

## Meadows Body and MSK Protocols 2006

### Brachial Plexus

NVarray coil for all sequences except the axial STIR, which is done with the body coil.

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Sagittal	se T1	5.5/ 1.0	24	512x384
Sagittal	T2	5.5/ 1.0	24	512x384
Sagittal	STIR	5.5/ 1.0	30	256x256
Coronal	se T1	3.0/ 0.3	30	512x384
Axial	STIR	5.0/ 0.5	36	256x256

### Aorta (double dose gad)

Torso coil for all sequences except the bolus MRA, which is done with the body coil.

PLANE	SEQUENCE	THICKNESS/ GAP (mm)	FOV (cm)	MATRIX
Axial	"Black blood" T2	10/ 2	32	256x128
Coronal	Cardiac gated SE	10/ 2	32	256x128
Axial	Cardiac gated SE	10/ 2	32	256x128
Parasagittal	Cardiac gated cine SPGR	4/ 1	32	256x128
Axial	Cardiac gated cine SPGR	7/ .07	38	256x128
Parasagittal	Bolus MRA	2.6/ 0	36	256x160

### Routine Chest

Torso coil

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	ss T2	7/ 1	36	256x192
Axial	T2 fat sat	7/ 1	36	256x192
Axial	spgr T1	7/ 1	36	256x128
Coronal	ss T2	7/ 1	42	256x192

## Subclavian Protocol

Torso Coil

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	Cardiac gated SE	5/ 0.5	38	256x192
Sagittal	2D TOF right	5/ 0.5	20	256x128
Sagittal	2D TOF left	5/ 0.5	20	256x128
Sagittal	"black blood" T2	10/ 1.0	30	256x128
Coronal	Bolus MRA	2.8/ 0	32	256x128

## Tumor Breast (single dose gad)

Breast Coil.

Unilateral

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Sagittal	se T1	6/ 0.6	18	256x256
Axial	T2	6/ 0.6	18	256x256
Sagittal	T2 fat sat	6/ 0.6	18	256x256
15Sagittal	spgr T1 fat sat pre	3/ 0	18	384x256
Sagittal	spgr T1 fat sat post	3/ 0	18	384x256
Sagittal	spgr T1 fat sat post #2	3/ 0	18	384x256
Axial	T2 through axilla	8/ 2	28	256x192
OPTIONAL:				
Sagittal	T1 fat sat both breasts	3/ 0	18	384x256

## Bilateral Breast Screening (single dose gad)

Breast Coil

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	T2 (bilateral)	6/ 0.6	36	512x384
Sagittal	se T1 (each breast separately)	6/ 0.6	18	256x256
Sagittal	T2 fat sat (each breast separately)	6/ 0.6	18	256x256
Sagittal	spgr T1 fat sat pre (bilateral)	3/ 0	18	384x256
Sagittal	spgr T1 fat sat post (bilateral)	3/ 0	18	384x256
Sagittal	spgr T1 fat sat post #2 (bilateral)	3/ 0	18	384x256

## Silicone Breast

Breast Coil. Bilateral

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	se T1	6/ 0.6	34	256x256
Axial	T2	6/ 0.6	34	256x256
Coronal	T2 (each breast separately)	6/ 0.6	18	256x256
Coronal	se T1 (each breast separately)	6/ 0.6	18	256x256
Axial	IR fat sat	4/ 0	34	384x256
Axial	IR water sat	4/ 0	34	384x256

## Abdomen

Torso Coil

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	ss T2	7/ 1	36	352x192
Axial	T2 fat sat	7/ 1	36	256x192
Axial	spgr T1	7/ 1	36	256x128
Coronal	ss T2	7/ 1	42	352x192

## Pancreas Tumor (single dose gad)

Torso Coil

The dynamic FAME sequence covers the pancreas only with 1 precontrast phase and 4 postcontrast phases. The "T1 Post" sequences cover the entire abdomen.

