

Providing Peace of Mind for Pediatric Cancer Patients

Erin Peterson¹, Meghan Genzel¹, Nick Kemp², Reid Jockisch³

TODAY

OSF Innovation Studio¹, Children's Hospital of Illinois Heller Center for Kids with Cancer², OSF Innovation Engineering³

PROBLEM

- This solution was designed by OSF Mission Partner Nicholas Kemp to protect the central venous access port for pediatric cancer patients who wish to remain active in sports.
- This internally developed device aims to prevent damage during contact sports, allowing patients to engage in physical activities safely.



Figure 1: Example Implanted Central Venous Access Ports

OUTCOME

- **Protection for Cancer Patients:** The primary goal is to provide a protective covering for the central venous access port, specifically designed for pediatric cancer patients who are active in sports. This helps prevent damage to the ports during physical activity.
- **Normalcy and Peer Interaction:** The device helps pediatric cancer patients feel like kids again by enabling them to participate in sports and activities with their peers, fostering a sense of normalcy and inclusion.

SOLUTION

- **Ideation and Initial Discussions:** Concept initiated by Nicholas Kemp and discussed with the Innovation Studio team.
- **Prototype Development:** Created by the OSF Innovation Engineering team
- **Testing Phase:** Prototype tested with two patients to gather feedback and make adjustments.
- **Legal and Market Exploration:** Obtained necessary waivers and legal approvals; next steps include patent search and market review.

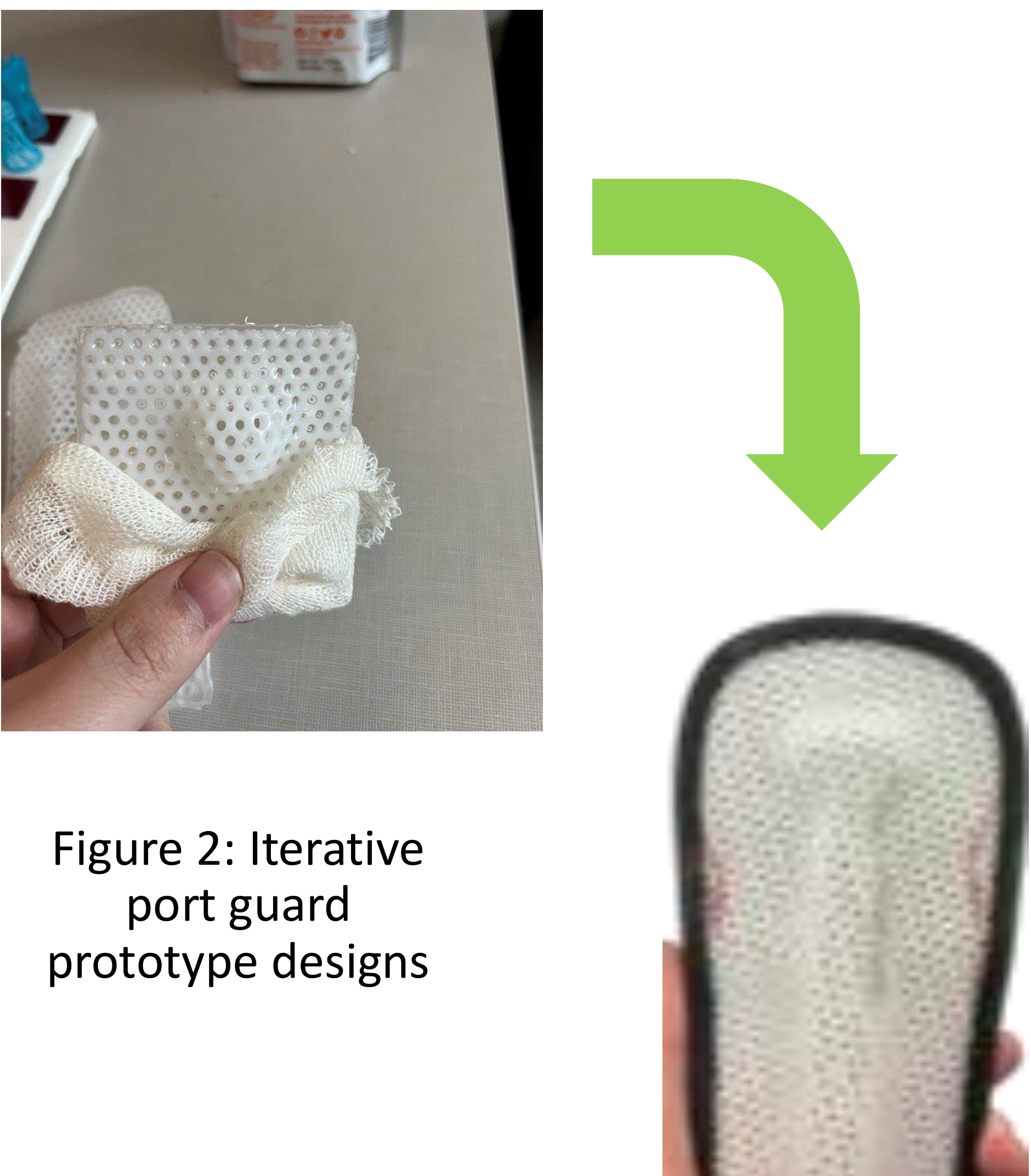


Figure 2: Iterative port guard prototype designs

IMPACT

- **Enhanced Safety:** Provides a protective covering for the port, reducing the risk of damage during physical activities
- **Improved Quality of Life:** Enables patients to engage in physical activities safely, contributing to their overall well-being and happiness
- **Peace of Mind for Families:** Offers reassurance to families that their children can safely participate in physical activities without compromising their medical devices