

# WORLD NEPHROLOGY CONGRESS

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### Central arterial pressure and arterial stiffness in dialysis patients

Arterial stiffness and central pressure are independent predictor of mortality in renal patients<sup>1-4</sup>. Central systolic blood pressure (cSBP) could also be useful to monitor and possibly anticipate hypotension episodes during dialysis. However most cSBP devices are based on peripheral estimates which might be unreliable during the specific hemodynamic state of dialysis. Complior Analyse (Alam Medical, France) presents the advantage of measuring cSBP, hand-free, directly from the carotid artery with no mathematical estimation. Our study aims to document cSBP variability from Complior Analyse before and during dialysis.

cSBP was measured in 19 stable patients (10M/9F, age:65±16yrs) with regular heart beats who underwent dialysis in Fresenius center, Montfermeil hospital, France (10 patients before dialysis,

13 patients 130±24min after the start of dialysis including 4 patients with data both before and during dialysis). Carotid waveforms were measured in triplicate within 5min and calibrated to mean (MAP) and diastolic pressures (DBP) obtained with a Philips SureSigns monitor on the fistula-free arm.

Mean±SD values and coefficient of variation(CV) of repeated measurements are shown in the table below.

Peripheral form factor (FF) was 37±13% (range 19-59) before dialysis and 39±21% (13-61) during dialysis while central FF was 45±7% (30-57) and 39±21% (21-46), respectively.

Estimation of cSBP during dialysis was feasible with Complior Analyse. Its variability was similar to peripheral BP variability. The wide range of peripheral form factor values suggested that there is a need to improve peripheral BP estimation during dialysis.

### Biography

Mabrouk Brahimi has completed his PhD at the age of 25 years from RENE DESCARTES PARIS University and Postdoctoral Studies from School of Medicine.. He is the Director of DIALYSE CENTER, a premier Bio-Soft service organization. He has published more than 25 papers in reputed journals and has been serving as an editorial board member of repute. (Up to 100 words)

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### Notes: