

# Radiologic Pathologic Correlation in Renal Cell Carcinoma

**Date:** 2024/02/01

**Client:** Dr. Meghan Lubner

**Advisor:** Dr. Tracy Puccinelli

**Team:**

Ellie Steger (Team Leader)

Erin Schlegel (Communicator)

Emily Wheat (BWIG)

Olivia Jaekle (BPAG)

Aleks Skutnik (BSAC)

## Problem statement

The goal of this project is to develop a blade for a tumor resection coring device. The blade should be able to effectively resect a cross-section from an ex-vivo kidney tumor without causing damage to the overall tissue sample. Currently, the resection device used is too blunt and thick to effectively extract tissue without causing surrounding areas to be damaged and un-imageable on CT. By creating a new blade design, the pathologist can preserve the extracted tumor during the coring process. In maintaining the integrity of the tumor, the pathologist will be able to accurately correlate CT image markings and findings with their location in the patient sample.

## Brief status update

The team has been researching pre-manufactured blades in order to purchase a better performing blade for our design. Along with this we have been working on our preliminary presentation.

## Difficulties / advice requests

No difficulties yet for this semester!

## Current design

Our current design is our final design from the fall semester, which can be found here: [https://bmedesign.engr.wisc.edu/projects/f23/coring\\_device](https://bmedesign.engr.wisc.edu/projects/f23/coring_device).

## Materials and expenses

No new expenses yet for this semester!

## Major team goals for the next week

1. Meet with advisor to discuss preliminary presentation
2. Practice and present preliminary presentation
3. Set up payment plan and order premade blades

## Next week's individual goals

- Aleks Skutnik
  - Work on preliminary report and presentation
  - Research next steps for fabrication of coring tube
  - Attend BSAC meeting
- Emily Wheat
  - Work on preliminary report and presentation
  - Update website
- Erin Schlegel
  - Work on preliminary report and presentation
  - Finish researching manufactured blades
- Olivia Jaekle
  - Work on what futures costs could look like with final design and mass production/packaging
  - Research silicon material for safety cap
  - Recircle to coring tube design to fit with new blade
- Ellie Steger
  - Work on preliminary presentation
  - Set up team timeline for the upcoming semester

## Timeline

Task	Jan	Feb				March					April				May	
	26	2	9	16	23	1	8	15	22	29	5	12	19	26	3	10
<b>Project R&amp;D</b>																
Empathize	X	X														
Background...	X	X														
Prototyping	X	X														
Testings																
<b>Deliverables</b>																
Progress Reports		X														
Prelim presentation		X														
Final Poster																
<b>Meetings</b>																
Client	X															
Advisor	X	X														
<b>Website</b>																
Update	X	X														

Filled boxes = projected timeline

X = task was worked on or completed

## Previous week's goals and accomplishments

- Team previous goal 1: Set up the team notebook, meet with client,
  - The team was able to successfully create a Lab Archives notebook and meet with our client.