SUPPLIES AND ROOM SET UP FOR:
UPPER GI SERIES
UPPER GI WITH SMALL BOWEL
BARIUM SWALLOW

Place these supplies on the counter:
1200 and 1400 barium pitchers
HD barium
Barium tablets
2 large cups
3 small cups
Straw
EZ gas (fizzies)
60 cc syringe

Pour 4 ounces of barium (weight depending on study 1400 for all studies except small bowel) and add straw. Mix HD bottle with 60cc of water and shake well, place with empty cup. Add a small amount of water to the small cup and open the EZ gas packet so it is ready to use. For barium swallows, have a barium tablet in a small cup and a small cup of water.

Take a preliminary film on upper GI and small bowel patients. Move the tube to the parked position. Stand the table erect. Move the image intensifier and the foot pedal to the side of the table.

Follow the radiologist prompts, they will tell what they need. The fizzies will usually be given first, followed by the HD barium. The table will be turned flat and numerous images will be obtained. During this part of the exam the thinner barium will be given. The radiologist will tell when they would like to administer the tablet.

Following the GI, additional barium will be given to small bowel patients. The radiologist will give instructions on what filming protocol they would like. Below is a list of preferences by radiologist.

UPPER GI SERIES

FLUORO KVP – 110

DIGITAL FLUORO SET AND PATIENT INFORMATION TYPED IN.

PATIENT POSITION FOR FLUORO – UPRIGHT

BARIUM MIXTURE/OTHER SUPPLIES – 8 OZ. BARIUM 1200 OR 1400 (DEPENDING ON RADIOLOGIST)

GENERAL DESCRIPTION OF EXAM AFTER SET-UP IS COMPLETE:

- The exam is started with the patient standing erect against the fluoro table.
- The radiologist will instruct the patient to take the cup containing the barium in the left hand and to swallow the barium as he instructs.
- The radiologist will obtain upright views of the esophagus while the patient is drinking and the table will be lowered to the horizontal position.
- The radiologist will then obtain a series of views of the stomach.
- The technologist should assist the patient in attaining positions as requested by the radiologist.
- Subsequently several films of the duodenal bulb and gastric antrum will be obtained. It is necessary to have the lead glove and compression paddle available for these films.
- The technologist will be instructed by the radiologist to perform overhead radiographs when fluoroscopy is completed.

UPPER GI SERIES OVERHEAD IMAGES

ROUTINE PROJECTIONS: RAO STOMACH, RIGHT LATERAL STOMACH, PA ABDOMEN, AP ABDOMEN.

RAO STOMACH:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXHALATION
44”	

PATIENT POSITION: From the PA position, have the patient rotate 45 degrees towards their right side.
CENTRAL RAY: Directed to the midpoint of the film.
Location of the stomach is dependent on the patient’s body habitus.
COLLIMATION: Collimate to the skin surface.
SHIELDING: Gonads on **ALL** patients.

RIGHT LATERAL STOMACH:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXHALATION
44”	

PATIENT POSITION: Place the patient in a lateral position with their right side against the table.
CENTRAL RAY: Directed to the midpoint of the film.
Location of the stomach is dependent on the patient’s body habitus.

COLLIMATION: Collimate to the skin surface.
SHIELDING: Gonads on **ALL** patients.

PA ABDOMEN:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXHALATION
44”	

PATIENT POSITION: PA prone with the mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Perpendicular to the film 3-4” above the iliac crest.
Location of the stomach is dependent on the patient’s body habitus.
COLLIMATION: Collimate to the skin surface.
SHIELDING: Gonads on male patients.

AP ABDOMEN:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXHALATION
44”	

PATIENT POSITION: AP supine with the mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Perpendicular to the film 3-4” above the iliac crest.
Location of the stomach is dependent on the patient’s body habitus.
COLLIMATION: Collimate to the skin surface.
SHIELDING: Gonads on male patients.

AIR CONTRAST UGI

FLUORO KVP – 110

DIGITAL FLUORO SET AND PATIENT INFORMATION TYPED IN.

PATIENT POSITION FOR FLUORO – UPRIGHT

BARIUM MIXTURE/OTHER SUPPLIES – 2 OZ. HD BARIUM (SHAKEN THOROUGHLY), 1 PACKAGE EFFERVESCENT GRANULES WITH SMALL AMOUNT OF WATER, 3 OZ. 1200 OR 1400 BARIUM (DEPENDING ON RADIOLOGIST).

GENERAL DESCRIPTION OF EXAM AFTER SET-UP IS COMPLETE:

- The exam is started with the patient standing erect against the fluoro table.
- The effervescent granules/water administered to the patient and then the patient drinks at the request of the Radiologist approximately 3 oz. of the liquid HD barium.
- The radiologist will obtain upright views of the esophagus while the patient is drinking and the table will be lowered to the horizontal position.
- The radiologist will then obtain a series of views of the stomach.
- The technologist should assist the patient in attaining positions as requested by the radiologist.
- The patient will then be placed in the prone position and will drink approximately 1oz. of the barium while the radiologist obtains another film of the barium filled esophagus and the esophagogastric junction. The radiologist may elect to place a pillow under the abdomen for these film.s
- Subsequently, several films of the duodenal bulb and gastric antrum will be obtained for both single and double contrast views. It is necessary to have the lead glove and compression paddle available for these films.
- The technologist will be instructed by the radiologist to perform overhead radiographs when fluoroscopy is completed.

AIR CONTRAST UPPER GI SERIES IMAGES

ROUTINE PROJECTIONS: LPO STOMACH, RAO STOMACH, RIGHT LATERAL STOMACH, PA ABDOMEN.

LPO STOMACH:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXHALATION
44”	

PATIENT POSITION: From the AP supine position, have the patient rotate 45 degrees towards their left side.
CENTRAL RAY: Directed to the midpoint of the film.
Location of the stomach is dependent on the patient’s body habitus.
COLLIMATION: Collimate to the skin surface.
SHIELDING: Gonads on **ALL** patients.

RAO STOMACH:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXHALATION
44”	

PATIENT POSITION: From the PA position, have the patient rotate 45 degrees towards their right side.
CENTRAL RAY: Directed to the midpoint of the film.
Location of the stomach is dependent on the patient's body habitus.
COLLIMATION: Collimate to the skin surface.
SHIELDING: Gonads on **ALL** patients.

RIGHT LATERAL STOMACH:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXHALATION
44"	

PATIENT POSITION: Place the patient in a lateral position with their right side against the table.
CENTRAL RAY: Directed to the midpoint of the film.
Location of the stomach is dependent on the patient's body habitus.
COLLIMATION: Collimate to the skin surface.
SHIELDING: Gonads on **ALL** patients.

PA ABDOMEN:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXHALATION
44"	

PATIENT POSITION: PA prone with the mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Perpendicular to the film 3-4" above the iliac crest.
Location of the stomach is dependent on the patient's body habitus.
COLLIMATION: Collimate to the skin surface.
SHIELDING: Gonads on male patients.

BARIUM SWALLOW

NO COMPRESSION CONE.

DIGITAL FLUORO SET UP WITH PATIENT INFO TYPED IN, RAPID SEQUENCE FRAMES SET TO THREE (3).

PATIENT POSITION FOR FLUORO – UPRIGHT.

BARIUM MIXTURE/OTHER SUPPLIES – 8 OZ. 1200 OR 1400 BARIUM DEPENDING ON RADIOLOGIST.

GENERAL DESCRIPTION OF PROCEDURE AFTER SET-UP IS COMPLETE:

- The radiologist will instruct the patient to take the cup containing the barium in the left hand and to swallow the barium and he/she instructs.
- The radiologist will then take digital films of the barium filled esophagus.
- The technologist will be instructed by the radiologist to perform overhead radiographs.

BARIUM SWALLOW IMAGES

ROUTINE PROJECTIONS: AP ESOPHAGUS, LATERAL ESOPHAGUS, RAO ESOPHAGUS (PER RADIOLOGIST).

AP ESOPHAGUS:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED RESPIRATION
44”	

PATIENT POSITION: AP supine with the mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Perpendicular to the film at the level of T7.
COLLIMATION: Collimate to the esophagus.
SHIELDING: Gonads on **ALL** patients.

