

N^P NOBLE PANACEA
TARGETED MICRONEEDLING SYSTEM

JACKIE CUNNINGHAM | AUGUST 2024 | POWER TOOL STUDIO

DISCOVER | IMMERSION EXPERIENCE

how do we make self
care more *accessible* and
enjoyable for all people?

DISCOVER | RESEARCH STRATEGY

With an emphasis on *intentional exploration*, we tackled multiple ways of collecting data: diving deep and spread our breadth of knowledge to know the *target market* thoroughly.

We spent a lunch in the home of an avid entertainer losing her physical abilities, along with a local esthetics spa in Oakley.

	isolated quantitative and qualitative data	in - person	
		physical data	anecdotal data
consumer	Survey (53 responses)	Alison Probst	Alison Probst and company
professional		Morgan Howard	Morgan Howard

DISCOVER | IN-PPERSON EXPERIENCES

who

what

where

why

Alison Probst
Designer and Self Care Consumer



Entertaining
Cooking & Hosting



Household
Kitchen & Living Space



Self Care
Care through Community



Morgan Howard
Professional Esthetician



Esthetics
Skincare Treatments



Medical Spa
Jenny Simon FACE



Self Care
Care through Personalization



consumer

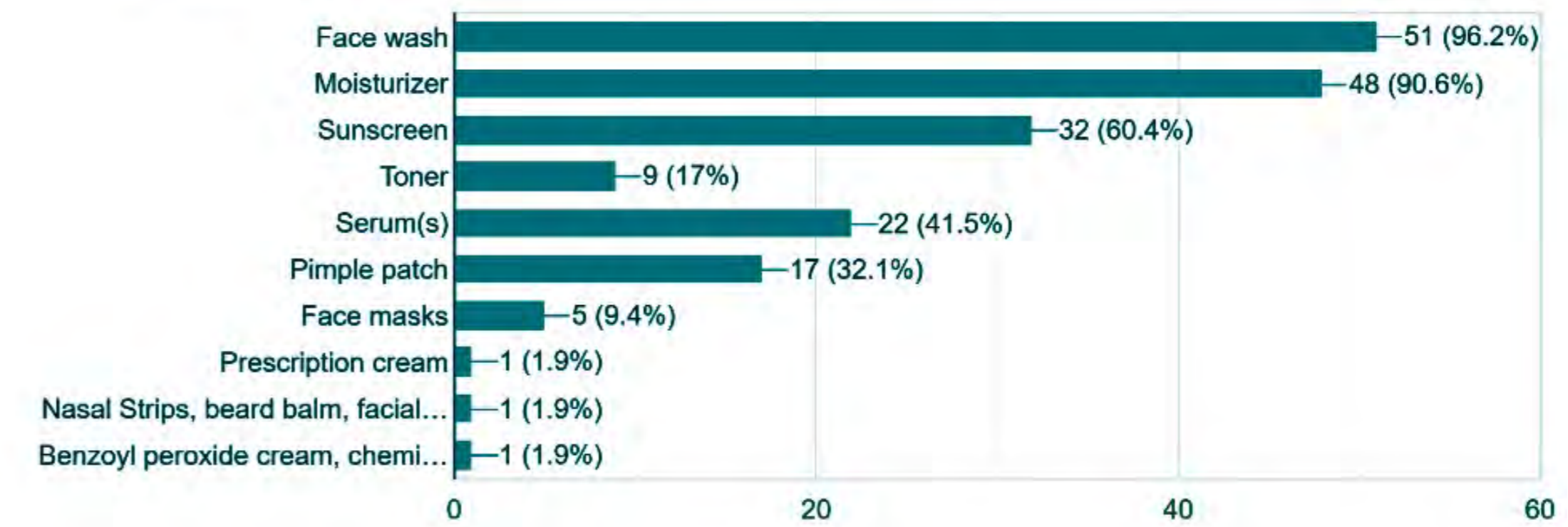
professional

DISCOVER | CROWD-SOURCED DATA

Through a collaborative effort with a partner group, we constructed a survey to collect mass data on the consumer level.

Which of the following products do you regularly use?

53 responses

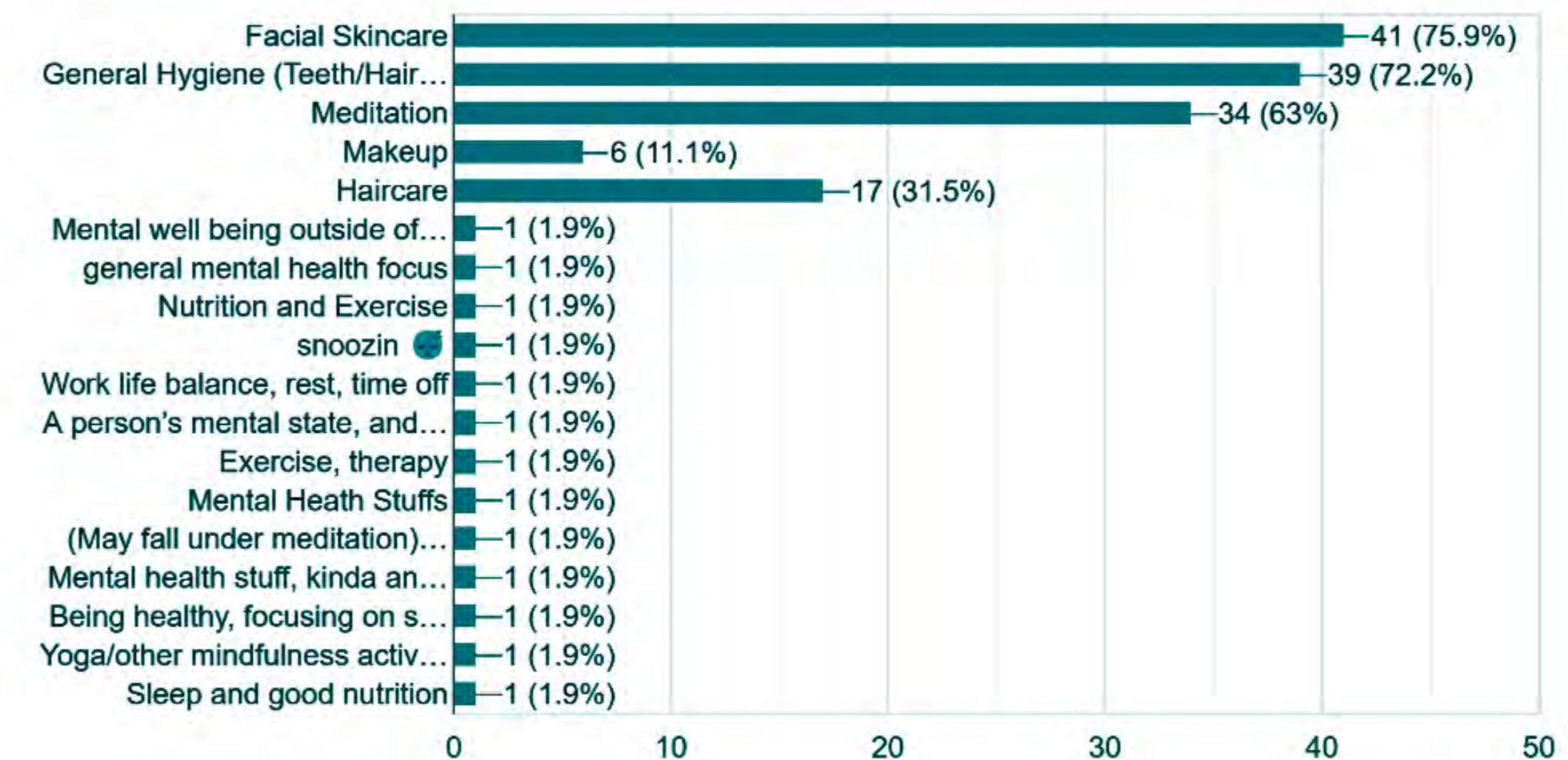


what is most important to you in your skincare/selfcare routine?



What do you think of when you hear the word "selfcare"?

54 responses



DISCOVER | REFLECTIONS

group reflections on conversational insight

personal takeaways from the pivotal discussion points



priorities

instill values of consumer over trend behaviors when considering product to iterate on or create



accessibility

unfit products can leave consumers and professionals feeling “unfinished”



performance

creating a relaxing environment is an art form for ourselves and others

DISCOVER | SETTING THE SCENE

process insight

ergonomics and accessibility



wiring

complicated wiring &
unnecessary mess



detachments

facial steamer:
no detachments,
uncomfortable positioning



function

safety issue: cap detaches too
easily during procedure

DISCOVER | POSSIBLE OPPORTUNITY SPACE

jackie's opportunity

professional industry focus

HMW improve the
esthetics experience
through the
optimization of
handheld devices?



DISCOVER | STATE OF THE ART ANALYSIS 1



DISCOVER | STATE OF THE ART ANALYSIS 2



DISCOVER | TASK ANALYSIS

Task Analysis

patient prep

microneedling procedure

post - procedure care

Step 1: Consultation
Sitting down and speaking with patient. Addressing needs and skin concerns.
What treatments does this patient need? Am I providing the right advice?

Step 2: Equipment Prep
Replacing needle, keeping the scope sterile.
Is this the right needle size for their skin type? What speed should I use?

Step 3: Prepping Patient
Cleaning patients skin, adding numbing cream and waiting for cream to activate.
Is the skin properly cleaned? When does the numbing cream kick in for this specific patient?

Step 4: Treatment
Rolls the micro-needle slowly and gently across the skin.
Am I putting too much pressure? Too little pressure? Is the needle length optimum?

Step 5: Clearing Equipment
Discard contaminated needle and clean device.
Is this cleaned well enough? I have to get pricked by the needles.

Step 6: After Care / Post Op
Re-consult with patient and explain steps and products that promote proper healing.
Am I telling the patient the right steps for their skin type? When should I recommend a follow up treatment?

Questions:
How can we properly clean and sterilize our device for repeated use?
How can we make the use to be as smooth as possible?
How can we make the process smoother with less steps?
How can we make people feel like they're "doing it right" the whole time?
How can we properly clean and sterilize our device for repeated use?
How can we guarantee sterilization of the tool?
How can we guarantee that this will be sterile and safe?
How can we empower users so feel confident in their self treatment?
How to know what amount of pressure is right?
How to provide cues for correct use?
How to make the skin prep step easier and integral to the tool.