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	ss T2	7/ 1	36	352x192
Axial	T2 fat sat	7/ 1	36	256x192
Axial	spgr T1	7/ 1	36	256x128
Coronal	ss T2	7/ 1	42	352x192
Axial	Dynamic FAME	5/ 0	38	256x128
Axial	T1 post	7/ 1	36	256x128
Coronal	T1 post	7/ 1	36	256x128

## Renal MRA (double dose gad)

Torso Coil for standard anatomic sequences.

Body coil for bolus MRA.

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Coronal	spgr T1	6/ 1	36	256x128
Coronal	Bolus MRA	2.4/ 0	30	256x192
Coronal	T1 post	6/ 1	36	256x128

## Renal CA #1

Torso Coil

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	ss T2	7/ 1	36	352x192
Axial	T2 fat sat	7/ 1	36	256x192
Axial	spgr T1	7/ 1	36	256x128
Axial	2D TOF (no presat)	5/ 0	40	256x192
Sagittal	2D TOF (sat aorta side)	4/ 0	24	256x192
Sagittal	"Black blood" T2	4/ 1	24	256x192

## Renal CA #2 (single dose gad)

Torso Coil

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	ss T2	7/ 1	36	352x192
Axial	spgr T1	7/ 1	36	256x128
Axial	T2 fat sat	7/ 1	36	256x192
Coronal	ss T2	7/ 1	42	352x192
Axial	T1 post	7/ 1	36	256x128
Coronal	T1 post	7/ 1	36	256x128

## Abdomen MRV

Torso Coil

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	2D TOF venogram	5/ 0	30	256x192
Axial	"Black blood" T2	7/ 1	36	512x384
OPTIONAL: (GE #2 only)				
Axial	FIESTA (no breath hold)	8/ 0	40	224x224
Axial	Dual IR (no breath hold)	7/ 0	30	256x256

## Adrenal

Torso coil

Opposed phase images are through the adrenal glands only.

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Coronal	ss T2	7/ 1	42	352x192
Axial	ss T2	7/ 1	36	352x192
Axial	T2 fat sat	7/ 1	36	256x192
Axial	spgr T1	7/ 1	36	256x128
Axial	Dual echo in/out of phase T1	5/ 1	36	256x128

## Mesenteric Artery (double dose gad)

Torso Coil for standard anatomic images.

Body coil for Bolus MRA.

The MRA is centered such that the posterior aspect of the acquisition is at the posterior wall of the aorta.

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	ss T2	7/ 1	36	352x192
Coronal	spgr T1	6/ 1	36	256x128
Coronal	Bolus MRA	2.4/ 0	30	256x192
Coronal	T1 post	6/ 1	36	256x128

## **MRCP**

Torso coil

Usually added to a routine abdomen protocol.

<b>PLANE</b>	<b>SEQUENCE</b>	<b>THICKNESS/GAP (mm)</b>	<b>FOV (cm)</b>	<b>MATRIX</b>
Coronal	Thick Slab MRCP	70/ 0	40	256x256
Coronal	Thin Slab MRCP	5/ 0	40	256x256

## **Fibroid Pelvis (single dose gad)**

Torso Coil

<b>PLANE</b>	<b>SEQUENCE</b>	<b>THICKNESS/GAP (mm)</b>	<b>FOV (cm)</b>	<b>MATRIX</b>
Axial	T2	6/ 1	26	256x192
Sagittal	T2	6/ 1	26	256x192
Coronal	T2	6/ 1	26	256x192
Sagittal	se T1	6/ 1	26	256x192
Sagittal	T1 post	6/ 1	26	256x192

## **Internal Pelvis**

Torso Coil

<b>PLANE</b>	<b>SEQUENCE</b>	<b>THICKNESS/GAP (mm)</b>	<b>FOV (cm)</b>	<b>MATRIX</b>
Axial	ss T2	7/ 1	36	352x192
Axial	se T1	6/ 1	26	256x192
Axial	T2 fat sat	6/ 1	26	256x192
Axial	T2	6/ 1	26	256x192
Sagittal	T2	6/ 1	26	256x192
Coronal	T2	5/ 1	26	256x192