LATERAL ESOPHAGUS:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED RESPIRATION
44”	

PATIENT POSITION: Lying on left side in a true lateral position. Arms in front of the patient outside of the lung field.
CENTRAL RAY: Perpendicular to the film at the level of T7.
COLLIMATION: Collimate to the esophagus.
SHIELDING: Gonads on **ALL** patients.

****RAO ESOPHAGUS**:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED RESPIRATION
44”	

PATIENT POSITION: From the prone position, oblique the patient 35-40 degrees with the right side closest to the film.
CENTRAL RAY: Perpendicular to the film at the level of T7.
COLLIMATION: Collimate to the esophagus.
SHIELDING: Gonads on **ALL** patients.

**** THIS PROJECTION IS TO BE PERFORMED AT THE DISCRETION OF THE RADIOLOGIST.****

AIR CONTRAST BARIUM SWALLOW

FLUORO KVP – 110.

SPOT FILM FORMAT.

DIGITAL FLUORO SET UP WITH PATIENT INFO TYPED IN, RAPID SEQUENCE FRAMES SET TO THREE (3).

PATIENT POSITION FOR FLUORO – UPRIGHT.

BARIUM MIXTURE/OTHER SUPPLIES – 1 CUP HD BARIUM (SHAKE THOROUGHLY), 1 PACKET EFFERVESCENT GRANULES WITH SMALL AMOUNT OF WATER TO MIX, THREE (3) TO FOUR (4) OZ OF 1200 OR 1400 BARIUM DEPENDING ON THE RADIOLOGIST.

GENERAL DESCRIPTION OF PROCEDURE AFTER SET-UP IS COMPLETE:

- The radiologist will instruct the patient to drink the effervescent granules mixed with water.
- The patient will then be asked to swallow several mouthfuls of the HD barium.
- The radiologist will then take spot and/or digital films of the barium and air filled esophagus.
- The technologist will be instructed by the radiologist to perform overhead radiographs.

AIR CONTRAST BARIUM SWALLOW IMAGES

ROUTINE PROJECTIONS: AP ESOPHAGUS, LATERAL ESOPHAGUS, RAO ESOPHAGUS (PER RADIOLOGIST).

AP ESOPHAGUS:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED RESPIRATION

44”

PATIENT POSITION: AP supine with the mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Perpendicular to the film at the level of T7.
COLLIMATION: Collimate to the esophagus.
SHIELDING: Gonads on **ALL** patients.

LATERAL ESOPHAGUS:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED RESPIRATION
44”	

PATIENT POSITION: Lying on left side in a true lateral position. Arms in front of the patient outside of the lung field.
CENTRAL RAY: Perpendicular to the film at the level of T7.
COLLIMATION: Collimate to the esophagus.
SHIELDING: Gonads on **ALL** patients.

****RAO ESOPHAGUS**:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED RESPIRATION
44”	

PATIENT POSITION: From the prone position, oblique the patient 35-40 degrees with the right side closest to the film.
CENTRAL RAY: Perpendicular to the film at the level of T7.
COLLIMATION: Collimate to the esophagus.
SHIELDING: Gonads on **ALL** patients.

****** THIS PROJECTION IS TO BE PERFORMED AT THE DISCRETION OF THE RADIOLOGIST.******

SMALL BOWEL SERIES

FLUORO KVP - 110

DIGITAL FLUORO SET UP WITH PATIENT INFO TYPED IN, RAPID SEQUENCE FRAMES SET TO THREE (3).

FLUORO COMPRESSION CONE IN PLACE.

PATIENT POSITION FOR FLUORO – AP SUPINE.

BARIUM MIXTURE/OTHER SUPPLIES – TWO (2) 8OZ. CUPS BARIUM 1200 WT.

GENERAL DESCRIPTION OF PROCEDURE AFTER SET-UP IS COMPLETE:

- After reviewing the preliminary radiograph(s) of the abdomen, the radiologist will instruct the technologist to give the patient 16 ounces barium to drink.
- The timing for the small bowel series should begin when the patient is finished drinking the barium with as little delay as possible.
- Small bowel films should be taken as instructed by the radiologist.
- When the barium has progressed through the entire small bowel, set up the room for fluoro.
- Under fluoroscopy, the radiologist will take spot films of the terminal ileum. The technologist should have the compression cone in place and have the compression paddle and lead gloves available.

