

Indications for fistula MRI scans

- > For the assessment of the activity of perianal fistulas in the course of Crohn's disease
- > For pre-operative evaluation of perineal abscess
- > For pre-operative evaluation of perineal fistula
- > To check the anatomy of anal region
- > To check the extend of fistulas
- > Causes of perianal fistulas

Contraindications

- > Any electrically, magnetically or mechanically activated implant (e.g. cardiac pacemaker, insulin pump biostimulator, neurostimulator, cochlear implant, and hearing aids)
- > Intracranial aneurysm clips (unless made of titanium)
- > Pregnancy (risk vs benefit ratio to be assessed)
- > Ferromagnetic surgical clips or staples
- > Metallic foreign body in the eye
Metal shrapnel or bullet

Patient preparation

- > A satisfactory written consent form must be taken from the patient before entering the scanner room
- > Ask the patient to remove all metal object including keys, coins, wallet, any cards with magnetic strips, jewellery, hearing aid and hairpins
- > Ask the patient to undress and change into a hospital gown
- > If possible provide a chaperone for claustrophobic patients (e.g. relative or staff)
- > Offer earplugs or headphones, possibly with music for extra comfort
- > Explain the procedure to the patient
- > Instruct the patient to keep still
Note the weight of the patient

Please check our new video tutorial for protocols and planning

Positioning

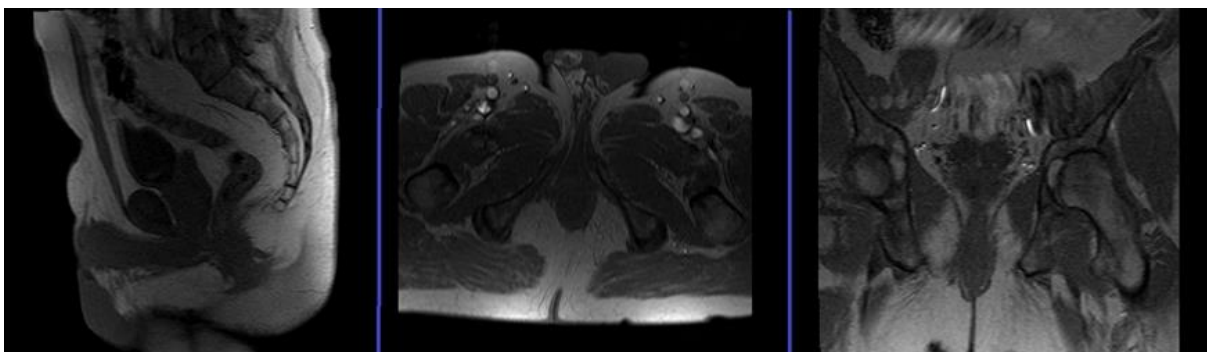
- > Position the patient in supine position with head pointing towards the magnet (head first supine)
- > Position the patient over the spine coil and place the body coil over the pelvis (iliac crest down to mid-thigh)
- > Securely tighten the body coil using straps to prevent respiratory artefacts
- > Give a pillow under the head for extra comfort
- > Centre the laser beam localiser over symphysis pubis (4 inches below iliac crest)

Do not use cushions under the legs because it can lift the bottom of the pelvis away from the coil



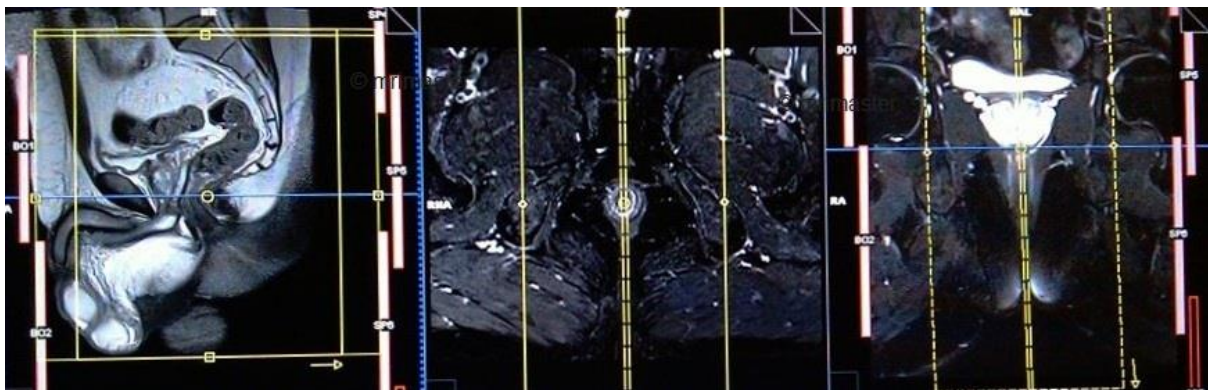
Suggested protocol, parameters and planning localiser