## External Pelvis

Torso Coil

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	ss T2	8/ 1	40	352x192
Axial	T2 fat sat	8/ 1	40	512x384
Axial	fse T1	8/ 1	40	512x384
Coronal	fse T1	7/ 1	40	512x384
Sagittal	T2	10/ 1	36	512x384

## Hip

Torso Coil

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	PD fat sat	7/ 1	36	512x256
Coronal	T2 fat sat	7/ 1	36	512x384
Coronal	se T1	7/ 1	36	512x384
Sagittal	T2	7/ 1	21	256x192

## Urethra

Cardiac Coil

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	T2	4/ 0.4	14	320x224
Axial	se T1	4/ 0.4	14	256x224
Axial	STIR	4/ 0.4	14	256x192
Sagittal	T2	4/ 0.4	20	320x224
Coronal	T2	4/ 0.4	16	320x224

## Endo-coil

Endorectal coil

For imaging the prostate or urethra in patients too large for the cardiac coil (>200 lbs)

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	T2	4/ 0.4	12	320x224
Axial	se T1	4/ 0.4	12	256x224
Axial	STIR	4/ 0.4	14	256x192
Sagittal	T2	4/ 0.4	20	320x224
Coronal	T2	4/ 0.4	12	320x224

## DVT Pelvis

Torso Coil

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	2D TOF venogram	5/ 0	30	256x192
Axial	"Black blood" T2	7/ 1	36	512x384
OPTIONAL: (GE #2 only)				
Axial	FIESTA (no breath hold)	8/ 0	40	224x224
Axial	Dual IR (no breath hold)	7/ 0	30	256x256

## Elbow

GP flex coil or cardiac coil

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	PD fat sat	4/ 0.4	12	256x256
Axial	se T1	4/ 0.4	12	256x192
Coronal	se T1	4/ 0.4	12	256x192
Coronal	STIR	4/ 0.4	12	256x192
Sagittal	PD fat sat	4/ 0.4	12	256x256
Sagittal	T2	4/ 0.4	12	256x256

## Shoulder

Shoulder coil

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	PD fat sat	4/ 1	14	256x256
Parasagittal	PD fat sat	4/ 1	14	256x256
Parasagittal	se T1	4/ 1	14	256x192
Paracoronal	se T1	4/ 1	14	256x192
Paracoronal	T2 fat sat	4/ 1	14	256x256
Paracoronal	T2	4/ 1	14	256x256

## Shoulder Arthrogram (contrast delivered to joint space)

Shoulder coil

All images are post-intraarticular contrast injection

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	se T1	4/ 1	14	256x192
Axial	T1 fat sat	4/ 1	14	256x192
Parasagittal	T1 fat sat	4/ 1	14	256x192
Paracoronal	T1 fat sat	4/ 1	14	256x192
Paracoronal	T2 fat sat	4/ 1	14	256x256
ABER	T1 fat sat	4/ 1	14	256x192

## Wrist

Wrist/TMJ coil

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	se T1	3/ 0.3	10	512x192
Axial	T2	3/ 0.3	10	256x192
Axial	T2 fat sat	3/ 0.3	10	256x192
Coronal	se T1	3/ 0.3	10	512x192
Coronal	GRE T2*	2.4/ 0	10	256x192
Coronal	T2 fat sat	3/ 0.3	10	256x192

### **Ankle I**

Ankle/chimney coil

Patient supine with ankle in neutral anatomic position.

<b>PLANE</b>	<b>SEQUENCE</b>	<b>THICKNESS/GAP (mm)</b>	<b>FOV (cm)</b>	<b>MATRIX</b>
Axial	se T1	4/ 0.4	12	256x192
Axial	T2 fat sat	4/ 0.4	12	256x192
Coronal	PD fat sat	4/ 0.4	12	256x192
Sagittal	STIR	4/ 0.4	12	256x192
OPTIONAL: For Achilles eval.				
Sagittal	se T1	4/ 0.4	12	256x192

### **Ankle II**

Ankle/chimney coil

Patient supine with ankle in neutral anatomic position.

