**SA-PO761**

**Comparison of Albumin Binding Capacity and Uremic Toxins in Hemodiafiltration versus Novel Dialysis Membrane** Sebastian Koball,[4] Christina Westphal,[1] Silvius Frimmel,[2] Michael Hinz,[5] Sebastian Klammt,[3] Steffen R. Mitzner.[4] *[1]Fraunhofer Institiut for Cell Therapy and Immunology, Rostock, Germany; [2]Rostock University Medical Center, Rostock, Germany; [3]University Rostock, Rostock, Germany; [4]University of Rostock, Rostock, Germany; [5]Universität Rostock, Rostock, Germany.*

**Background:** Albumin is an important transport protein for non-water-soluble protein-bound drugs and uremic toxins. A decreased transport capacity may lead to endogenous intoxication and worsening of uremic symptoms. It is known that the albumin binding capacity (ABiC) is reduced in patients with advanced stages of chronic kidney disease. Moreover, ABiC is an important marker of the detoxification capacity of extracorporeal treatments. It is presumed that open-pored filters remove high molecular substances more efficiently than conventional treatment, thereby increasing the detoxification capacity. The Baxter-Theranova (HDx) filter is the first approved filter which could meet these requirements. The study aim was to evaluate the effectiveness of the HDx dialyzer with regard to the improvement of ABiC and the removal of uremic toxins (e.g.hippuric acid, paracresylglucoronid, indoxylsulfate, paracresylsulfate, indolacetic acid), phosphate, urea, albumin concentration during standard hemodialysis/ hemodiafiltration treatment.

**Methods:** The efficacy of HDx was assessed by comparing Baxter Theranova 500 filters with the standard Fresenius FX80 filters (HDF). We included 32 patients with dialysis-dependent chronic kidney disease (stage 5d); above age 18 who provided written informed consent. Key exclusion criteria were acute infectious diseases, bleeding and a hospital stay within the last 14 days. All patients were first treated with HDF for 14 days (3 times a week) and blood samples were drawn (15ml) before and after treatment at study entry, before and after first HDx treatment and before/after 6 HDx treatments, to determine ABiC and other clinically relevant parameters. Alteration of ABiC and other relevant parameters was assessed by using Wilcoxon matched-pairs signed-rank test.

**Results:** ABiC improved significantly in both therapies (HDx/HDF), however, no significant differences were found between the two therapies. The same was true for phosphate, indoxylsulfate, urea, creatinine, and uric acid. A reduction of albumin concentration during HDx treatment was not observed, neither during single treatment nor over the 14 days period.

**Conclusions:** Expanded hemodialysis enabled by Theranova demonstrates equal effects on ABIC and uremic toxins in comparison to OL-HDF.

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