Cercare Medical

Papers

Stroke

"Ground breaking research, a robust technology, and a market where the current technology failed to deliver what it was supposed to. That's why we created Cercare Medical."

Kim Beuschau Mouridsen
Founder & CEO, Cercare Medical

C

Stroke		PAPERS	MR	CT
X	♡	**Østergaard et al., 2013** https://doi.org/10.1038/jcbfm.2013.18 Relevance of CTH and other markers in an acute ischemic stroke setting	X	
		Nagenthiraja et al., 2013 https://doi.org/10.3389/fneur.2013.00140 Retrospective evaluation of the TTP and ADC AI outlines	X	
X		**Mouridsen et al., 2013** https://doi.org/10.1148/radiol.13121622 Evaluation of the model based MTT outline: agreement of model outcome with neuroradiologists was 0.79	X	
		Hougaard et al., 2014 https://doi.org/10.1161/STROKEAHA.113.001346 **Comparison between of remote ischemic perconditioning in adition to trombolysis therapy: inconclusive results**	X	
X	♡	**Østergaard et al., 2015** Capillary Dysfunction: Its Detection and Causative Role in Dementias and Stroke | SpringerLink Relevance of CTH and other markers in a stroke or dementia setting	X	
X	♡	**Engedal et al., 2018** https://doi.org/10.1177/0271678X17721666 **MRI: COV biomarker was evaluated, named as RTH in the publication; CTH too [DSC]**	X	

Stroke

	PAPERS	MR	CT
X	**Potreck et al., 2019** https://doi.org/10.1007/s00330-019-06064-4 CTH is a predictor of outcome for ICH in patients with acute ischemic stroke and mismatch undergoing endovascular thrombectomy	X	
	Brugnara et al., 2022 https://jnis.bmj.com/content/14/1/neurintsurg-2020-017163 **Comparison of maps for patients with LVO before and after** endovascular treatment. T_{max}, MTT, OEF and CTH values immediately after EVT were lower in patients with complete (as compared with incomplete) recanalization	X	
X	**Kate et al., 2013** https://doi.org/10.1038/jcbfm.2013.164 Tested whether Blood pressure reduction impairs the perihematoma tissue oxygenation. Results revealed that blood pressure reduction does not affect perihematoma oxygen delivery.	X	
	Nielsen et al., 2018 https://doi.org/10.1161/STROKEAHA.117.019740 AI model to detect the infarct area. The infarct area was delineated by 4 expert radiologists on a T2-FLAIR scan acquired 1 month after the stroke to cross check the quality of the CNN.	X	
X	**Hansen et al., 2016** 10.1002/jmri.24963 Agreement between model and 4 expert readers.	X	
	Livne et al,, 2018 https://doi.org/10.1161/STROKEAHA.117.019440 Predict final infarct from perfusion maps, T2FLAIR and DWI as seen on follow-up T2FLAIR using the extreme gradient boosting	X	

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Stenosis

C

Stroke

	PAPERS	MR	CT
X	**Boldsen et al., 2018** https://doi.org/10.3389/fninf.2018.00021 Outlines of core stroke lesion using decision trees based on DWI images.	X	
	Neumann et al., 2009 Interrater Agreement for Final Infarct MRI Lesion Delineation | Stroke (ahajournals.org) Rating infarct size with FLAIR leads to lower interrater variability than T2.	X	
X	**Jonsdottir et al., 2009** Predicting Tissue Outcome From Acute Stroke Magnetic Resonance Imaging | Stroke (ahajournals.org) For AI models one should use the same amount of infarcting and non-infarcting voxels.	X	
♡	**Mikkelsen et al., 2015** https://doi.org/10.1007/s00330-015-3602-x Comparison between SVD method and vascular model. Vascular model can be applied to shorter scan durations.		X
♡	**Mouridsen et al. 2006** https://doi.org/10.1016/j.neuroimage.2006.06.015 Technical presentation of the vascular model and comparison with the traditional one	X	X
♡	**Mouridsen et al. 2014** https://doi.org/10.1038/jcbfm.2014.111 Technical presentation of the measure of CTH and other biomarker	X	