SMALL BOWEL SERIES IMAGES

ROUTINE PROJECTIONS: PA ABDOMEN.

PA ABDOMEN:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED RESPIRATION
44”	

PATIENT POSITION: Prone with the mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Perpendicular to the film at the level of the iliac crest.
COLLIMATION: Collimate to the skin surface.
SHIELDING: None.

SMALL BOWEL SERIES WITH UGI

FLUORO KVP - 110

DIGITAL FLUORO SET UP WITH PATIENT INFORMATION TYPED IN.

PATIENT POSITION FOR FLUORO – UPRIGHT.

BARIUM MIXTURE/OTHER SUPPLIES – THREE (3) 8OZ. CUPS BARIUM 1200 WT.

GENERAL DESCRIPTION OF PROCEDURE AFTER SET-UP IS COMPLETE:

- The exam is started with the patient standing erect against the fluoro table.
- The radiologist will instruct the patient to take the cup containing the barium in the left hand and to swallow the barium as he instructs.
- The radiologist will obtain upright views of the esophagus while the patient is drinking and the table will be lowered to the horizontal position.
- The radiologist will then obtain a series of views of the stomach.
- The technologist should assist the patient in attaining positions as requested by the radiologist.
- Subsequently several films of the duodenal bulb and gastric antrum will be obtained. It is necessary to have the lead glove and compression paddle available for these films.
- The technologist will be instructed by the radiologist to perform overhead radiographs when fluoroscopy is completed.
- After completing routine overhead radiographs for the UGI series, the patient should be given the two (2) additional cups of barium. The timing of the small bowel series should begin when the patient is finished drinking the two additional cups with as little delay as possible.
- Small bowel films should be taken as instructed by the radiologist.
- When the barium has progressed through the entire small bowel, set up room for fluoro.
- Under fluoroscopy, the radiologist will take spot films of the terminal ileum. The technologist should have the compression cone in place, and have the compression paddle and lead gloves available.

SMALL BOWEL SERIES (WITH UPPER GI) IMAGES

ROUTINE PROJECTIONS: RAO STOMACH, RIGHT LATERAL STOMACH, PA ABDOMEN, AP ABDOMEN.

RAO STOMACH:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXHALATION
44”	

PATIENT POSITION: From the PA position, have the patient rotate 45 degrees towards their right side.
CENTRAL RAY: Directed to the midpoint of the film.
Location of the stomach is dependent on the patient’s body habitus.

COLLIMATION: Collimate to the skin surface.
SHIELDING: Gonads on **ALL** patients.

RIGHT LATERAL STOMACH:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXHALATION
44”	

PATIENT POSITION: Place the patient in a lateral position with their right side against the table.
CENTRAL RAY: Directed to the midpoint of the film.
Location of the stomach is dependent on the patient’s body habitus.
COLLIMATION: Collimate to the skin surface.
SHIELDING: Gonads on **ALL** patients.

PA ABDOMEN:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXHALATION
44”	

PATIENT POSITION: PA prone with the mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Perpendicular to the film 3-4” above the iliac crest.
Location of the stomach is dependent on the patient’s body habitus.
COLLIMATION: Collimate to the skin surface.
SHIELDING: Gonads on male patients.

AP ABDOMEN:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXHALATION
44”	

PATIENT POSITION: AP supine with the mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Perpendicular to the film 3-4” above the iliac crest.
Location of the stomach is dependent on the patient’s body habitus.
COLLIMATION: Collimate to the skin surface.
SHIELDING: Gonads on male patients.

SMALL BOWEL SERIES WITH AIR CONTRAST UGI

FLUORO KVP – 110

DIGITAL FLUORO SET AND PATIENT INFORMATION TYPED IN.

PATIENT POSITION FOR FLUORO – UPRIGHT

BARIUM MIXTURE/OTHER SUPPLIES – 2 OZ. HD BARIUM (SHAKEN THOROUGHLY), 1 PACKAGE EFFERVESCENT GRANULES WITH SMALL AMOUNT OF WATER, 3 OZ. 1200 OR 1400 BARIUM (DEPENDING ON RADIOLOGIST).

