Real time biomarkers which correlate with dialysis efficacy could provide clinicians with a method for individual tailoring of dialysis dose.

**METHODS**

We examined the relationship between Breath Ammonia (BA), Ammonia Reduction Ratio (ARR) and Urea Reduction Ratio (URR), in 44 dialysis treatments in 17 patients undergoing haemodialysis (HD). Blood was collected just prior to haemodialysis and 30 minutes after stopping. Thirty minutes prior to each haemodialysis patients exhaled directly into a Tedlar bag (Fresenius Medical Care, NZ). Each bag was then sealed and stored until analysed for the presence of ammonia and volatile organic compounds (VOCs) using a mass spectrometer (SIFT-MS).

**METHODOLOGY**

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**RESULTS**

- As seen in the image plot (Figure 6) generated from mass scan data obtained using the HD+™ precursor, masses 18, 36, and 54, all relating to ammonia and its water clusters, are good biomarkers of kidney function.

**CONCLUSION**

- Breath Analysis allows real-time monitoring of haemodialysis efficacy.