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**ABDOMEN
AND
PELVIS
EXAMS**

**ABDOMEN
W/O & W/ CONTRAST**

<u>EXAM</u>	<u>Scan Range</u>	<u>Scan Type/ Image Thickness</u>	<u>Enteric Contrast</u>	<u>IV Contrast</u>	<u>Scan Phase</u>	<u>Images</u>
Adrenal	Diaphragm though Iliac crest	Helical 2.5 x 2.5mm	None	100 cc's Omni	Unenhanced (adrenals only) Portal Venous 15min Delay	Soft tissue axial Soft tissue axial, coronal and Sagittal Soft Tissue Axial
Pancreatic	Diaphragm though Iliac crest	Helical 2.5 x 2.5mm	Oral Water	100 cc's Omni	Arterial Portal venous Delay	Soft tissue axial Soft tissue axial, coronal and sagittal Soft tissue axial Soft tissue axial
Hepatic	Diaphragm though Iliac crest	Helical 2.5 x 2.5mm	None	100 cc's Omni	Arterial Portal venous Delay	Soft tissue axial Soft tissue axial, coronal and sagittal Soft tissue axial Soft tissue axial

**ABDOMEN PELVIS
W/O CONTRAST**

<u>EXAM</u>	<u>Scan Range</u>	<u>Scan Type/ Image Thickness</u>	<u>Enteric Contrast</u>	<u>Scan Phase</u>	<u>Images</u>
Renal Stone/Non- Contrast	Diaphragm though Symphysis Pubis	Helical 2.5 x 2.5mm	None	Unenhanced	Soft tissue axial, coronal and Sagittal
Oral Only	Diaphragm though Symphysis Pubis	Helical 2.5 x 2.5mm	Oral	Unenhanced	Soft tissue axial, coronal and sagittal

**ABDOMEN PELVIS
W/ CONTRAST**

<u>EXAM</u>	<u>Scan Range</u>	<u>Scan Type/ Image Thickness</u>	<u>Enteric Contrast</u>	<u>IV Contrast</u>	<u>Scan Phase</u>	<u>Images</u>
Routine	Diaphragm though Symphysis Pubis	Helical 2.5 x 2.5mm	Oral	100 cc's Omni	Portal Venous 5 min delay only if trauma or suspected pyelonephritis	Soft tissue axial, coronal and Sagittal Soft Tissue Axial
Enterography	Diaphragm though Symphysis Pubis	Helical 2.5x 2.5mm	Volumen or Milk	125 cc's Omni	Portal venous Delay	Soft tissue axial, coronal and sagittal Soft tissue axial
Urogram	Diaphragm though Symphysis Pubis	Helical 2.5 x 2.5mm	Water	120 cc's Omni	Unenhanced *10-15 min Delay Portal venous/ Delay (all in one)	Soft tissue axial Soft tissue axial, coronal and sagittal
Cystogram	Diaphragm through Symphysis Pubis	Helical 2.5 x 2.5mm	None Fill Bladder via Cath	100cc's Omni	Unenhanced Portal Venous Delay	Soft Tissue Axial Soft Tissue axial, coronal, sagittal Soft Tissue Axial

PELVIS W/ CONTRAST

<u>EXAM</u>	<u>Scan Range</u>	<u>Scan Type/ Image Thickness</u>	<u>Enteric Contrast</u>	<u>IV Contrast</u>	<u>Scan Phase</u>	<u>Images</u>
Routine	Top of Crest through Symphysis Pubis	Helical 2.5 x 2.5mm	Oral	80cc's Omni (Pre- inject 40)	Arterial/ Delay (all in one) Wait 5 min. to scan	Soft tissue axial, coronal and Sagittal

CHEST EXAMS

CHEST W/O CONTRAST

<u>EXAM</u>	<u>Scan Range</u>	<u>Scan Type/ Image Thickness</u>	<u>Enteric Contrast</u>	<u>Scan Phase</u>	<u>Images</u>
Routine	Lung Apices through Adrenals	Helical 2.5mm x 2.5mm	None	Unenhanced	Soft tissue axial, coronal Sagittal, and Axial MIP
High Resolution	Lung Apices through Adrenals	Axial 1.25mm x 1i	None	Unenhanced	Soft tissue Axial (Inspiration & Expiration- Prone Inspiration- Supine)

CHEST W/ CONTRAST

<u>EXAM</u>	<u>Scan Range</u>	<u>Scan Type/ Image Thickness</u>	<u>Enteric Contrast</u>	<u>IV Contrast</u>	<u>Scan Phase</u>	<u>Images</u>
Routine	Lung Apices through Adrenals	Helical 2.5 x 2.5mm	None	60 cc's Omni	Arterial	Soft tissue axial, coronal, Sagittal, and Axial MIP
PE	Lung Apices through Costophrenic Angles	Helical 1.25 x 1.25mm	None	100cc's Omni	Arterial/ Pulmonary Arteries	Soft tissue axial, coronal, sagittal, axial MIP, rotational MIP

**CHEST/ABDOMEN/PELVIS
W/ CONTRAST**

<u>EXAM</u>	<u>Scan Range</u>	<u>Scan Type/ Image Thickness</u>	<u>Enteric Contrast</u>	<u>IV Contrast</u>	<u>Scan Phase</u>	<u>Images</u>
Routine	Lung Apices through Symphysis Pubis	Helical 2.5 x 2.5mm	Oral	100cc's Omni	Venous Delay	Soft tissue axial, coronal, Sagittal, and Axial MIP Soft Tissue Axial

CTA

<u>EXAM</u>	<u>Scan Range</u>	<u>Scan Type/ Image Thickness</u>	<u>Enteric Contrast</u>	<u>IV Contrast</u>	<u>Scan Phase</u>	<u>Images</u>
Abdomen (Renals)	Diaphragm to Crest	Helical 2.5 x 2.5mm (recon to 0.625mm for reformats)	None	100cc's omni	Unenhanced Arterial	Soft Tissue Axial Soft tissue axial, coronal, Sagittal
Abdomen Pelvis	Diaphragm to Symphysis Pubis	Helical 2.5 x 2.5mm (recon to 0.625mm for reformats)	None	100cc's Omni	Unenhanced (graft or dissection) Arterial Delay (graft or dissection)	Soft tissue axial, Soft tissue axial coronal, sagittal, Soft tissue axial
Run-Off	Diaphragm through Toes	Helical 2.5 x 2.5mm (recon to 0.625mm for reformats)	None	100cc's omni	Unenhanced (graft or dissection) Arterial	Soft tissue axial, Soft tissue axial coronal, sagittal
GI Bleed	Diaphragm through Symphysis Pubis	Helical 2.5 x 2.5mm (recon to 0.625mm for reformats)	None	100cc's omni	Unenhanced Arterial	Soft tissue axial, Soft tissue axial coronal, sagittal

Chest/ Thorax	Apices through Adrenals	Helical 1.25x1.25 (recon to 0.625mm for reformats)	None	100cc's Omni	Arterial	Soft Tissue axial, coronal, sagittal, axial MIP
Entire Aorta	Apices through Symphysis Pubis	Helical 2.5x 2.5mm (recon to 0.625mm for reformats)	None	100cc's Omni	Unenhanced (Graft or dissection Arterial Delay (graft or dissection)	Soft tissue axial, Soft tissue axial coronal, sagittal, Soft tissue axial
CTA Head	Base of skull to Vertex	Helical 0.625 x 0.625mm	None	75cc's Omni	Arterial	Standard Axial MIP Axial, oblique, coronal & sagittal
CTA NECK	Sella to Arch	Helical 0.625x 0.625mm	None	75cc's Omni	Arterial	Soft tissue MIPS- axial, sagittal, coronal; include angled axial images if there is dental filling artifact

- All delays 5 min unless indicated or pathologically beneficial
- All CTA bolus timing for enhancement of Aorta/Carotids
- Send only the 2.5mm slice thickness images to PACS; DO NOT send the 0.625mm images
- CTA of the upper extremity should be run like the CTA chest/thorax but scan from the top of the shoulder through the finger tips

