

### **Summary**

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Peritoneal transport characteristics vary between patients under peritoneal dialysis (PD).

Some patients have a peritoneal membrane, that exchanges uremic solutes fast, but in others, these transports are slow. To investigate the peritoneum, peritoneal membrane transport tests are performed routinely in PD patients. There are two standardized tests to analyze the peritoneal membrane. In the peritoneal function test (PFT), patients perform their routine treatment at home during 24 hours. They note time point of every exchange as well as fill and drainage volumes. Furthermore, patients take a dialysate sample of every exchange. The next day, a standardized 2 hour exchange is performed in the dialysis center. The peritoneal equilibration test (PET) is a 4 hour test performed in the center to investigate the peritoneum.

Both tests are accurate to assess transfer rates of uremic solutes. But they are both inaccurate to predict volume elimination (ultrafiltration) in PD patients. Therefore, we want to analyze in this study, if an extra exchange with a dwell time of one hour might improve prediction of volume elimination. Furthermore, we want to compare the two membrane tests.

This is a study performed in 7 centers in Switzerland. We will include a total of 40 PD patients. The study takes place on 4 different days. On the first day, patients perform a PFT at home. On the following day, a PET test will be performed in the dialysis center as well as this extra exchange with a dwell time of one hour. To validate our model, patients will perform another PFT on the third day of the study. This will be between 4 and 8 weeks after the PET. On the last day of the study, one day after the second PFT, a routine control will be performed in the dialysis center. Then the study will be completed.