A three plane localiser must be taken in the beginning to localise and plan the sequences. Localisers are normally less than 25sec. T1 weighted low resolution scans. Take additional localisers if needed.



T2 stir sagittal 3mm

Plan the sagittal slices on the coronal plane; angle the position block parallel to the anal canal (i.e. parallel to the interpubic fibrocartilage). Check the positioning block in the other two planes. An appropriate angle must be given in the axial plane (parallel to the line along the interpubic fibrocartilage and the anal canal). Slices must be sufficient to cover the whole pelvis from the right ischial tuberosity to the left ischial tuberosity. FOV must be big enough to cover the whole buttock.

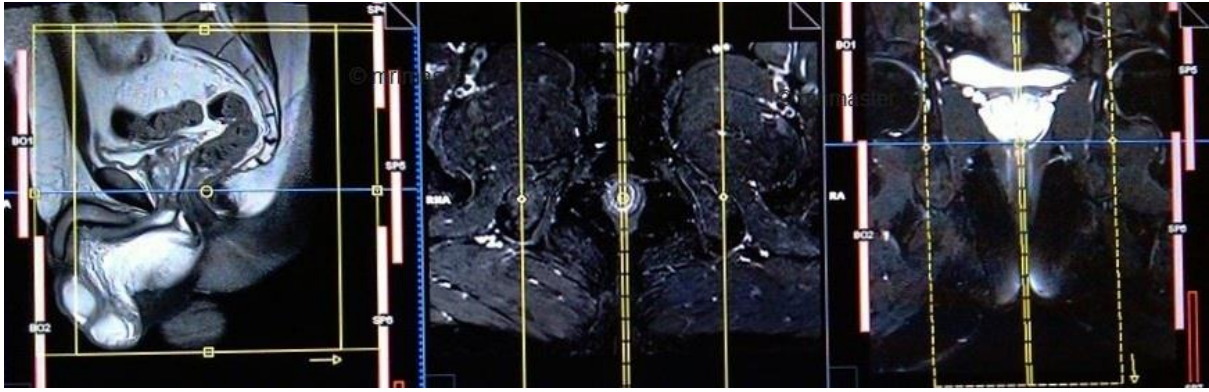


Parameters

TR	TE	FLIP	NEX	SLICE	MATRIX	FOV	PHASE	GAP	TI
3000-4000	110	130	2	3MM	320X256	250-300	A>P	10%	130

T2 tse sagittal 3mm

Plan the sagittal slices on the coronal plane; angle the position block parallel to the anal canal (i.e. parallel to the interpubic fibrocartilage). Check the positioning block in the other two planes. An appropriate angle must be given in the axial plane (parallel to the line along the interpubic fibrocartilage and the anal canal). Slices must be sufficient to cover the whole pelvis from the right ischial tuberosity to the left ischial tuberosity. FOV must be big enough to cover the whole buttock.