Neuro

<u>EXAM</u>	<u>Scan Range</u>	<u>Scan Type/ Image Thickness</u>	<u>IV Contrast</u>	<u>Scan Phase</u>	<u>Images</u>
Head W/O	Skull Base to Vertex	Helical 2.5 x 2.5mm	Unenhanced	Unenhanced	Standard Axial and coronal; add HD Bone Axial if trauma
Head W/	Skull Base to Vertex	Helical 2.5 x 2.5mm	60 cc's Omni	Unenhanced	Standard Axial and coronal
Head W/O & W/	Skull Base to Vertex	Helical 2.5 x 2.5mm	60cc's omni	Unenhanced *1-5 min Delay	Standard Axial and Coronal
Stroke	Skull Base to Vertex	Helical 2.5 x 2.5mm	Unenhanced	Unenhanced	Standard Axial and Coronal
Facial	Bone Axial, Sagittal and Coronal	Helical 0.625 x 0.625mm	Unenhanced	Unenhanced	HD Bone Axial, Sagittal and Coronal
Facial W/ Contrast	Bone Axial, Sagittal and Coronal	Helical 0.625 x 0.625mm	60 cc's Omni Pre-inject 30cc's	Arterial	HD Bone Axial, Sagittal and Coronal
Sinus	Inferior Maxillary sinus through frontal sinus	Helical 0.625 x 0.625mm	Unenhanced	Unenhanced	Bone Axial, Sagittal and Coronal
Temporal Bones	Inferior Mastoid tips to top of ear	Helical 0.625 x 0.625mm	Unenhanced	Unenhanced Prone- Angle perpendicular to base of skull. Supine-angle parallel to base of skull	Bone Axial Supine and Prone
Soft Tissue Neck	Sella to inferior arch	Helical 2.5 x 2.5mm	60cc's omni (Pre-Inject 30cc's)	Arterial	Soft tissue Axial, Coronal, Sagittal; include angled axial images if

there is dental filling artifact

Parathyroid	Sella to Arch	Helical 2.5 x 2.5mm Arterial 0.625x0.625	75cc's omni	Unenhanced Arterial Venous/Delay- 12sec	Soft Tissue Axial Soft tissue axial, coronal, Sagittal Soft Tissue Axial
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Musculoskeletal

<u>EXAM</u>	<u>Scan Range</u>	<u>Scan Type/ Image Thickness</u>	<u>Images</u>
Shoulder	Top of Shoulder through scapula	Helical 1.25 x 1.25mm	HD Bone Axial, Sagittal, and Coronal
Elbow	Above and Below Elbow Joint (area of interest)	Helical 0.625 x 0.625mm	HD Bone Axial, Sagittal, and Coronal
Wrist	Proximal to Radiocarpal joint through mid metacarpals	Helical 0.625 x 0.625	HD Bone Axial, Sagittal, and Coronal
Hand	Entire Hand	Helical 0.625 x 0.625	HD Bone Axial, Sagittal, and Coronal

Cervical	Skull base to T1	Helical 1.25 x 1.25mm (recon to 0.625)	Standard Axial Bone Sagittal and Coronal
Thoracic	C7 Thru L1	Helical 1.25 x 1.25mm (recon to 0.625)	Standard Axial Bone Sagittal and Coronal
Lumbar	T1 thru S1	Helical 1.25 x 1.25mm (recon to 0.625)	Standard Axial Bone Sagittal and Coronal
Pelvis	Top of Crest thru ischial tuberosity	Helical 1.25 x 1.25mm	Bone Axial, Sagittal, and Coronal
Knee	Above and Below Knee Joint (area of interest)	Helical 1.25 x 1.25mm	HD Bone Axial, Sagittal, and Coronal
Ankle	Above Ankle Thru Calcaneus	Helical 0.625 x 0.625	HD Bone Axial, Sagittal, and Coronal
Foot	Ankle through Toes	Helical 0.625 x 0.625	HD Bone Axial, Sagittal, and Coronal

TRAUMA

Head/C-spine/Chest/Abdomen/Pelvis

<u>EXAM</u>	<u>Scan Range</u>	<u>Scan Type/Image Thickness</u>	<u>Enteric Contrast</u>	<u>IV Contrast</u>	<u>Scan Phase</u>	<u>Images</u>
Head W/O	Skull base to Vertex	Helical 2.5 x 2.5mm	None	None	Unenhanced	Standard, axial and coronal and HD Bone axial

Cervical	Skull base to T1	Helical 1.25 X 1.25mm (recon to 0.625mm)	None	None	Unenhanced	Standard axial, bone sagittal and coronal
C/A/P	Lung Apices through Symphysis Pubis	Helical 2.5 x 2.5mm	None	100 cc's Omni	Portal venous 5min Delay diaphragm through bladder (if patient is stable enough)	Soft tissue axial Soft tissue axial, coronal and sagittal

