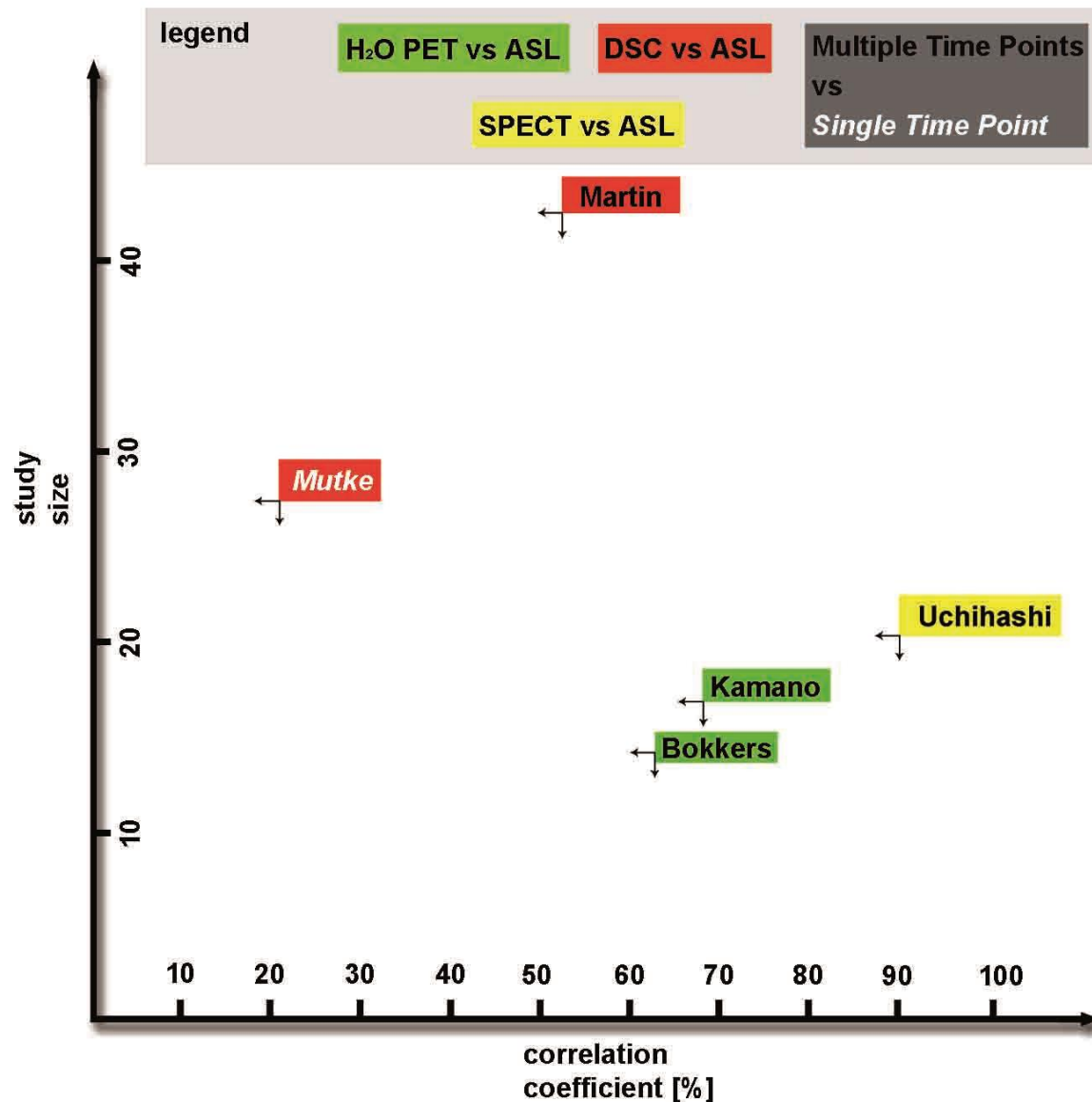


## Supplement



**Figure 1. Published comparisons between ASL-perfusion measurement vs. another modality in chronic atherosclerotic steno-occlusive disease.**

The figure depicts the number of patients and correlation coefficients (either Spearman or Pearson) found in the literature. Included were only studies investigating patients with atherosclerotic chronic steno-occlusive disease. The different perfusion modalities are colour-coded (DSC: red, PET: green, SPECT: yellow). ASL was either performed applying a single-time point (white) or multi-time point (black) technique. In case more than one correlation coefficient was found due to different analysis techniques, always the highest reported value is depicted.

## Supplement

**Figure 2: Qualitative visual rating of DSC/ASL-CBF (contralateral and ipsilateral to stenosis)**

		DSC-CBF								
		ACA territory			MCA territory			PCA territory		
		hypoperfusion ipsilateral to stenosis	hypoperfusion contralateral to stenosis	no hypoperfusion	hypoperfusion ipsilateral to stenosis	hypoperfusion contralateral to stenosis	no hypoperfusion	hypoperfusion ipsilateral to stenosis	hypoperfusion contralateral to stenosis	no hypoperfusion
ASL-CBF	hypoperfusion ipsilateral to stenosis	3	0	17	23	0	5	6	0	12
	hypoperfusion contralateral to stenosis	3	0	18	1	0	2	0	0	1
	no hypoperfusion	0	0	2	4	0	8	2	0	22

**Results of the visual qualitative analysis.** Table shows visual findings for ASL-CBF vs. DSC-CBF. Rows show imaging findings for ASL, columns show imaging findings for DSC. Raters were blinded for clinical data. For both ASL and DSC it is depicted if hypoperfusion was rated ipsilateral to stenosis, contralateral to stenosis or if no hypoperfusion was found. Whilst DSC always showed hypoperfusion ipsilateral to stenosis, ASL showed in some cases hypoperfusion contralateral to stenosis. For the MCA and PCA territory there are only few cases, however in the ACA territory the identified right-sided frontal artifact leads to a high number of contralaterally rated hypoperfusion.

## Supplement

**Figure 3: Qualitative visual rating: DSC-TTP vs. ASL-BAT (contralateral and ipsilateral to stenosis)**

		DSC-TTP								
		ACA territory			MCA territory			PCA territory		
		delay ipsilateral to stenosis	delay contralateral to stenosis	no delay	delay ipsilateral to stenosis	delay contralateral to stenosis	no delay	delay ipsilateral to stenosis	delay contralateral to stenosis	no delay
ASL-BAT	delay ipsilateral to stenosis	5	0	12	24	0	2	11	0	5
	delay contralateral to stenosis	0	0	0	2	0	0	3	0	4
	no delay	1	0	25	10	0	5	8	0	12

**Results of the visual qualitative analysis.** Table shows visual findings for ASL-BAT vs. DSC-TTP. Rows show imaging findings for ASL, columns show imaging findings for DSC. Raters were blinded for clinical data. For both ASL and DSC it is depicted if delay was rated ipsilateral to stenosis, contralateral to stenosis or if no delay was found. Whilst DSC always showed delay ipsilateral to stenosis, ASL showed in some cases delay contralateral to stenosis in the MCA and PCA territory.