Refined Task Analysis 1

1/Consultation
Sitting down and speaking with nurse. Addressing needs and skin concerns.
Am I properly explaining my condition?

2/Skin Prep
Sit still while the nurse cleanses skin and applies numbing solution (typically lidocaine).
Does this feel comfortable? Is my skin numbing?

3/Treatment
Sit while nurse rolls microneedling device slowly across the skin.
What is this supposed to feel like? How long does this take? What if I fall asleep?

4/Post Operation
Listen to post-care instructions from nurse. Likely leaving with some new products.
When will I see results?

Questions:
Can you break this down into a regime step?
Maybe focus on one of the steps.
How can I visually depict the difference of mental load for an appointment vs self-treatment?
Mental load; typically is the behind the scenes, cognitive and emotional work needed to manage a household - UCLA Health.
While mental load typically is for household work, how can we apply this logic to how we manage our self care?
4 Stages of Mental Load:
1. Anticipate
2. Identify
3. Decide
4. Monitor

Task Analysis 2

device prep

skin prep

microneedling procedure

post - procedure care

Questions:
How can we combine the serum, numbing and numbing step?
How can we guarantee sterilization of the tool?
How can we guarantee that this will be sterile and safe?
How to empower users so feel confident in their self treatment?
How to make the skin prep step easier and integral to the tool.

Refined Task Analysis 2

1/Replace Battery
Twist off bottom of the microneedling device to replace the with a pre-charged battery.

2/Install Needles
Wipe device with alcohol wipe to sterilize. Remove needles from sterile bag and snap into the top of the device.

3/Skin Prep
Cleanse skin and apply numbing cream to the skin. Leave on for 20-30 minutes.

4/Treatment
Apply serum in small sections of the face. Roll device across the skin only where the serum is present. Work in a crosshatching motion, or small circles. Adjust settings when needed, and repeat process across the face until complete.

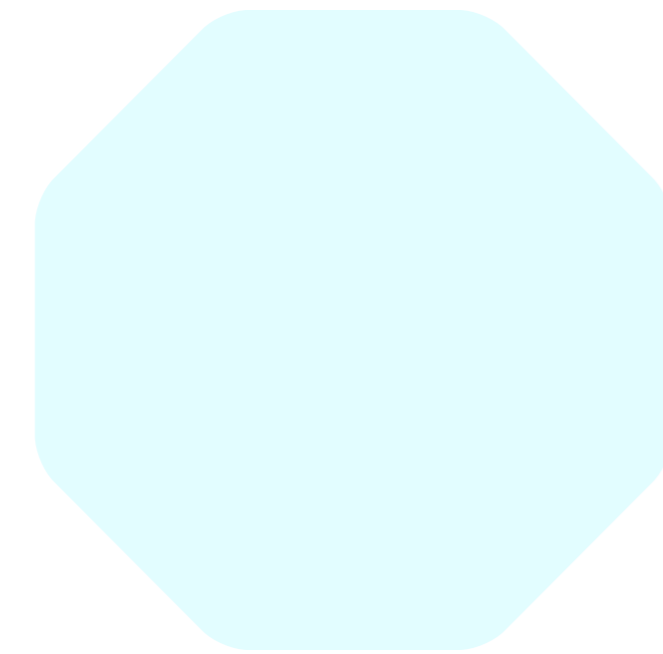
5/Post Operation
Discard needle and return to original bag before tossing. Clean device and put away. Treat skin with proper products.

Physical Task

Mental Load

Questions:
Did I properly install the battery? How do I know if it is charged?
Is the device clean enough? Are the needles still sterile? Do I really need gloves for this?
Is my skin clean enough? Is this enough numbing cream? How do I know when my skin is ready?
Am I doing this right? Is the pressure too soft or too hard? Should I hurt? I can't see myself do this part. Am I using the right settings? What if I hurt myself? Is there enough tension on my skin? I hate having to make this weird face.
Did I put this away right? What am I supposed to do now?
An increased amount of mental labor decreases the ability to have a calming and relaxing experience.
How can we create an experience so simple and streamlined that a self-patient can experience the same level (or close to that) of relaxation they would at an in-person appointment?
What level of battery should we provide a powerbank?
Does a powerbank need multiple device types?
How to make the skin prep step easier and integral to the tool?
How can we guarantee sterilization of the tool?
How can we guarantee that this will be sterile and safe?
How to empower users so feel confident in their self treatment?
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DISCOVER | TASK ANALYSIS 1



X | STEP

Details of the physical task:

Details of the mental tasks of a patient:



1 | CONSULTATION

Sitting down and speaking with nurse. Addressing needs and skin concerns.

Am I properly explaining my condition?



2 | SKIN PREP

Sit still while the nurse cleanses skin and applies numbing solution (typically lidocane).

Does this feel comfortable? Is my skin numbing?



3 | TREATMENT

Sit while nurse rolls microneedling device slowly across the skin.

What is this supposed to feel like? How long does this take? What if I fall asleep?



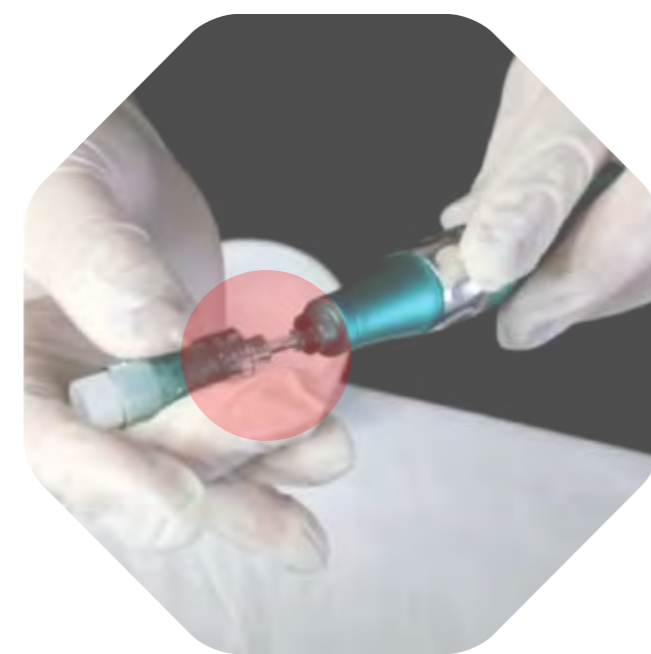
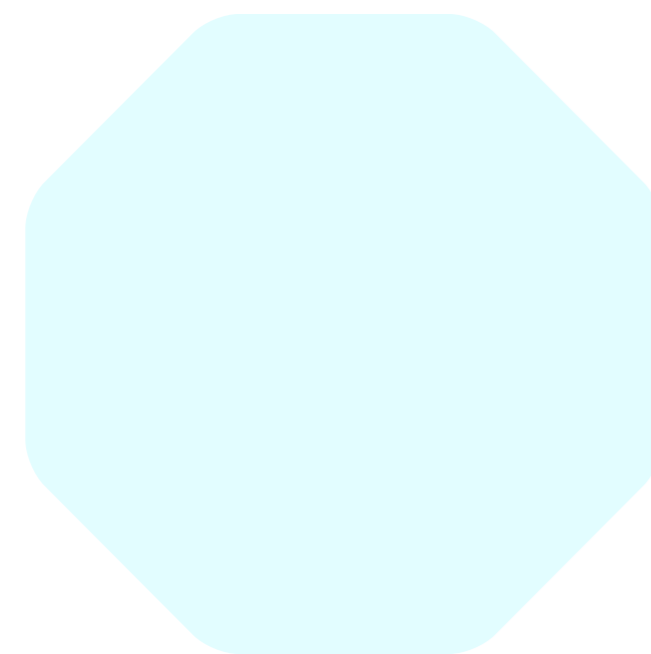
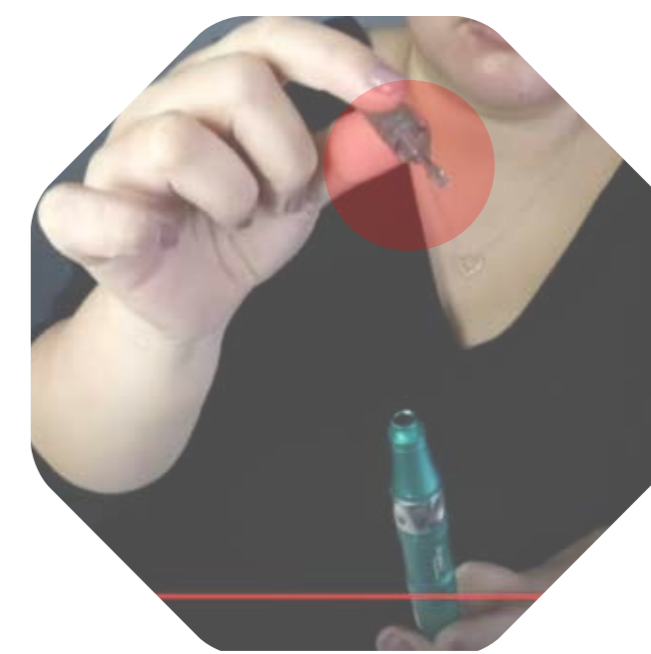
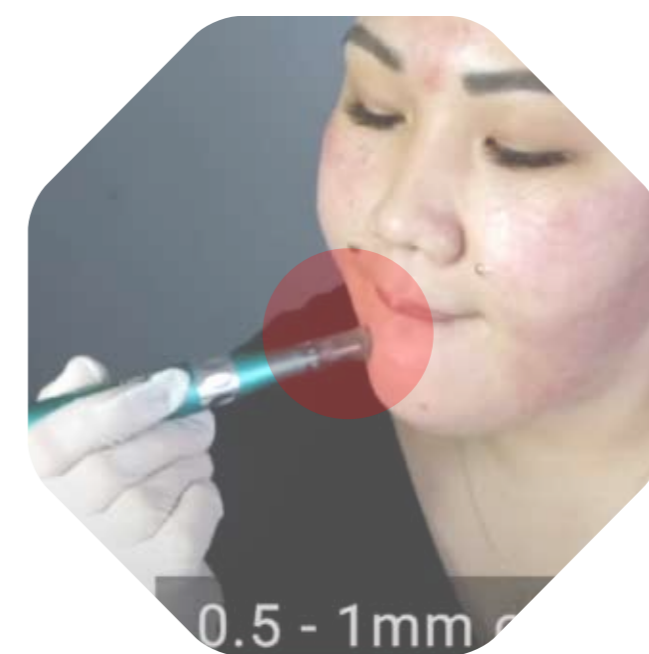
4 | POST OPERATION

Listen to post-care instructions from nurse. Likely leaving with some new products.

