

# Title: Progress Report 7

Date: 03/13/2025

Client: Dr. Andrew Ross

Advisor: Dr. Megan McClean

Team:

Student 1: Ana Toscano

Student 2: Rini Anand

Student 3: Gabriela Cecon

Student 4: Sofia Yeates-Delahoz

**Problem statement:**

Design and develop a prototype that securely supports, stabilizes, and precisely maneuvers needles during, image-guided minimally invasive radiology procedures to enhance ergonomics, reduce operator fatigue, and improve accuracy and patient outcomes

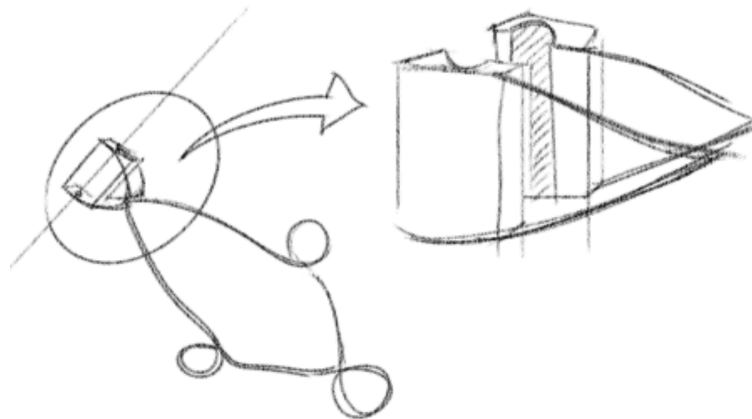
## Brief status update

The team has proposed a final design (displayed below) and will begin to work on developing the CAD model to begin prototyping.

## Difficulties / advice requests

None to report.

## Current design



This image depicts the current proposed design for the Needle Navigator device.

## This Week's Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Ana Toscano	3/1 - 3/4	Brainstormed the material with team Research on material Research on locking mechanism	2	2	19
Rini Anand	3/1-3/4	Brainstormed materials with the team Updated team notebook Attended design meeting with Team Labs	2	3	19
Sofia Yeates-Delahoz	3/3 - 3/4	Brainstormed material with the team Conducted research on material Observed bilateral cervical injection procedure with Dr. Ross	2	2	19
Gabriela Cecon	3/1-3/4	Conducted research on soft materials Brainstormed additional design implementations	2	2	19

## Major team goals for the next week

1. Continue working on the CAD model for the prototype.
2. 3D print the prototype for Show and Tell
3. Start protocol

## Next week's individual goals

- Ana Toscano
  - Work on CAD model for final design
  - Update protocol document
- Rini Anand
  - Work on CAD model for final design
  - Update protocol document
  - Print prototype
  - Set up another client meeting
- Gabriela Cecon
  - Work on the CAD model for the device
  - Meet with the group to discuss meeting with design advisor
  - Decide on final materials and design
  - Print prototype for show and tell
- Sofia Yeates-Delahoz
  - Work on the CAD model for final design
  - Research additional information that is needed for the PDS
  - Print prototype and get it ready for show and tell

# Timeline

Task	Jan	Feb				March				April				May	
	30	6	13	20	27	6	13	20	27	3	10	17	24	1	8
<b>R&amp;D</b>															
Preliminary Design	X	X	X	X											
Final Design					X	X									
Prototyping							X								
Testing															
<b>Deliverables</b>															
Progress Reports	X	X	X	X	X	X	X								
Prelim presentation				X											
Final Poster															
<b>Meetings</b>															
Team	X	X	X	X	X	X	X								
Client		X			X										
Advisor	X	X	X	X	X	X	X								
<b>Website</b>															
Update	X	X	X	X	X	X	X								

# Materials and expenses

Currently, there are no expenses as the project is still in the preliminary prototyping phase.

Item	Description	Manufacturer	Mft Pt#	Vendor	Vendor Cat#	Date	#	Cost Each	Total	Link
<b>Category 1</b>										
									\$0.00	
									\$0.00	
<b>Category 2</b>										
									\$0.00	
									\$0.00	
								<b>TOTAL:</b>	<b>\$0.00</b>	