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Oncology		PAPERS	MR	CT
X	♡	**Tietze et al., 2015** https://doi.org/10.1371/journal.pone.0123044 CTH improves tumor grading and outcome prediction in glioma patients compared to CBV alone.	X	
		Tietze et al., 2015 https://doi.org/10.1371/journal.pone.0202906 Comparison between Bayesian model (BM) and Levenberg-Marquardt (LM) method for the generation of DCE perfusion maps. BM revealed superior image quality.	X	
X	♡	**Østergaard et al. 2013** https://doi.org/10.1158/0008-5472.CAN-13-0964 Review article: value of biomarkers in an oncology setting	X	X
		Kickingereder et al. 2020 https://doi.org/10.1148/radiol.2020200978 longitudinal study to evaluate bevacizumab treatment effects. The tumour metabolic rate of oxygen (TMRO2) was compared for patients treated with bevacizumab or another drug, and higher for patients treated with another drug.	X	
		Bonekamp et al. 2016 https://doi.org/10.1177/0271678X16630322 a larger $TMRO_2$ increases the hazards for progression and death	X	
		Stadlbauer et al. 2017 https://doi.org/10.1177/0271678X17694905 Recurrent glioblastoma had significantly higher µVTH and µCOV as well as significantly lower mithocondrial oxygen tension ($PO2_{mit}$) values compared to newly-diagnosed glioblastoma	X	

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Alzheimer	PAPERS	MR	CT
X	**Madsen et al. 2022** https://doi.org/10.1016/j.nbas.2022.100035 Both Alzheimer disease and Mild Cognitive impairment patients showed increased CTH, suggesting that heterogeneity of capillary blood flow is a primary pathological event in Alzheimer Disease.	X	
	Østergaard et al. 2013 https://doi.org/10.1016/j.neurobiolaging.2012.09.011 **Review paper: Model describing** the sequence of adaptations that are necessary to maintain tissue oxygen metabolism when the CTTH gradually increases over time in AD patients.	X	X
	Østergaard et al. 2015 https://doi.org/10.1007/s11910-015-0557-x Relevance of CTH and other markers in a stroke or dementia setting	X	X
	Nielsen et al. 2017 https://doi.org/10.1016/j.jalz.2017.02.007 CBF, CBV, MTT, CTH, COV (in the paper called RTH), and estimated tissue oxygen tension	X	
	Nielsen et al. 2020 https://doi.org/10.1002/dad2.12032 Focus on CTH, but MTT, CBF and CBV were also analysed	X	X
Adrenoleukodystrophy			
	Lauer et al. 2017 https://doi.org/10.1093/brain/awx262 focus on CTH, but also OEF and CMRO2	X	

Stenosis		PAPERS	MR	CT
X	♡	**Pimentel et al., 2022** https://doi.org/10.1007/s00062-021-01077-3 Patients with asymptomatic high-grade carotid stenosis without ischemic brain lesions were evaluated before and after revascularization. High CTH was detected before revascularization and the intervention normalized CTH, CBF, OEF and MTT.	X	
X		**Kaczmarz et al., 2021** https://doi.org/10.1177/0271678X20912364 most pronounced changes of CBF and rCBV in internal carotid artery stenosis -patients were detected within individual watershed areas. Subject-specific impairments on CBF, rCBV, rOEF, CTH.	X	
X	♡	**Mundiyanapurath et al., 2016** https://doi.org/10.1371/journal.pone.0158148 CTH is superior to T_{max} in discriminating ICAS patients with favorable from non-favorable outcome	X	

Traumatic Brain Injury

			MR	CT
		Thorup et al., 2019 https://doi.org/10.1097/ANA.0000000000000596 Biomarkers: OEF and CMRO2 - Review article	X	X
X	♡	**Østergaard et al. 2014,** https://doi.org/10.1038/jcbfm.2014.131 Biomarkers: Focus on CTH - Review article	X	X

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		PAPERS	MR	CT
Cerebral small vessel disease				
	♡	**Østergaard et al., 2016** https://doi.org/10.1177/0271678X15606723 Review on, OEF and CMRO2 under a small vessel disease perspective CTH	X	X
Covid 19				
		Østergaard et al., 2021 https://doi.org/10.14814/phy2.14726 CTH, OEF, CMRO2	X	X
Subarachnoid or intracerebral haemorrhage				
		Østergaard et al., 2013 https://doi.org/10.1038/jcbfm.2013.173 Relevance of CTH and other markers in Delayed Cerebral Ischemia and Chronic Degenerative Changes after Subarachnoid Hemorrhage	X	X
Ischemic heart disease				
		Østergaard et al., 2014 https://doi.org/10.1007/s00395-014-0409-x Role of capillary transit time heterogeneity in myocardial oxygenation and ischemic heart disease	X	X