When will I see results?

DISCOVER | TASK ANALYSIS 2

**Wear gloves*



X | STEP

1 | REPLACE BATTERY

2 | INSTALL NEEDLES

3 | SKIN PREP

4 | TREATMENT

5 | POST OPERATION

Details of the physical task:

Twist off bottom of the microneedling device to replace the with a pre-charged battery.

Wipe device with alcohol wipe to sterilize. Remove needles from sterile bag and snap into the top of the device.

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Apply serum in small sections of the face. Roll device across the skin only where the serum is present. Work in a crosshatching motion, or small circles. Adjust settings when needed, and repeat process across the face until complete.

Discard needle and return to original bag before tossing. Clean device and put away. Treat skin with proper products.

Details of the mental tasks of a patient:

Did I properly install the battery? How do I know if it is charged?

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Is my skin clean enough? Is this enough numbing cream? How do I know when my skin is ready?

Am I doing this right? Is the pressure too soft or too hard? Should it hurt? I can't see myself do this part. Am I using the right settings? What if I hurt myself? Is there enough tension on my skin? I hate having to make this weird face.

Did I put this away right? What am I supposed to do now?

DISCOVER | PRODUCT TEARDOWN

NEEDLE HOUSING 1



NEEDLE HOUSING 2



SPINNING MOTOR



BATTERY & CHIP HOUSING



CHIP & BATTERY



CHARGING PORT



DEFINE | PARTS ANALYSIS

NEEDLE HOUSING

Needles get twisted into the machines housing, and pressed up against the oscillating mechanism.

The Oscillating Cam pushes up against the mechanism to **vibrate the microneedle**.



MOTOR W/ OSCILLATING CAM (OEM)

The **spinning motor** is battery powered with a plastic cam attachment on top. This plastic part is **cut at an angle** to create an **up and down motion** against the needle's backing.

Having the cam attachment allows the motor to stay upright cylindrically which **slims down the overall frame**. If the motor were a typical oscillating motor, the motor would sit on its side and be around 25% wider.

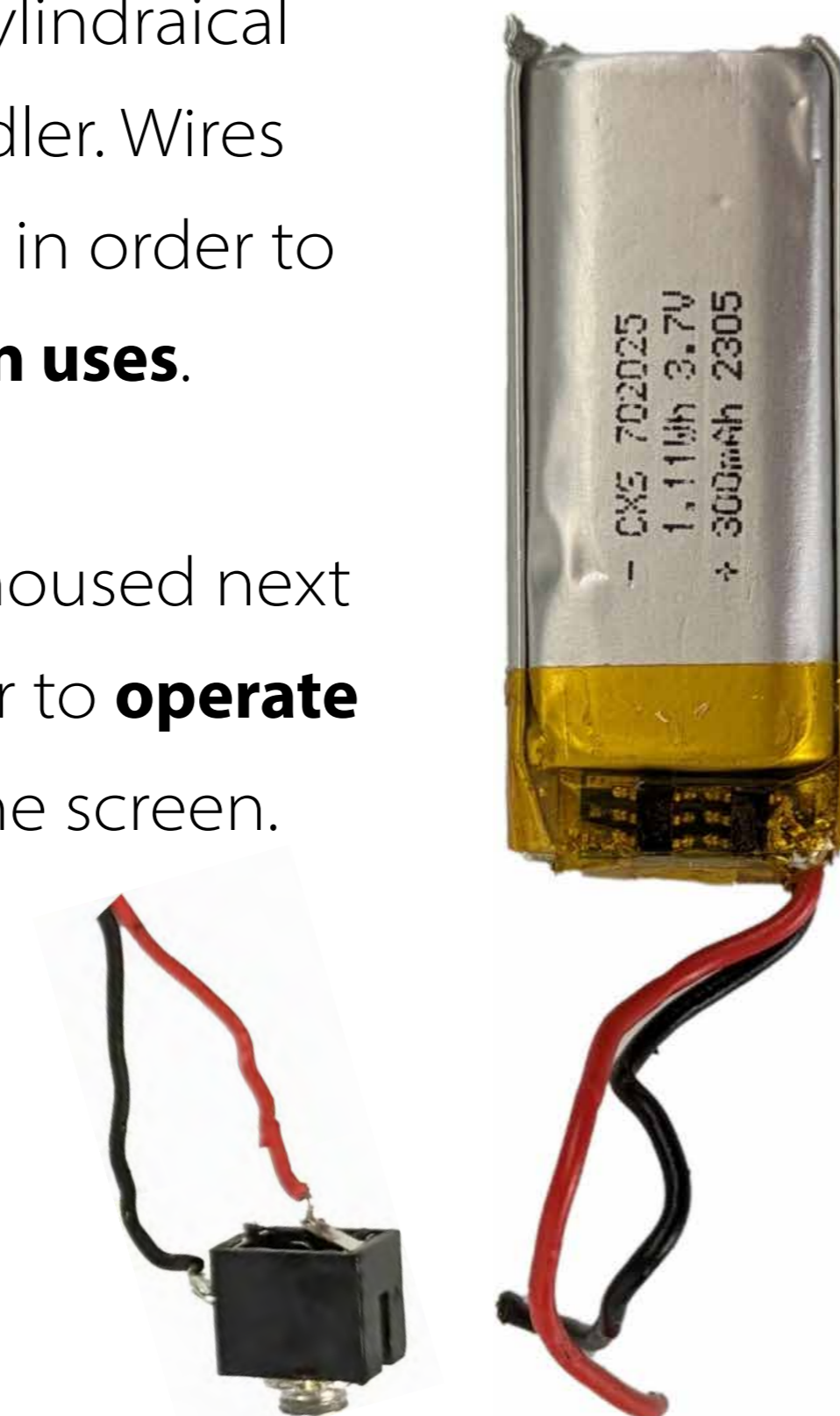


DEFINE | PARTS ANALYSIS

RECHARGABLE BATTERY (OEM)

Battery embedded into cylindrical housing of the microneedler. Wires connect to a charging port in order to be **charged in between uses**.

The rechargeable battery is housed next to the motherboard in order to **operate the motor** and light up the screen.



MOTHERBOARD AND DISPLAY (OEM)

Motherboard houses display and the **on/off button**. Attached to the rechargeable battery and charging port.

Display shows the levels of microneedling speed/intensity on a scale from 1-7. Tapping the button once cycles through the levels and holding the button down powers off the device.



DEFINE | PRODUCT INSPIRATION

angled chamfer details



inner-eye corner forms



embossing/debossing



bead-blasted metal



palm-grip ergonomics

DEFINE | BRAND INSPIRATION

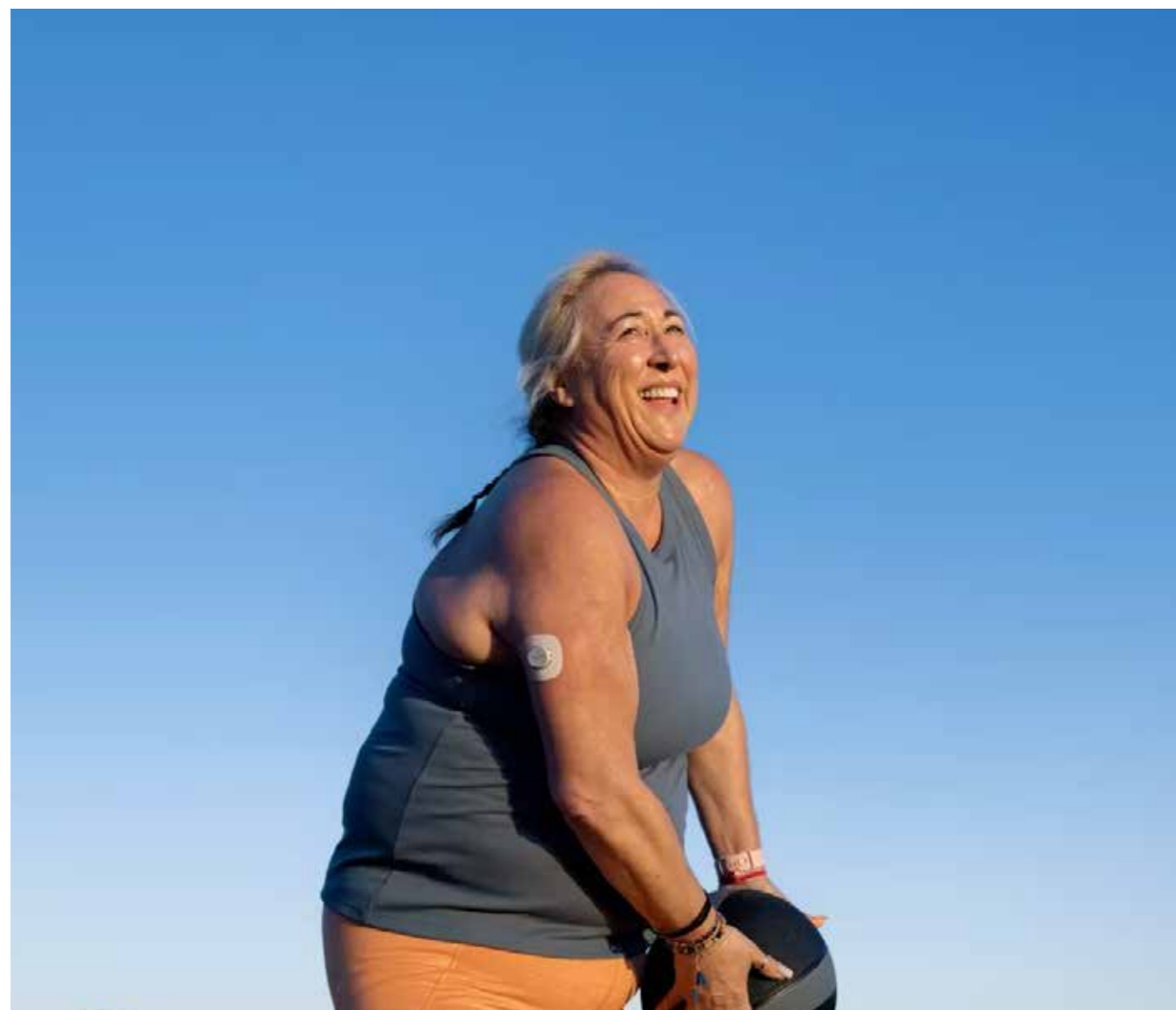
ingredient and process transparency



clean



airy



women's empowerment



"formulated for you"

DEFINE | WHY NOBLE PANACEA

NOBLE PANACEA

Noble Panacea prides themselves on **technology based skincare**. Founded by Noble Laureate Sir Fraser Stoddart, Noble Panacea is known for their OSMV technology that has the ability to host and protect active ingredients at the molecular level.

