

Assessment of Arterial Reflection Markers using an A-Mode

Ultrasound Device

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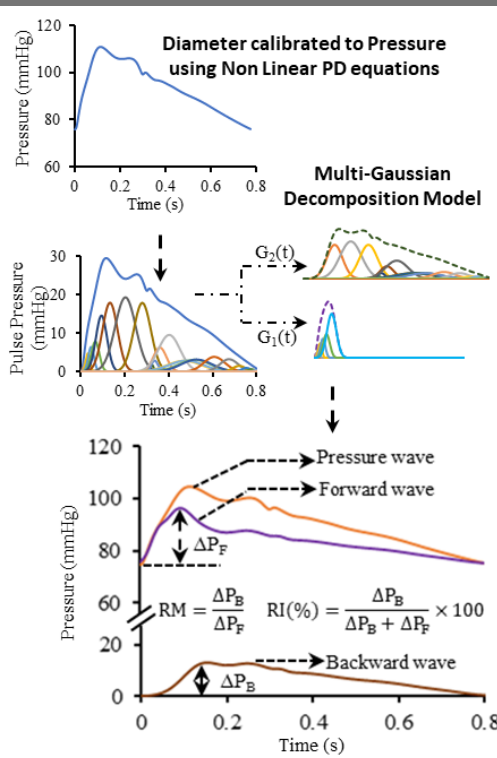


- To compute the reflection markers (RM, RI) using a multi-Gaussian decomposition (MGD) based wave separation analysis (WSA) algorithm

- To compare the agreement of reflection markers (RM, RI) with clinically relevant stiffness markers



A-Mode ultrasound device used for acquiring diameter waveforms from Carotid Artery

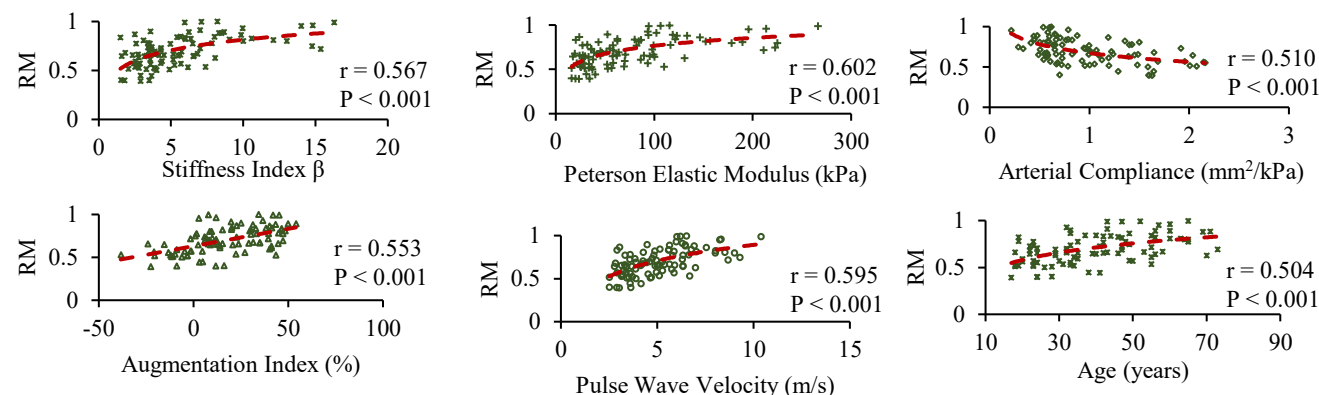


Subject Demography

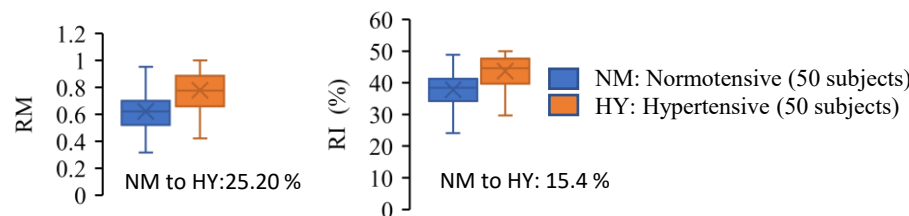
Subjects: 100 (37 male/63 female)
Age: 17 to 83
SBP: 79 to 220 (mmHg)
DBP: 47 to 97 (mmHg)
Normotensive: 50 Subjects
Hypertensive: 50 Subjects



- Significant correlation ($r > 0.5$, $p < 0.0001$) between RM of MGD Model with the stiffness markers: β , Ep, AC, PWV & AIx



- RM and RI were able to screen between normotensive & hypertensive subjects



The MGD based WSA on diameter scaled pressure waveforms has enabled quantification of reflection markers without the need for any measured pressure & flow measurements

