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cromis-2
Clinical Relevance Of Microbleeds In Stroke

MRI PROTOCOL

1. MRI sequences for cerebral microbleed detection

Gradient-recalled echo (GRE) T2* MRI is generally used to detect cerebral microbleeds (CMBs) because of its high sensitivity to paramagnetic blood-breakdown products. Choice of MRI parameters may affect the identification of microbleeds. The table below shows the ***optimal*** and ***accepted limits*** of the important MRI parameters for GRE T2* sequences.

Parameter	Optimal	Accepted limits
Slice thickness (ST)	3mm	3-5 mm
Slice gap (SG)	Ideally no gap	Not more than 1mm
Echo time (TE)	20-30 ms	15-40 ms

2. Other required MRI sequences

Please include the following sequences if these are not already a part of an existing "stroke protocol". We have not specified exact sequence parameters for most of these.

- **Axial T2-weighted MRI** should be obtained to identify CMB mimics (e.g. cavernomas).
- **Axial Diffusion-weighted MRI** should be obtained to detect acute ischemic lesions.
- **FLAIR** sequences should be included for sensitively identifying white matter changes.

Optimal FLAIR MRI sequence	Accepted sequence
Volumetric FLAIR (3D-Cube FLAIR)	Coronal FLAIR with 3 mm slice thickness

Coronal T1-weighted images are useful for identifying medial temporal lobe atrophy, lacunes, and acute to subacute haemorrhage.

3. Optional MRI sequence

- **Susceptibility-weighted imaging (SWI)** is a new blood-sensitive technique which is currently the most sensitive means to image cerebral microbleeds.
- Although not essential, the use of this sequence is strongly encouraged if possible

PLEASE CONTACT US IF YOU HAVE ANY QUESTIONS ABOUT THE MRI PROTOCOL

Many thanks!

DETAILS OF MRI PROTOCOL FOR CROMIS-2 – TO BE FILLED IN BEFORE OR DURING SITE INITIATION VISIT

Centre Name: _____

Name of person completing the form: _____

MRI Scanner system used:

Field strength: _____

Manufacturer and name:_____

MRI sequences:

GRE T2* Slice thickness _____

Slice gap _____

Echo time _____

T2WI? Yes ☐ No ☐
COMMENTS
_____
_____
_____

DWI? Yes ☐ No ☐
COMMENTS
_____
_____
_____

FLAIR? Yes ☐ No ☐
COMMENTS
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T1WI? Yes ☐ No ☐
COMMENTS
_____
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_____

SWI? Yes ☐ No ☐
COMMENTS
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_____

Please return to Clare Shakeshaft, CROMIS-2 Study Co-ordinator, CROMIS-2 study, Stroke Research Office, Box 6, NHNN, Queen Square, London, WC1N 3BG or fax back to : 020 3448 4072.
Thank you.