GENERAL DESCRIPTION OF EXAM AFTER SET-UP IS COMPLETE:

- The exam is started with the patient standing erect against the fluoro table.
- The effervescent granules/water administered to the patient and then the patient drinks at the request of the radiologist approximately 2 oz. of the liquid HD barium in a slightly RAO position.
- The radiologist will obtain upright views while the patient is drinking and the table will be lowered to the horizontal position.
- The radiologist will then obtain a series of views of the stomach.
- The technologist should assist the patient in attaining positions as requested by the radiologist.
- The patient will then be placed in the prone position and will drink approximately 3oz. of the 1200 wt. barium while the radiologist obtains films of the barium filled esophagus. The radiologist may elect to place a pillow under the abdomen for these films.
- Subsequently, several films of the duodenal bulb and gastric antrum will be obtained for both single and double contrast views. It is necessary to have the lead glove and compression paddle available for these films.
- The technologist will be instructed by the radiologist to perform overhead radiographs when fluoroscopy is completed.
- After completing routine overhead radiographs for UGI series (if requested by the radiologist), the patient should be given the two (2) additional cups of barium.
- The timing for the small bowel series should begin when the patient is finished drinking the two additional cups.
- Small bowel films should be taken as instructed by the radiologist.
- When the barium has progressed through the entire small bowel, set up the room for fluoro.
- Under fluoroscopy, the radiologist will take spot films of the terminal ileum. The technologist should have the compression cone in place, and have the compression paddle and lead gloves available.

SMALL BOWEL SERIES WITH AIR CONTRAST UGI IMAGES

ROUTINE PROJECTIONS: LPO STOMACH, RAO STOMACH, RIGHT LATERAL STOMACH, PA ABDOMEN.

LPO STOMACH:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXHALATION
44”	

PATIENT POSITION: From the AP supine position, have the patient rotate 45 degrees towards their left side.
CENTRAL RAY: Directed to the midpoint of the film.
Location of the stomach is dependent on the patient’s body habitus.
COLLIMATION: Collimate to the skin surface.
SHIELDING: Gonads on **ALL** patients.

RAO STOMACH:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXHALATION
44”	

PATIENT POSITION: From the PA position, have the patient rotate 45 degrees towards their right side.
CENTRAL RAY: Directed to the midpoint of the film.
Location of the stomach is dependent on the patient’s body habitus.
COLLIMATION: Collimate to the skin surface.
SHIELDING: Gonads on **ALL** patients.

RIGHT LATERAL STOMACH:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXHALATION
44”	

PATIENT POSITION: Place the patient in a lateral position with their right side against the table.
CENTRAL RAY: Directed to the midpoint of the film.
Location of the stomach is dependent on the patient’s body habitus.
COLLIMATION: Collimate to the skin surface.
SHIELDING: Gonads on **ALL** patients.

PA ABDOMEN:

14 x 17 LENGTHWISE
BUCKY SUSPENDED EXHALATION
44”

PATIENT POSITION: PA prone with the mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Perpendicular to the film at the level of the iliac crest.
Location of the stomach is dependent on the patient’s body habitus.
COLLIMATION: Collimate to the skin surface.
SHIELDING: None.

The radiologist will give instructions on what filming protocol they would like. Below is a list of preferences by radiologist.

Radiologist	Image times	View Images	Spot times	Special requests
Dr. Darden	Immediate, 15, 45 and then every 30 minutes	review each image	as requested	
Dr. Fish	Immediate, 15, 45 and then every 30 minutes	review each image	as requested	
Dr. Frazier	Immediate, 15, 45 and then every 30 minutes	review each image (unless contrast hasn’t moved)	Every 30 minutes	
Dr. Green	Immediate, 15, 45 and then every 30 minutes	review each image	as requested	
Dr. Hewitt	Immediate, 15, 45 and then every 30 minutes	review 30 min. image and each one there after	as requested	needs to see request and history before exam is started, including prior reports.
Dr. Landsnes	Immediate, 15, 45 and then every 30 minutes	when the barium is in the terminal ileum unless there is a question	as requested	
Dr. Meyer	Immediate, 15, 45 and then every 30 minutes		as requested	full stomach on each image
Dr.Scott	Immediate, 15, 45 and then every 30 minutes	review each image	as requested	
Dr. Sprinkle	Immediate, 15, 45 and then every 30 minutes	at end of study unless there is a previous abnormal study	at end of study unless history of abnormal study	
Dr. Statler	Immediate and every 30 minutes	every 30 minutes	Every 30 minutes	bilateral obliques at end of the study

**Small bowel studies without a GI may be scouted and done in any room.

BARIUM ENEMA (STANDARD)

FLUORO KVP – 110

DIGITAL FLUORO SET WITH PATIENT INFORMATION TYPED IN.