Through their wording and visual brand language, Noble Panacea has a **clinical yet comforting and empowering language**. Their skincare Collections have elegant names such as "The Exceptional" where this final microneedling system will be a part of. They also denote their serum and other treatment packs as "doses".

Noble Panacea's target market are **consumers looking to improve their skin through science backed systems**, which directly correlated with the Targeted Microneedling System.



DEFINE | VISUAL BRAND ANALYSIS

Here, I printed out the home pages of the Noble Panacea website in black and white. This allowed me to analyze the specific language, imagery, and compositions that Noble Panacea consistently incorporates into their website. The patterns I noticed are:

1 | OCTAGONS

The primary shape used across the brand packaging, graphics, and marketing

2 | SCI-FI “LOGOS”

Scientific language such as, “activate, refresh, technology, photoaging, etc”. Promotes a sense of integrity for consumers who believe in science-based health and wellness.

3 | TRANSPARENCY

Specific callouts in relation to ingredient integrity, cruelty-free practices, sustainable packaging and sourcing.



DEFINE | VISUAL BRAND ANALYSIS

NOBLE PANACEA

BRAND TITLE

1 | TITLES - ALTIVO EXTRA
LIGHT 48 PT/48 SPACING,
UPPERCASE

Body text - altivo extra light 30 pt/30 spacing,
center alignment

The precision of our patented OSMV™
Tecnology is only the beginning.

*Caption Text: Altivo Extra Light 24 pt 24
spacing, L/R alignment*

*The precision of our patented OSMV™
Tecnology is only the beginning.*



BRAND LOGO

COLOR SWATCHES
BY COLLECTION



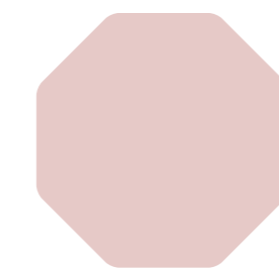
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#e0d0bc



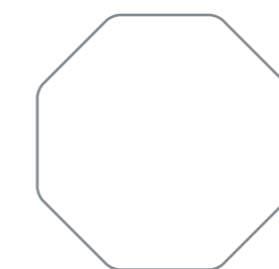
#848b90



#e6c9c7



#4f4081



#ffffff

PRODUCT EXAMPLES



DEFINE | VISUAL BRAND DIRECTION



THE ENERGIST
For Photoaging And UV Protection

[DISCOVER](#)



THE EXCEPTIONAL
For Targeted Transformation

[DISCOVER](#)



THE ABSOLUTE
For Regenerated, Repaired Skin

[DISCOVER](#)



THE BRILLIANT
For Glowing Radiance

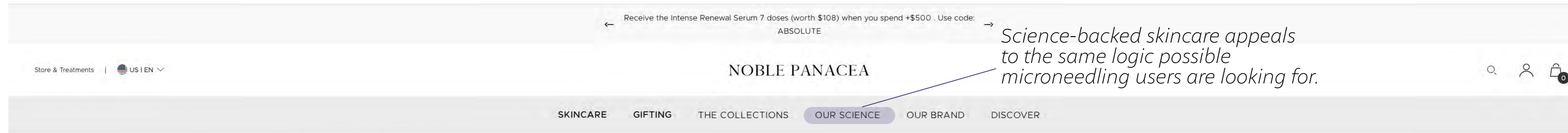
[DISCOVER](#)



THE ELEMENTAL
For Purified, Resurfaced Skin

[DISCOVER](#)

DEFINE | VISUAL BRAND DIRECTION



Science-backed skincare appeals to the same logic possible microneedling users are looking for.

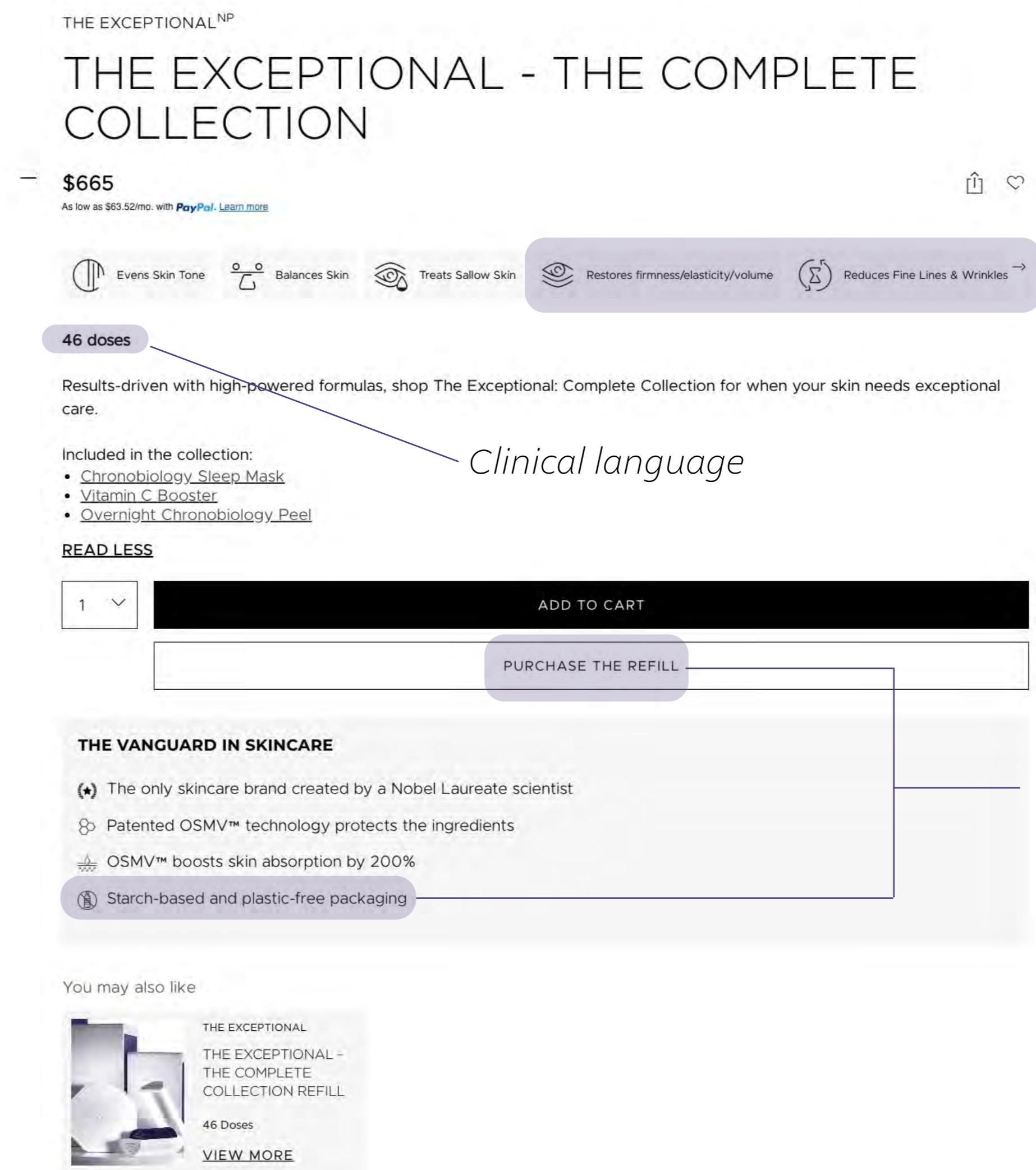


Purple accent color unites the collection and creates a sense of calm.

Rounded hexagonal shapes with white plastic packaging

Debossed logo

Light and airy composition, comfortable areas of white space.



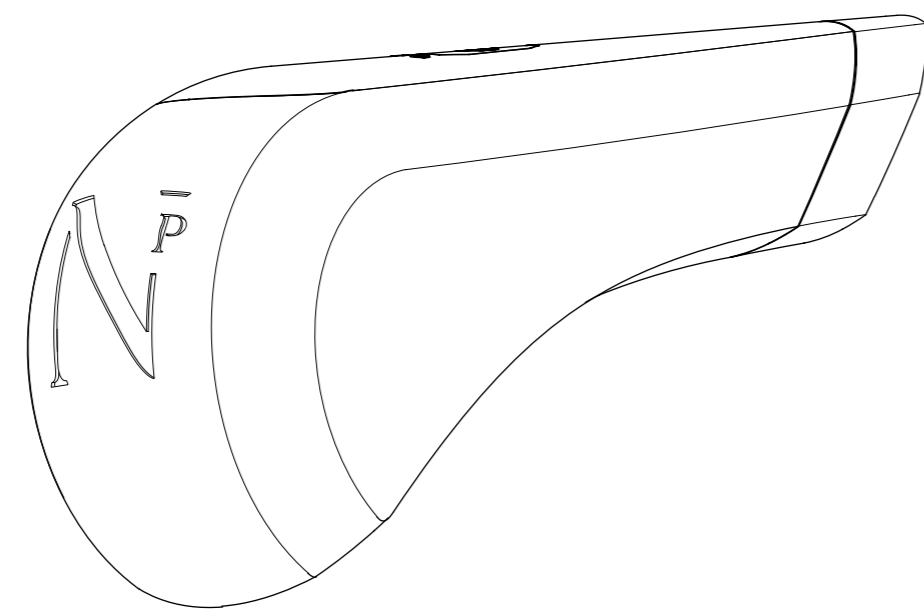
Directly aligns with microneedling skincare benefits.

Clinical language

Sustainable mindset in action throughout product lines.