<b>PLANE</b>	<b>SEQUENCE</b>	<b>THICKNESS/GAP (mm)</b>	<b>FOV (cm)</b>	<b>MATRIX</b>
Axial	PD fat sat	4/ 0.4	12	256x192
Sagittal	PD fat sat	4/ 0.4	12	256x192
Coronal	T2	4/ 0.4	12	256x192
Coronal	T2 fat sat	4/ 0.4	12	256x192
Coronal	se T1	4/ 0.4	12	256x192

### **Ankle III**

Knee/extremity coil

Patient prone with foot plantar flexed.

<b>PLANE</b>	<b>SEQUENCE</b>	<b>THICKNESS/GAP (mm)</b>	<b>FOV (cm)</b>	<b>MATRIX</b>
Sagittal	T2	4/ 0.4	16	512x192
Paraaxial	se T1	4/ 0.4	12	256x192
Paraaxial	T2	4/ 0.4	12	256x192
Paraaxial	STIR	4/ 0.4	12	256x192

## Foot 1

Ankle/chimney coil

Cover the entire foot. Coronal and axial to the patient's body (not the foot).

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Coronal	se T1	5/ 0.5	12	256x192
Coronal	T2	5/ 0.5	12	256x192
Coronal	STIR	5/ 0.5	12	256x192
Axial	PD fat sat	4/ 0.4	24	512x384
Sagittal	STIR	4/ 0.4	26	256x192
Sagittal	se T1	4/ 0.4	24	512x384

## Foot 2 FOREFOOT

Ankle/chimney coil

Cover the forefoot only. Coronal and axial to the patient's body (not the foot).

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Coronal	se T1	4/ 0.4	12	256x192
Coronal	T2	4/ 0.4	12	256x192
Coronal	STIR	4/ 0.4	12	256x192
Axial	PD fat sat	4/ 0.4	12	256x192
Sagittal	STIR	3/ 0.4	12	256x192
Sagittal	se T1	3/ 0.5	12	256x192
OPTIONAL:				
Sagittal	T1 fat sat post gad	4/ 0.4	12	256x192

## Foot 3 TOES

Wrist/TMJ coil

Evaluation of individual toes. Coronal and axial to the patient's body (not the foot).

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Coronal	se T1	3/ 0.5	10	256x192
Coronal	T2	3/ 0.5	10	256x192
Coronal	STIR	3/ 0.5	10	256x192
Axial	PD fat sat	3/ 0.5	10	512x384
Sagittal	STIR	3/ 0.5	10	256x192
Sagittal	se T1	3/ 0.5	10	512x384

## Knee

Knee coil

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	PD fat sat	4/ 1	14	256x192
Coronal	PD fat sat	4/ 1	14	256x192
Coronal	se T1	4/ 1	14	256x192
Sagittal	PD	4/ 1	14	256x192
Sagittal	T2	4/ 1	12	256x192

## Fibular Flap (double dose gad)

Body Coil

Cover bilateral lower legs.

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	2D TOF	5/ 0	40	256x192
Coronal	Bolus MRA	2.2/ 0	44	256x160

## MSK Tumor 1

Coil, slice thickness, and FOV depending on region of interest.

Long axis images are coronal if the lesion is medial/lateral, or sagittal if the lesion is anterior/posterior.

Mark mass.

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	se T1			256x192
Axial	T2			256x256
Axial	STIR			256x192
Cor/Sag	STIR			256x192
Cor/Sag	se T1			256x192

## MSK Tumor 2- GAD (single dose gad)

Coil, slice thickness, and FOV depending on region of interest.

Long axis images are coronal if the lesion is medial/lateral, or sagittal if the lesion is anterior/posterior.

Mark mass.

PLANE	SEQUENCE	THICKNESS/GAP (mm)	FOV (cm)	MATRIX
Axial	se T1			256x192
Axial	T2			256x256
Axial	STIR			256x192
Cor/Sag	STIR			256x192
Cor/Sag	T1 fat sat			256x192
Axial	T1 fat sat post gad			256x192
Cor/Sag	T1 fat sat post gad			256x192