

Propositions accompanying the PhD thesis

Image analysis for contrast enhanced ultrasound carotid plaque imaging

- 1) Motion compensation is crucial for accurate quantification of intraplaque neovascularization (IPN). (this thesis)
- 2) Quantitative CEUS imaging parameters can replace qualitative visual scoring to measure the degree of IPN in an objective and reproducible manner. (this thesis)
- 3) Currently available commercial contrast quantification tools are not suitable for analysis of carotid IPN due to artifacts and intermittent perfusion of plaques. (this thesis)
- 4) Systematic comparison of different IPN analyses over patient datasets requires the use of identical patient-specific regions of interest for all analyses. (this thesis).
- 5) Simultaneous acquisition of BMUS and CEUS allows an accurate carotid plaque segmentation and IPN quantification in CEUS. (this thesis)
- 6) Even though it has been shown and published that IPN assessment in the far wall of the carotid artery using CEUS is unreliable due to the pseudo-enhancement artifact, this artifact is still neglected in many CEUS studies. (ref.: Atherosclerosis, 229:451-52)
- 7) It is better to have a simple method that doesn't work than a complex method that doesn't work. (S. Klein)
- 8) Confidence and hard-work is the best medicine to kill the disease called failure. (Abdul Kalaam)
- 9) If you judge a fish on its ability to climb a tree, it will live its whole life believing that it is stupid. (A. Einstein)
- 10) Wisdom begins in wonder. (Sokrates)
- 11) Do not be satisfied with the stories that come before you. Unfold your own myth. (Mevlana Rumi)