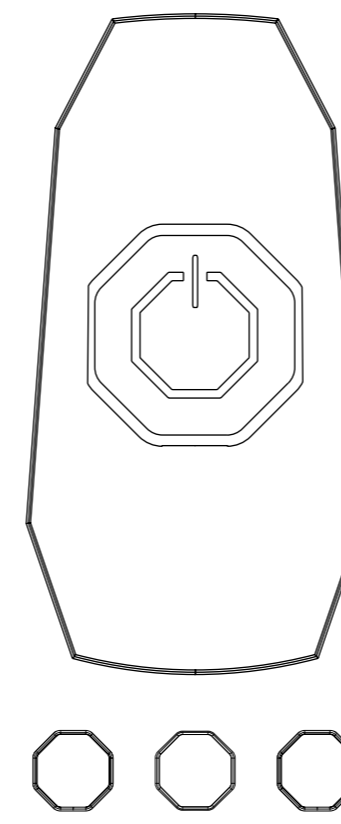


DEFINE | SUCCESS FACTORS



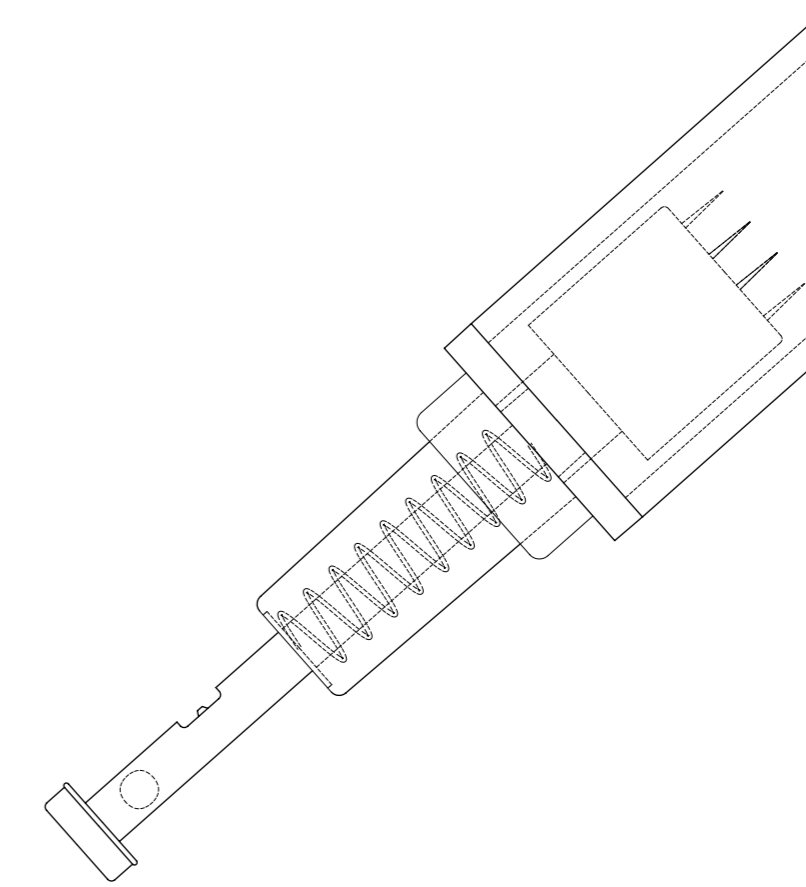
ERGONOMICS

Recognizing that the current pencil-grip products are not optimal for self-use.



SIMPLICITY

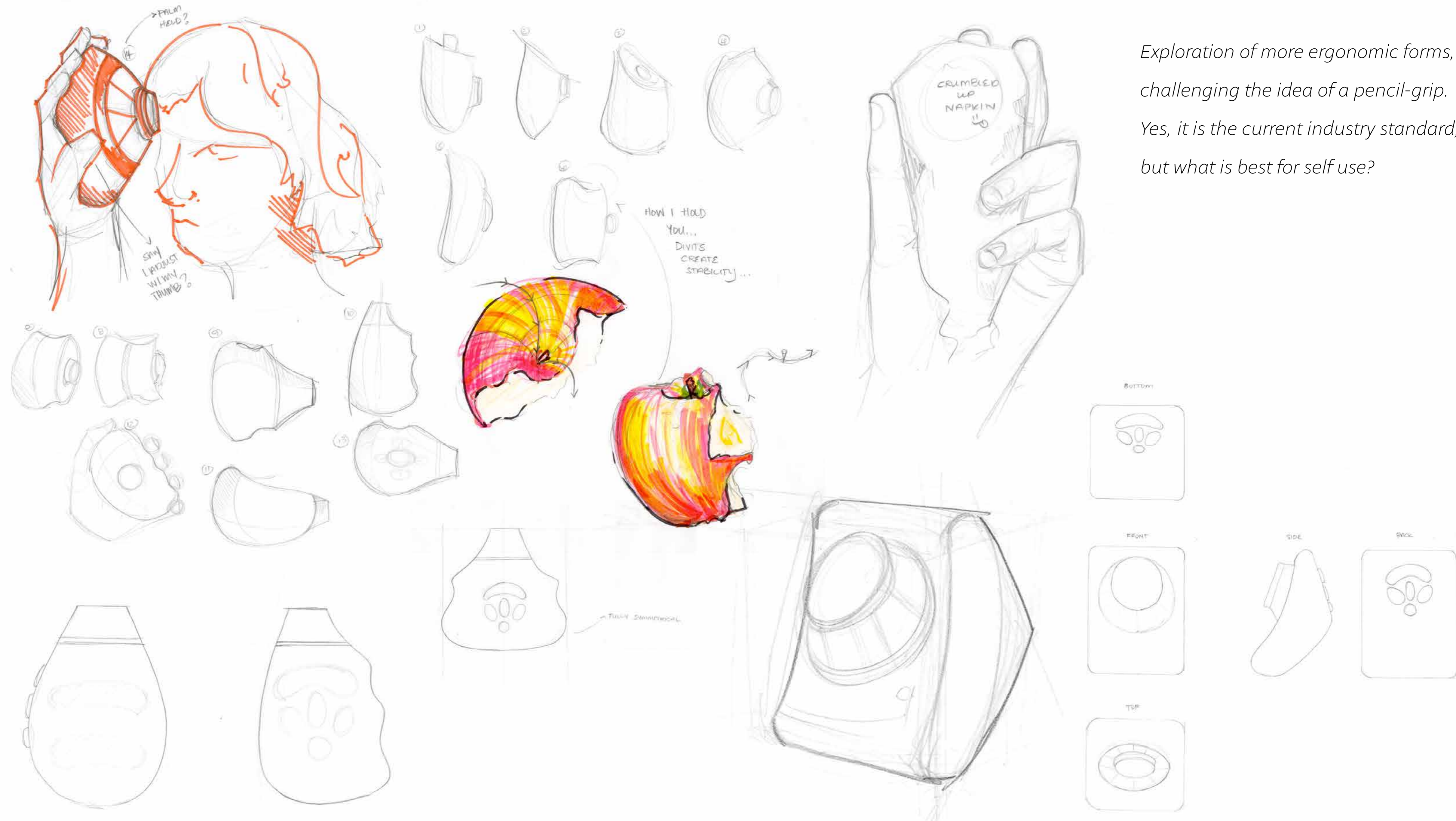
Evaluating complicated settings of current at-home microneedles, and the key settings for optimal treatment.



SAFETY

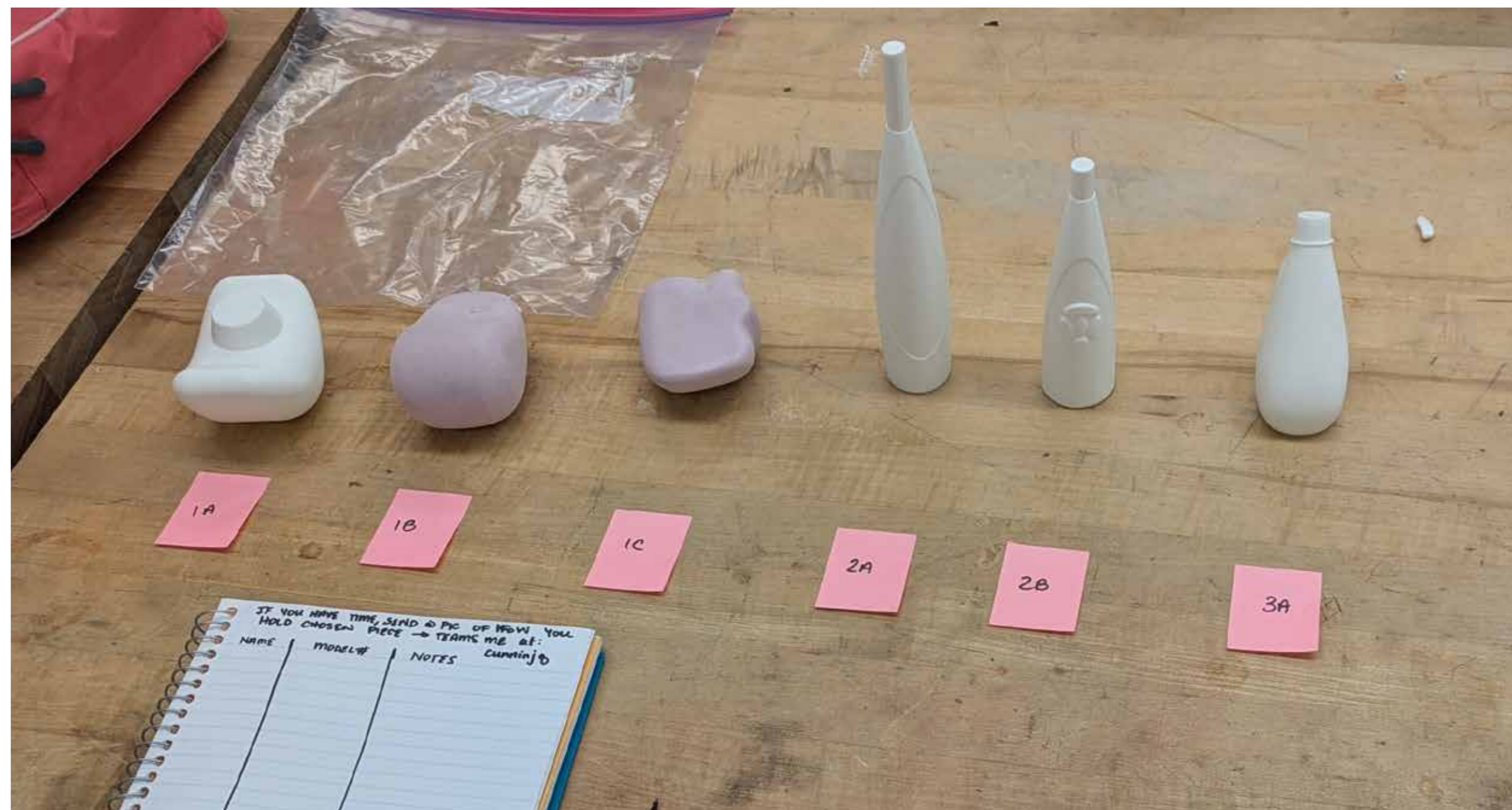
Ensuring a sterile, repeatable treatment where users feel mentally and physically confident

DESIGN | FORM IDEATION



Exploration of more ergonomic forms, challenging the idea of a pencil-grip. Yes, it is the current industry standard, but what is best for self use?