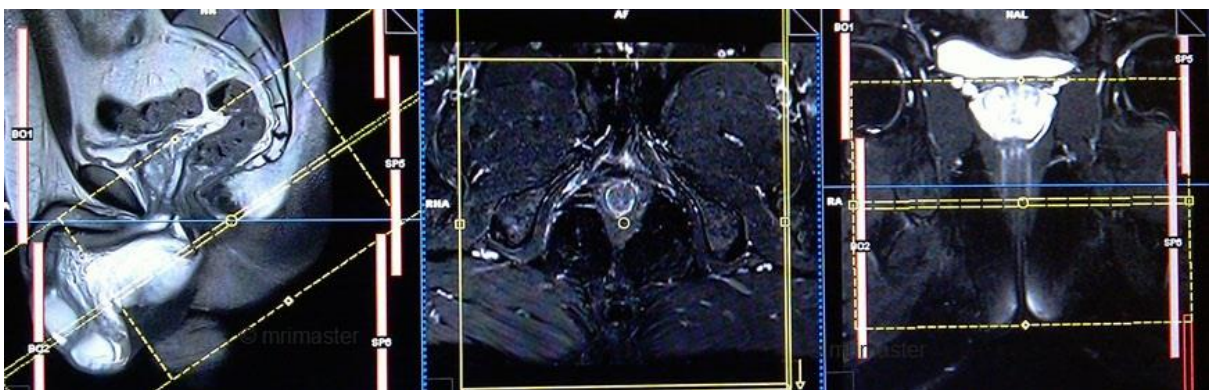


Parameters

TR	TE	SLICE	FLIP	PHASE	MATRIX	FOV	GAP	NEX(AVRAGE)
3000-4000	100-120	3 MM	130-150	A>P	320X320	250-300	10%	2

T2 tse fat sat (or stir) axial oblique 3mm

Plan the axial slices on the sagittal plane; angle the position block perpendicular to the anal canal. Check the positioning block in the other two planes. An appropriate angle must be given in the coronal plane (perpendicular to the anal canal). Slices must be sufficient to cover the whole buttock from the mid rectum down to the skin level of buttock (**it is very important to cover the whole buttock because most of the fistulas extend and open at the skin surface of buttock**).

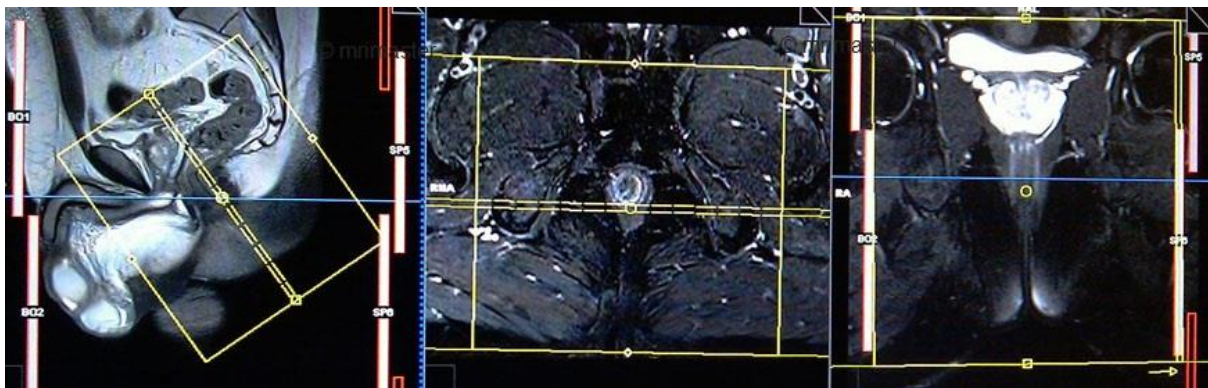


Parameters

TR	TE	FLIP	NEX	SLICE	MATRIX	FOV	PHASE	GAP	FAT SAT
5000-6000	110	130	2	3 MM	256X256	270-300	A>P	10%	SPAIR

T2 tse fat sat (or stir) coronal oblique 3mm

Plan the coronal slices on the sagittal plane; angle the position block parallel to the anal canal. Check the positioning block in the other two planes. An appropriate angle must be given in the axial plane (parallel to the line along the right and left ischial tuberosities). Slices must be sufficient to cover the whole buttock from two slices in front of the symphysis pubis up to the level of sacrum.



Parameters

TR	TE	FLIP	NEX	SLICE	MATRIX	FOV	PHASE	GAP	FAT SAT
5000-6000	110	130	2	3 MM	256X256	270-300	A>P	10%	SPAIR