COMPRESSION CONE IN PLACE.

BARIUM MIXTURE/OTHER SUPPLIES: ENEMA BAG, ENEMA TIP WITH RETENTION BALLOON, BARIUM MIXTURE, KY JELLY.

GENERAL DESCRIPTION OF PROCEDURE AFTER SET-UP IS COMPLETE:

The patient should fill out the questionnaire pertaining to their prep.

- Technologist inserts enema tip and retention cuff inflated under fluoroscopic control by radiologist.
- The radiologist is notified as soon as everything is ready for examination.
- As requested by the radiologist, the control clip is released and the flow of barium is started.
- The technologist will control the flow of barium as instructed by the radiologist.
- The technologist should also assist the patient in rotating to various positions as indicated by the radiologist.
- The radiologist will take spot films of the colon.
- Upon completion of the fluoroscopic part of the examination, the radiologist will instruct the technologist to begin taking the routine overhead radiographs.
- Upon satisfactory completion of the overhead radiographs, the patient is escorted to the restroom and instructed to expel as much of the enema as possible.
- A post evacuation radiograph may be obtained at the radiologist's discretion.

BARIUM ENEMA (STANDARD) IMAGES

ROUTINE PROJECTIONS: AP ABDOMEN (PRELIM), AP ABDOMEN HIGH/LOW, AP SIGMOID, RPO/LPO ABDOMEN, PA ABDOMEN, LEFT LATERAL RECTUM, PA ABDOMEN (POST EVAC).

AP ABDOMEN (PRELIM):

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44"	

PATIENT POSITION: AP supine with mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Perpendicular to the film at the level of the iliac crest.
COLLIMATION: Collimate to the skin surface.
SHIELDING: None.

AP ABDOMEN HIGH/LOW:

14 x 17	CROSSWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: AP supine with mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: HIGH – Centered high enough to include the diaphragm.
LOW – Centered low enough to include the rectum.
THESE TWO FILMS SHOULD OVERLAP.
COLLIMATION: Collimate to the skin surface.
SHIELDING: None.

AP SIGMOID:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: AP supine with mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Direct the central ray 30-40 degrees cephalic entering just inferior to the symphysis.
COLLIMATION: Collimate to the size of the film.
SHIELDING: None.

RPO ABDOMEN:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: From the AP position, oblique the patient 35-45 degrees with the patient’s right side closest to the film.
CENTRAL RAY: Perpendicular to the film at the level of the iliac crest. Be certain to include the left (splenic) flexure size of the film.
COLLIMATION: Collimate to the size of the film.
SHIELDING: None.

LPO ABDOMEN:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: From the AP position, oblique the patient 35-45 degrees with the patient's left side closest to the film.
CENTRAL RAY: Perpendicular to the film at the level of the iliac crest. Be certain to include the right (hepatic) flexure size of the film.
COLLIMATION: Collimate to the size of the film.
SHIELDING: None.

PA ABDOMEN:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44"	

PATIENT POSITION: Prone with the mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Perpendicular to the film at the level of the iliac crest.
COLLIMATION: Collimate to the size of the film.
SHIELDING: None.

LEFT LATERAL RECTUM:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44"	

PATIENT POSITION: Lying on left side in a true lateral position.
CENTRAL RAY: Perpendicular to the film, 5-7 inches above the symphysis.
COLLIMATION: Collimate to the size of the film.
SHIELDING: None.

PA ABDOMEN (POST EVAC):

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44"	

PATIENT POSITION: Prone with the mid-sagittal plane centered to the midline of the film.
CENTRAL RAY: Perpendicular to the film at the level of the iliac crest.
COLLIMATION: Collimate to the size of the film.
SHIELDING: None.

AIR CONTRAST BARIUM ENEMA

FLUORO KVP – 90

DIGITAL FLUORO SET WITH PATIENT INFORMATION TYPED IN.