DESIGN | FORM IDEATION



Both pencil grip concepts revealed the need for an angled needle tip. Leaving the tip straight on adds strain to the wrist and creates an obstruction of view.

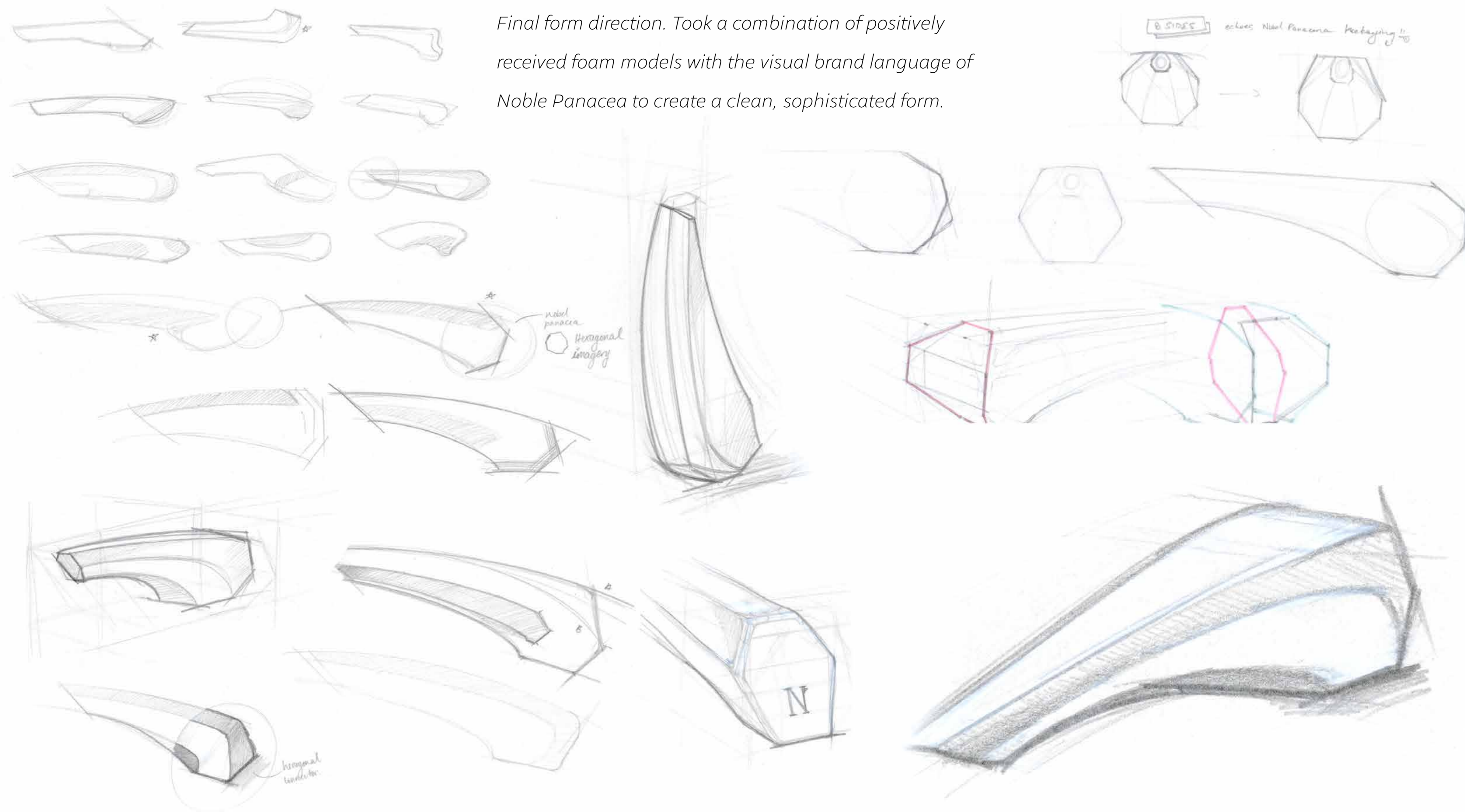


Discovered safety concerns with palm grip concepts. In order to reduce slipping, along with keeping fingers away from the needles the tool needs to be longer.

