

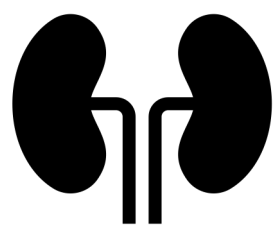
Evaluation of Sodium Deposition in Soft Tissues of Patients with Kidney Disease and its Association with Patient Symptomatology

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INTRODUCTION

Over the last 5 years we have,

1. Been able to identify the importance of salt burden
2. Move from studying salt in the leg where we started, to the very technically challenging areas of the heart and the kidney
3. Build capacity with two scanners that can visualize and measure salt in patient's bodies



ENGAGEMENT

We have been fortunate to take on a cohesive group of patients with us on this journey

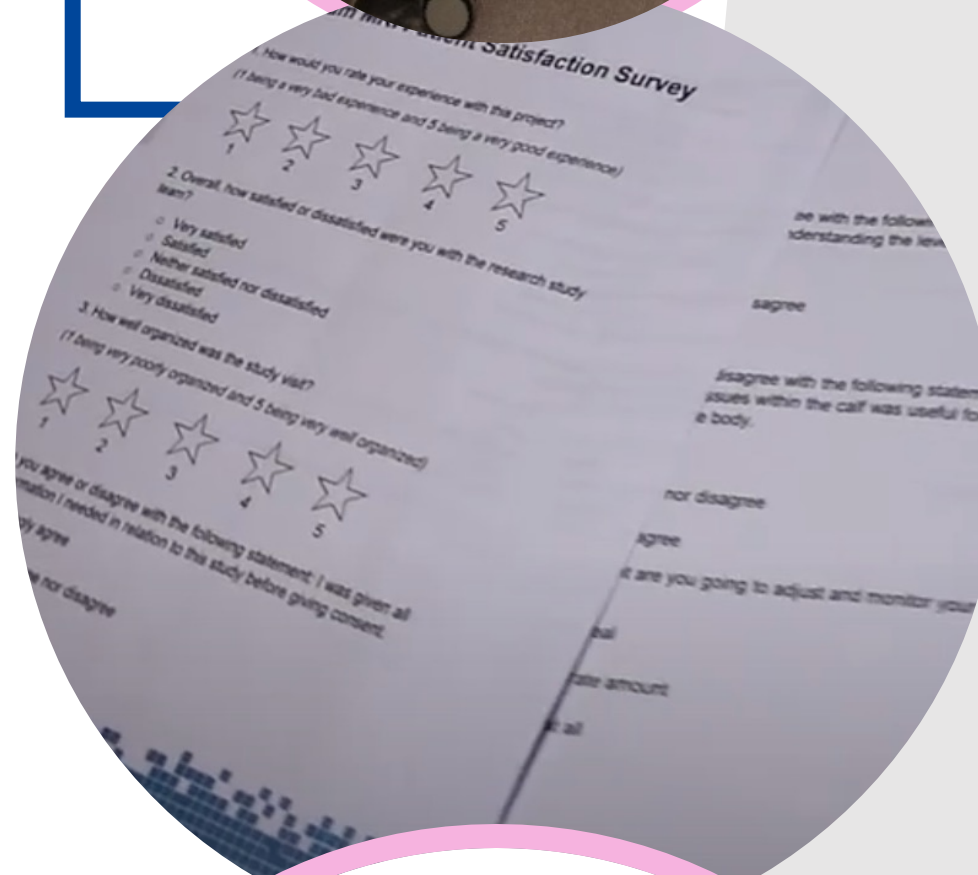
Our patient partners have contributed in a substantial way over the last few years. Some of which include,

- Review of various study documentation
- Review of knowledge translation products
- Providing insight on new study procedures

We've also been able to share each participant's individual images with them to help them understand the impact of being in research and the issue of salt on their lives and their caregiver's life

We've had a great time so far and we are excited for us and our patient partners to look for the next five years on ahead

THREE KEYS AREAS



RESULTS

We have worked to measure sodium "salt" levels using sodium magnetic resonance imaging in patients in various stages of chronic kidney disease, on various dialysis therapies, and in patients with heart failure

OUR MISSION WAS ACCOMPLISHED!!

Adults: Larger skin sodium content in the leg is associated with cardiovascular disease and death → Sodium accumulation is harmful and may contribute to explain the negative outcomes observed in patients

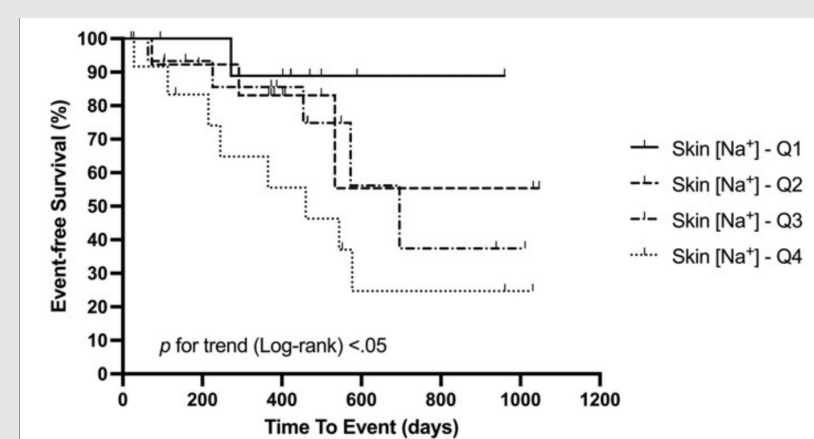


Figure: Event-free survival (cardiovascular events + death) in 52 dialysis patients (10 PD, 42 HD) after stratification according to skin sodium concentration (Skin [Na⁺] quartile).

Children: Glomerular diseases causing nephrotic syndrome = increased leg sodium

CONCLUSIONS

- Discovery – We are looking at salt in the heart and how salt affects heart health because heart failure leads to kidney disease
- Diagnosis – We are looking at salt levels in the kidneys to determine if this could be an alternate path to avoid biopsies and transplants
- Evolvement – Using implantable, invisible dialysis systems to augment the removal of extra salt