BARIUM MIXTURE/OTHER SUPPLIES: ENEMA BAG, ENEMA TIP WITH RETENTION BALLOON, BARIUM MIXTURE, AIR BULB, KY JELLY.

GENERAL DESCRIPTION OF PROCEDURE AFTER SET-UP IS COMPLETE:

- Technologist inserts enema tip and retention cuff inflated under fluoroscopic control by radiologist.
- The radiologist is notified as soon as everything is ready for examination.
- As requested by the radiologist, the control clip is released and the flow of barium is started.
- The technologist will control the flow of barium as instructed by the radiologist.
- The technologist should also assist the patient in rotating to various positions as indicated by the radiologist.
- When the barium has adequately coated the walls of the colon, the radiologist will instruct the technologist to lower the enema bag to the floor, leaving clamp open.
- When a sufficient amount of barium has been drained from the colon, the radiologist will instruct the technologist to clamp the enema bag and place it on the table.
- The radiologist will then begin to inject air into the colon under fluoroscopy.
- When a sufficient amount of air has been instilled into the colon the radiologist will begin to take spot films.
- Upon completion of the fluoroscopic part of the examination, the radiologist will instruct the technologist to begin taking the routine overhead radiographs.
- Upon satisfactory completion of the overhead radiographs, the patient is escorted to the restroom and instructed to expel as much of the enema as possible.
- A post evacuation radiograph may be obtained at the radiologist's discretion.
-

MIXING BARIUM

Pre-filled enema bags

Add 750 cc of warm water, shake well.

Do not mix until the preliminary film has been approved by the radiologist.

BARIUM ENEMA WITH AIR IMAGES

ROUTINE PROJECTIONS: AP ABDOMEN (PRELIM), RIGHT AND LEFT LATERAL DECUBITUS ABDOMEN, AP ABDOMEN HIGH/LOW, RPO/LPO

ABDOMEN, LPO SIGMOIND, PA ABDOMEN, PA SIGMOID, AP UPRIGHT ABDOMEN, VENTRAL DECUBITUS ABDOMEN.

AP ABDOMEN (PRELIM):

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: AP supine with mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Perpendicular to the film at the level of the iliac crest.
COLLIMATION: Collimate to the skin surface.
SHIELDING: None.

RIGHT AND LEFT LATERAL DECUBITUS ABDOMEN:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: Recumbent, lying on left and right sides, arms extended above abdominal field. Patient lying in front of vertical grid device.
CENTRAL RAY: Horizontal, perpendicular to the film at the level of the iliac crest.
COLLIMATION: Collimate to the size of the field.
SHIELDING: None.

AP ABDOMEN HIGH/LOW:

14 x 17	CROSSWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: AP supine with mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: HIGH – Centered high enough to include the diaphragm.
LOW – Centered low enough to include the rectum.
THESE TWO FILMS SHOULD OVERLAP.
COLLIMATION: Collimate to the skin surface.
SHIELDING: None.

RPO ABDOMEN:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION

44”

PATIENT POSITION: From the AP position, oblique the patient 35-45 degrees with the patient’s right side closest to the film.
CENTRAL RAY: Perpendicular to the film at the level of the iliac crest. Be certain to include the left (splenic) flexure size of the film.
COLLIMATION: Collimate to the size of the film.
SHIELDING: None.

LPO ABDOMEN:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: From the AP position, oblique the patient 35-45 degrees with the patient’s left side closest to the film.
CENTRAL RAY: Perpendicular to the film at the level of the iliac crest. Be certain to include the right (hepatic) flexure size of the film.
COLLIMATION: Collimate to the size of the film.
SHIELDING: None.

LPO SIGMOID:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: From the AP position, oblique the patient 35-45 degrees with the patient’s left side closest to the film.
CENTRAL RAY: Direct the central ray 30-40 degrees cephalic entering at the level of the ASIS.
COLLIMATION: Collimate to the size of the film.
SHIELDING: None.

PA ABDOMEN:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: Prone with the mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Perpendicular to the film at the level of the iliac crest.
COLLIMATION: Collimate to the size of the film.
SHIELDING: None.