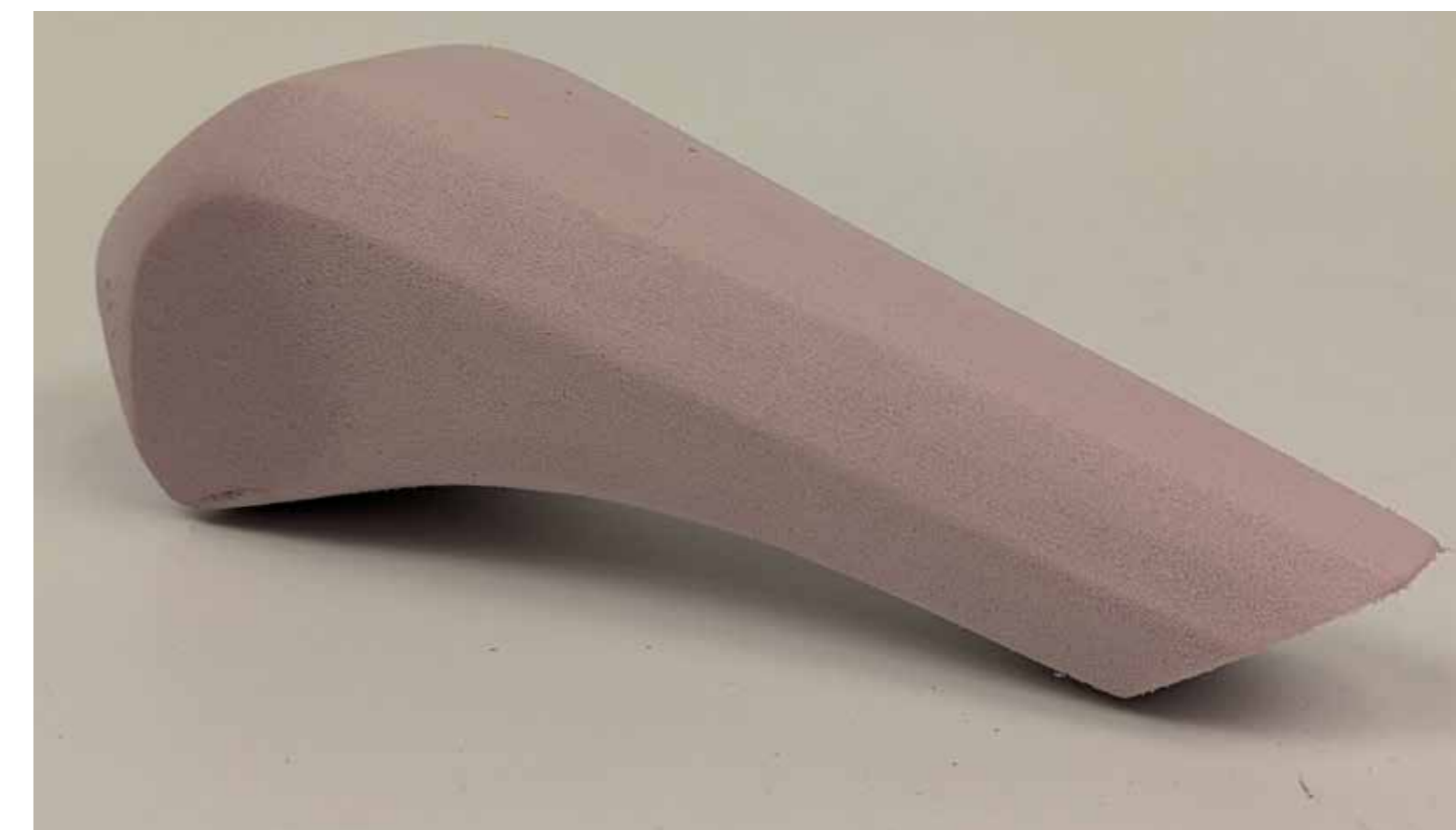
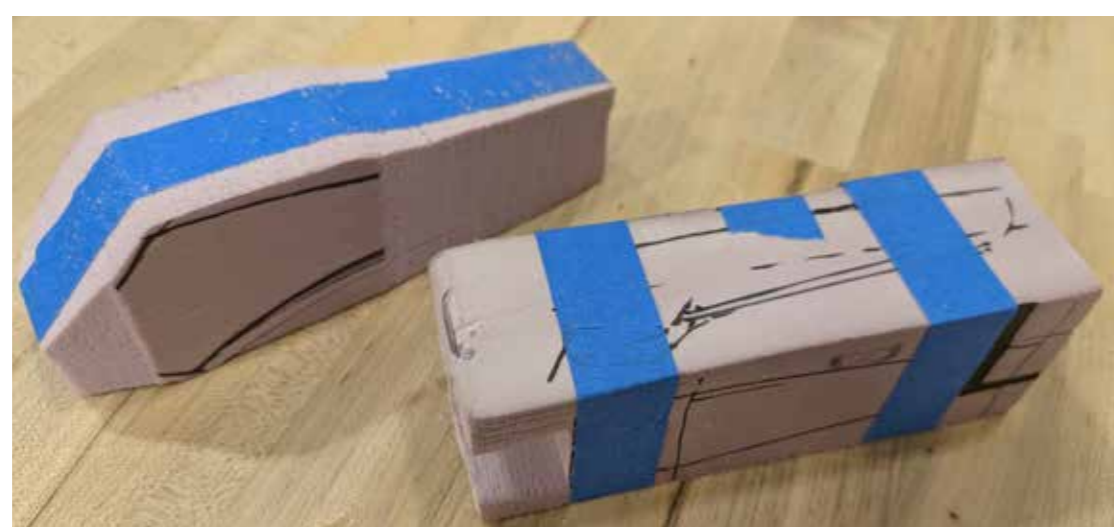
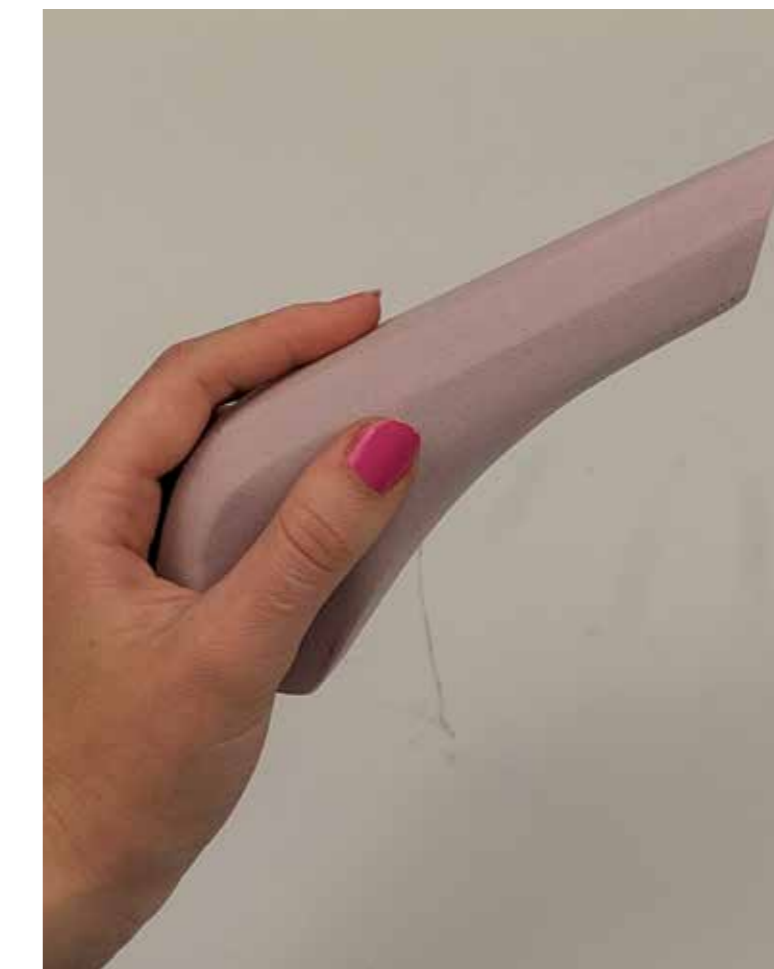
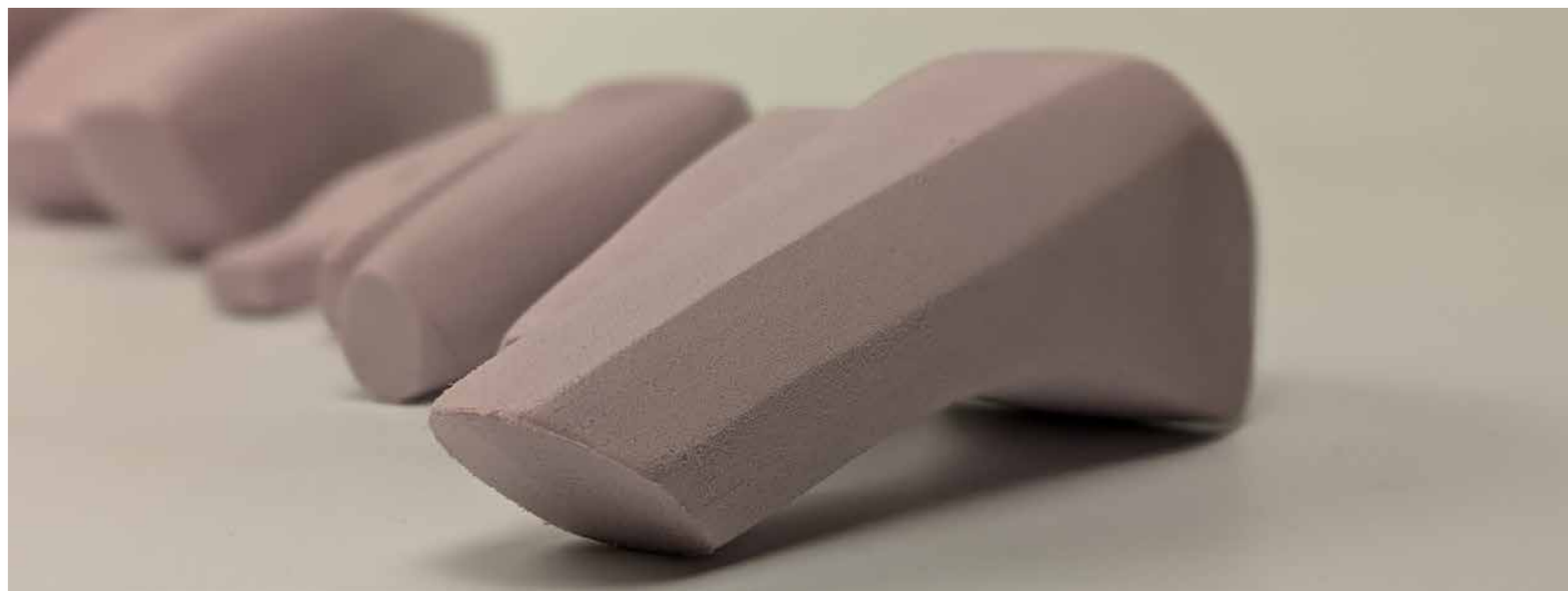
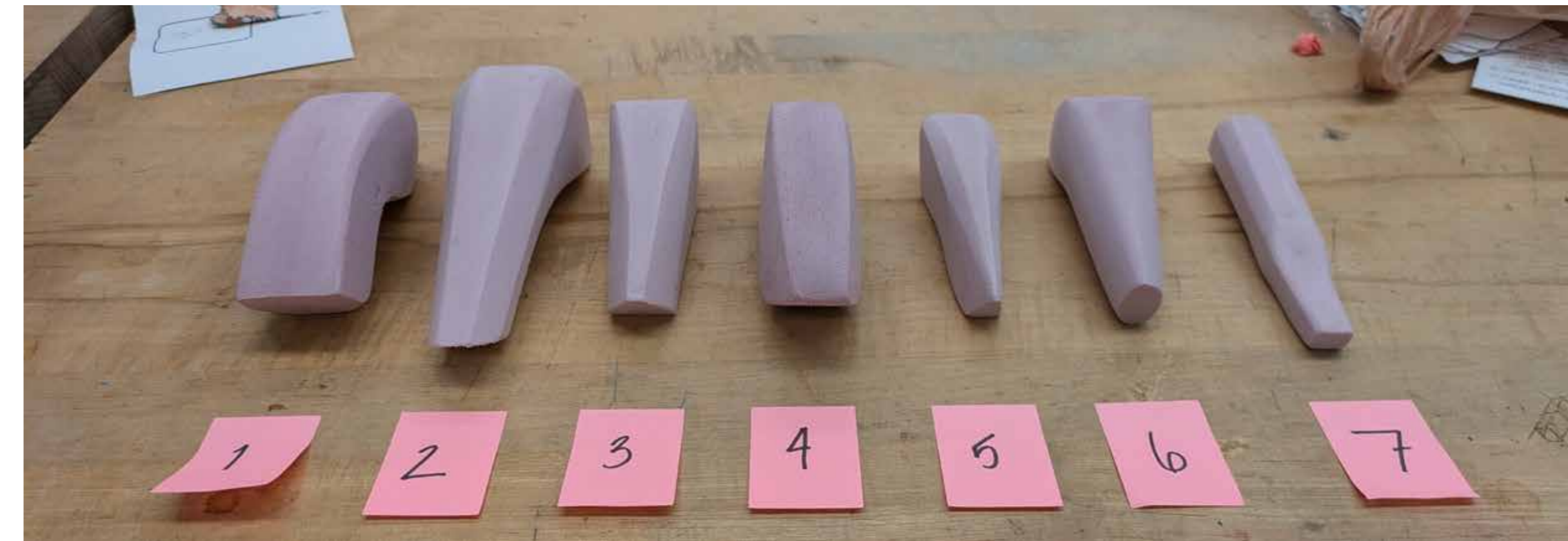
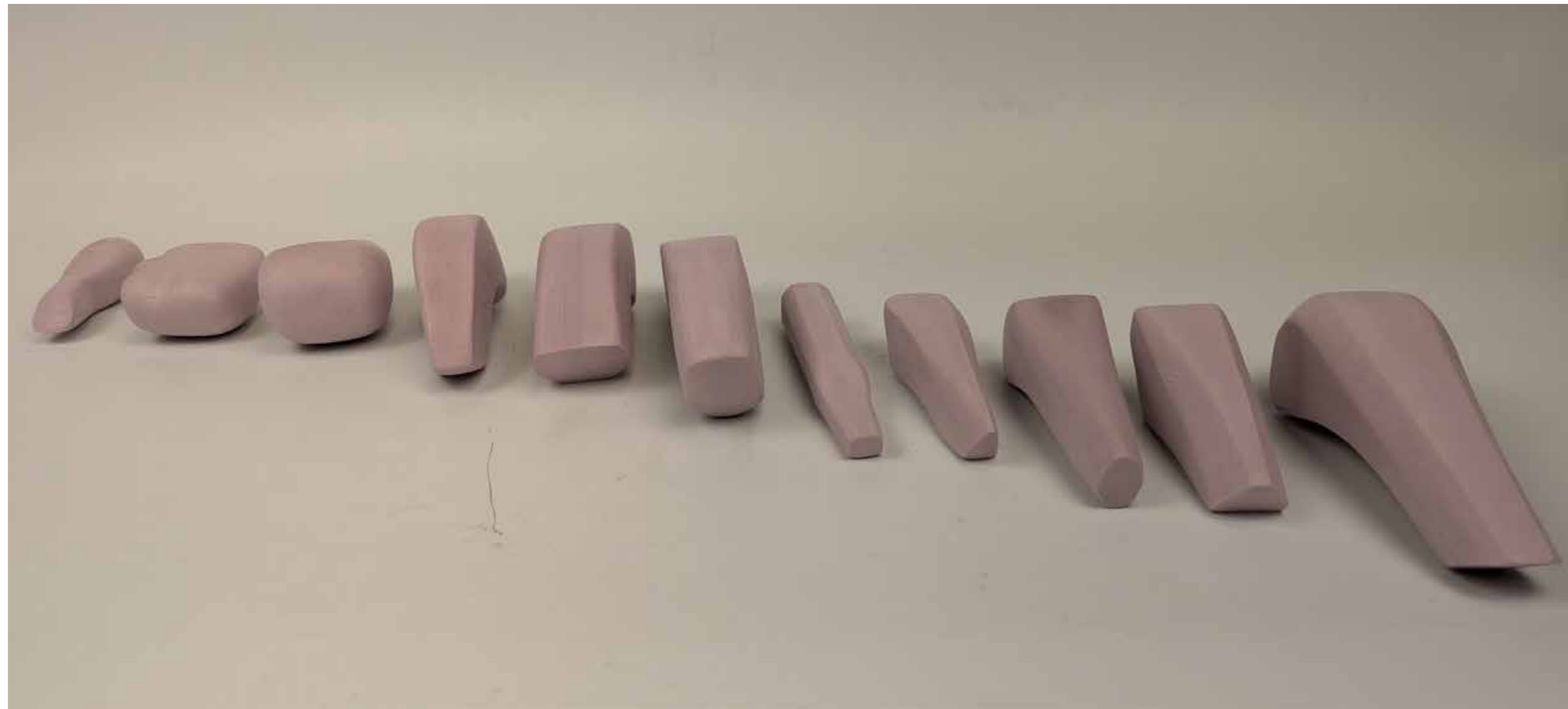
shot 1	1A	1B	1C	2A	2B	3A	AI's Summary
all feedback	[Post-it notes]	[Post-it notes]	[Post-it notes]	[Post-it notes]	[Post-it notes]	[Post-it notes]	There are 150 post-it notes in total.
positives: do they match my success factors?	simplicity, size, and intuitive holding grasps, comfortable	COMFY, simple, clear where to hold, intuitive grasp	intuitive, simple, comfortable	comfortable	"look" doesn't really match my success factors for form	versatility, comfortable. "fun" is interesting... not the goal really	
pain points: what success factors am I missing?	intuitiveness is lacking for how to be held, too small overall	intuitiveness is lacking for how to be held, too small overall	small!!! again, not intuitive on where to hold, also right vs left handed	BORING af, lacks visual and surface interest	too small, boring ish	too small, awkward holding	
neutral things to look into	ergonomics need work	organic has good feedback	size!	boring af, look into asymmetry?	again, boring and no one knew buttons meaning	small, but interesting to blend palm and pencil grip	
next steps	Ensure a secure grip	Address the size and grip					