Pediatrics
0-18yrs

<u>EXAM</u>	<u>Scan Range</u>	<u>Scan Type/ Image Thickness</u>	<u>Enteric Contrast</u>	<u>IV Contrast</u>	<u>Scan Phase</u>	<u>Images</u>
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Head W/O	Diaphragm to Crest	Helical 5 x 5mm	None	Unenhanced	Unenhanced	Standard Axial and Coronal; add 3D if trauma
Cranio-synostosis	Diaphragm to Symphysis Pubis	Helical 1.25 x 1.25mm	None	Unenhanced	Unenhanced	Standard Axial and Coronal
Chest W/ Contrast	Apices through Adrenals	Helical 5 x 5mm	None	See guideline below	Unenhanced (graft or dissection) Arterial Delay	Soft tissue axial, Soft tissue axial coronal, and sagittal, Soft tissue axial
Abdomen Pelvis W/ Contrast	Diaphragm through Symphysis Pubis	Helical 5 x 5mm	Oral See guidelines below	See guideline below	Portal/Venous No delays unless pathologically indicated/beneficial	Soft tissue axial coronal, and sagittal,

**Pediatric
Contrast
Guidelines**

Contrast

OMNI 240

- ORAL

<u>Age</u>	<u>Amount</u>	
1-6 mos	60-120ml	2-4oz
6-12 mos	120-180ml	4-6oz
1-4 yrs	180-270ml	6-9oz
4-8 yrs	270-360ml	9-12oz
8-12 yrs	360-480ml	12-16oz
12-16 yrs	480-600ml	16-20oz
>16 yrs	follow adult dosing	

**OMNI
350- IV
ONLY**

1.0cc per kilogram / ½ cc per pound – do not exceed the adult does of 100cc

CT
Contrast
Guidelines

Contrast

OMNI 240 25ml is to be mixed with 30oz of a clear non-carbonated liquid and drank 2
- ORAL hours prior to CT scan.

OMNI Patients should be NPO 3 hours prior to CT scan, excluding ER and STAT
350- IV patients. Omni 350 is used for all contrast studies.
ONLY

VISIPAQ Patients should be NPO 3 hours prior to CT scans. Visipaque is used for ALL
UE -IV cardiology patients and possible for any renal deficiency patients or allergy
ONLY patients.

Patient Prep Guidelines

Diabetics

*Patients should remain off the following diabetes medications for 48 hours after IV contrast injection:

- Adavandament
- Metformin
- Glucophage
- Glucovance

Creatinine/ GFR

Normal creatinine levels are 0.6-1.4 (results outside of the normal levels must be checked with a radiologist)

Creatinine levels should be obtained for patients who are

- 65 years of age or older
- Diabetic
- Renal failure
- History of kidney disease

Patient must also have a GFR > 45

Patients with a GFR between 30-45 must have Renal Protection prior to CT scan.

Patients with a GFR <30 CAN NOT have IV Contrast

Premedication Protocol

Outpatient 32mg Methylprednisolone (Medrol) by mouth, night before procedure. 32mg Methylprednisolone (Medrol) by mouth 2 hrs prior to procedure and 50mg diphenhydramine (Benadryl), 1 hour before procedure.

Inpatient/ ER	200mg Hydrocortisone through IV, given 1 hour prior to procedure and 50 Diphenhydramine by mouth, 1 hour before procedure
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Unable to take by mouth	200mg Hydrocortisone IV 12 Hours before procedure, 200mg Hydrocortisone IV, 1 hour before procedure, and 50mg diphenhydramine IV, 1 hour before procedure.
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Renal Protection Protocol

6 Hour	1 Hour prior to procedure: Sodium Chloride 0.9% IV infuse at 3.5 ml/kg/hr Post Procedure: Sodium Chloride 0.9% IV infuse 1.18 ml/kg/hr for 6 hours. Patient's with left ventricle failure rate can not exceed 385 ml/hr (200ml/hr)
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2 Hour	1 Hour prior to procedure: Sodium Chloride 0.9% IV infuse at 3.5 ml/kg/hr Post Procedure: Sodium Chloride 0.9% IV infuse 1.5 ml/kg/hr for one hour Patient's with left ventricle failure rate can not exceed 385 ml/hr (200ml/hr)
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Post IV contrast instructions for Breastfeeding

- ACR (American College of Radiology) Recommends breast feeding mothers may continue breastfeeding per their usual routine
 - ACR (American College of Radiology) specifically states because a very small percentage of iodinated contrast medium that is excreted into the breast milk and absorbed by the infant's gastrointestinal tract, we believe that the available data suggests that it is safe for the mother and infant to continue breastfeeding after such agent
 - However, if you have any concerns with the due small percentage of iodinated contrast that may be excreted into the breast milk, bottle feeding may be substituted for breast feedings for 24 hours following administration
-