PA SIGMOID:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: Prone with the mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Direct the central ray 30-40 degrees caudal, entering at the level of the iliac crest.
COLLIMATION: Collimate to the size of the film.
SHIELDING: None.

AP UPRIGHT ABDOMEN (if requested by radiologist):

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: AP upright with back flat against table, and the mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Horizontal, perpendicular to the film at the level of the iliac crest. Be certain to include the entire transverse colon.
COLLIMATION: Collimate to the skin surface.
SHIELDING: None.

VENTRAL DECUBITUS RECTUM:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: Prone with the mid-sagittal plane centered to the midline of the table. Arms extended above the head.
CENTRAL RAY: Horizontal, perpendicular to the film, centered 5-7 inches above the symphysis.
COLLIMATION: Collimate to the size of the film.
SHIELDING: None.

****ENEMA TIP MUST BE REMOVED PRIOR TO THE EXPOSURE.****

BARIUM ENEMA WITH COLOSTOMY

*Prior to preparing for this exam, ask the patient:

- What type of surgery was performed?
- Is the colostomy temporary or permanent? Is the rectum intact?

From the answers to these questions, the radiologist will determine if the exam is to be standard or air contrast.

FLUORO KVP 110

DIGITAL FLUORO SET UP AND PATIENT INFORMATION TYPED IN

PATIENT POSITION FOR FLUORO – AP SUPINE

BARIUM SUPPLIES – BARIUM MIXTURE, KY JELLY, ENEMA TIP

GENERAL DESCRIPTION OF PROCEDURE AFTER SET-UP IS COMPLETE.

- The radiologist is notified as soon as everything is ready for examination.
- With assistance from the radiologist the technologist inserts enema tip into stoma and inflates retention cuff.
- As requested by the radiologist, the control clip is released and the flow of barium is started.
- The technologist will control the flow of barium as instructed by the radiologist.
- The technologist should also assist the patient in rotating to various positions as indicated by the radiologist.
- The radiologist will take spot films of the colon.
- Upon completion of the fluoroscopic part of the examination the radiologist will instruct the technologist to begin taking the routine overhead projections.
- Upon satisfactory completion of the overhead radiographs, the enema bag should be dropped to the floor and as much barium as possible should be drained back into the enema bag.
- Upon satisfactory evacuation, the stoma should be irrigated and cleansed, and a fresh dressing applied.
- A postevacuation radiograph is then obtained, and if satisfactory, the exam is usually complete.

BARIUM ENEMA WITH COLOSTOMY

ROUTINE PROJECTIONS: AP ABDOMEN (PRELIM), AP ABDOMEN HIGH/LOW, RPO/LPO ABDOMEN, PA ABDOMEN (POST EVAC).

AP ABDOMEN (PRELIM):

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: AP supine with mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Perpendicular to the film at the level of the iliac crest.
COLLIMATION: Collimate to the skin surface.
SHIELDING: None.

AP ABDOMEN HIGH/LOW:

14 x 17	CROSSWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: AP supine with mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: HIGH – Centered high enough to include the diaphragm.
LOW – Centered low enough to include the rectum.
THESE TWO FILMS SHOULD OVERLAP.
COLLIMATION: Collimate to the skin surface.
SHIELDING: None.

RPO ABDOMEN:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: From the AP position, oblique the patient 35-45 degrees with the patient’s right side closest to the film.
CENTRAL RAY: Perpendicular to the film at the level of the iliac crest. Be certain to include the left (splenic) flexure size of the film.
COLLIMATION: Collimate to the size of the film.
SHIELDING: None.

LPO ABDOMEN:

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: From the AP position, oblique the patient 35-45 degrees with the patient’s left side closest to the film.
CENTRAL RAY: Perpendicular to the film at the level of the iliac crest. Be certain to include the right (hepatic) flexure size of the film.
COLLIMATION: Collimate to the size of the film.
SHIELDING: None.

PA ABDOMEN (POST EVACUATION):

14 x 17	LENGTHWISE
BUCKY	SUSPENDED EXPIRATION
44”	

PATIENT POSITION: Prone with the mid-sagittal plane centered to the midline of the table.
CENTRAL RAY: Perpendicular to the film at the level of the iliac crest.
COLLIMATION: Collimate to the size of the film.
SHIELDING: None.