RE-DESIGN | FORM IDEATION

Final form direction. Took a combination of positively received foam models with the visual brand language of Noble Panacea to create a clean, sophisticated form.

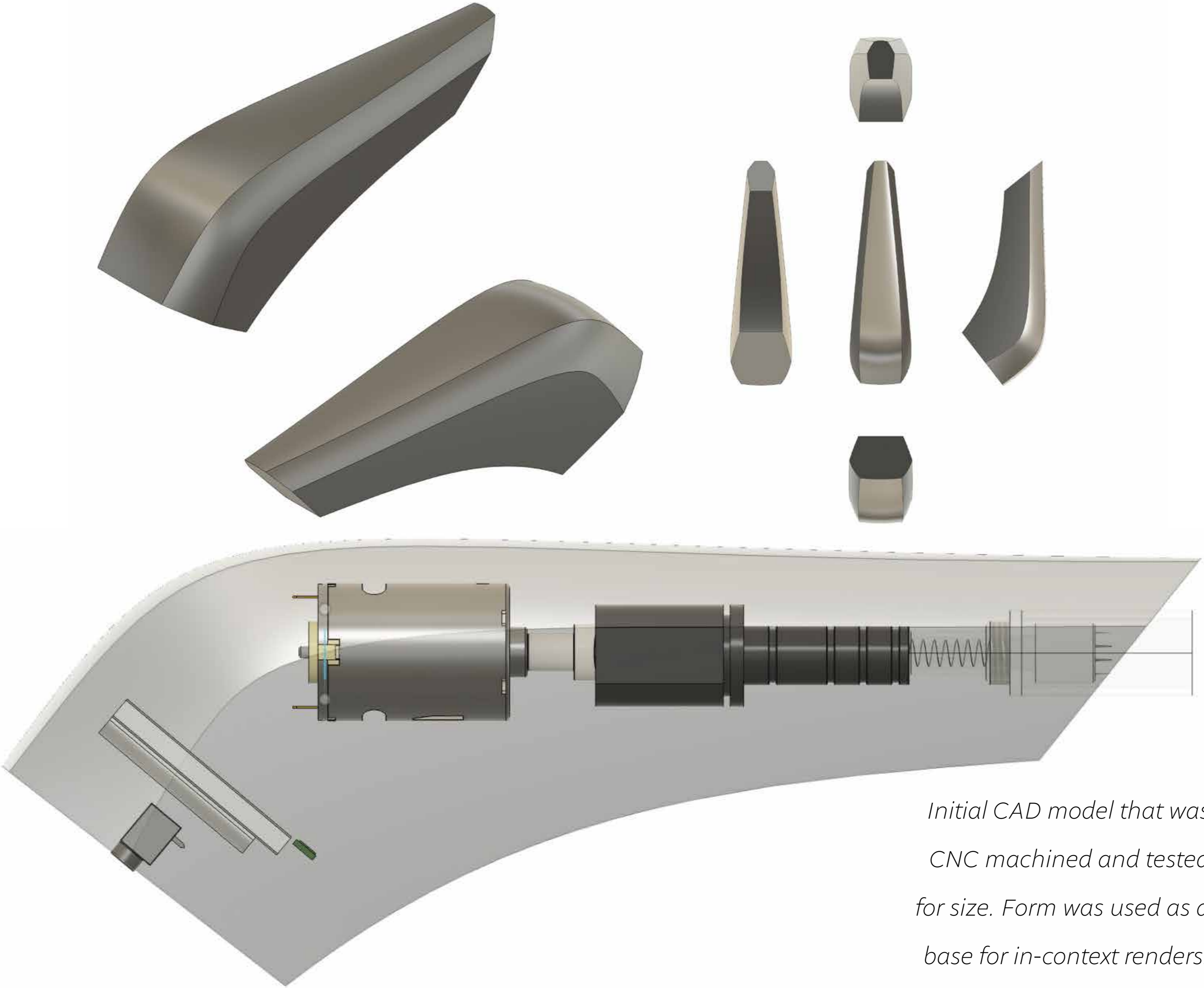


RE-DESIGN | FORM IDEATION

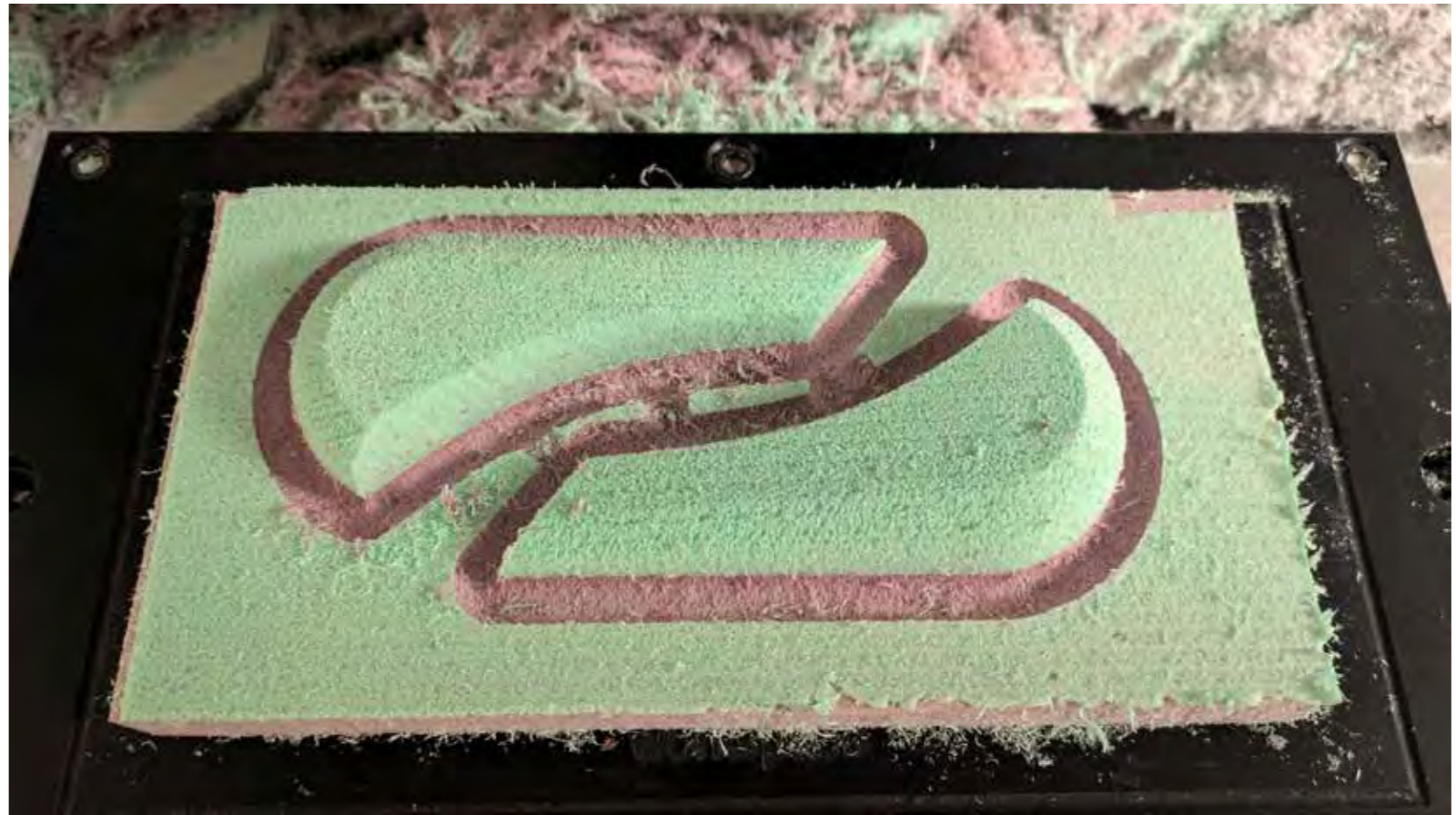


Models created using high-density foam. Laminating, cutting, and sanding to create 1:1 forms quickly.

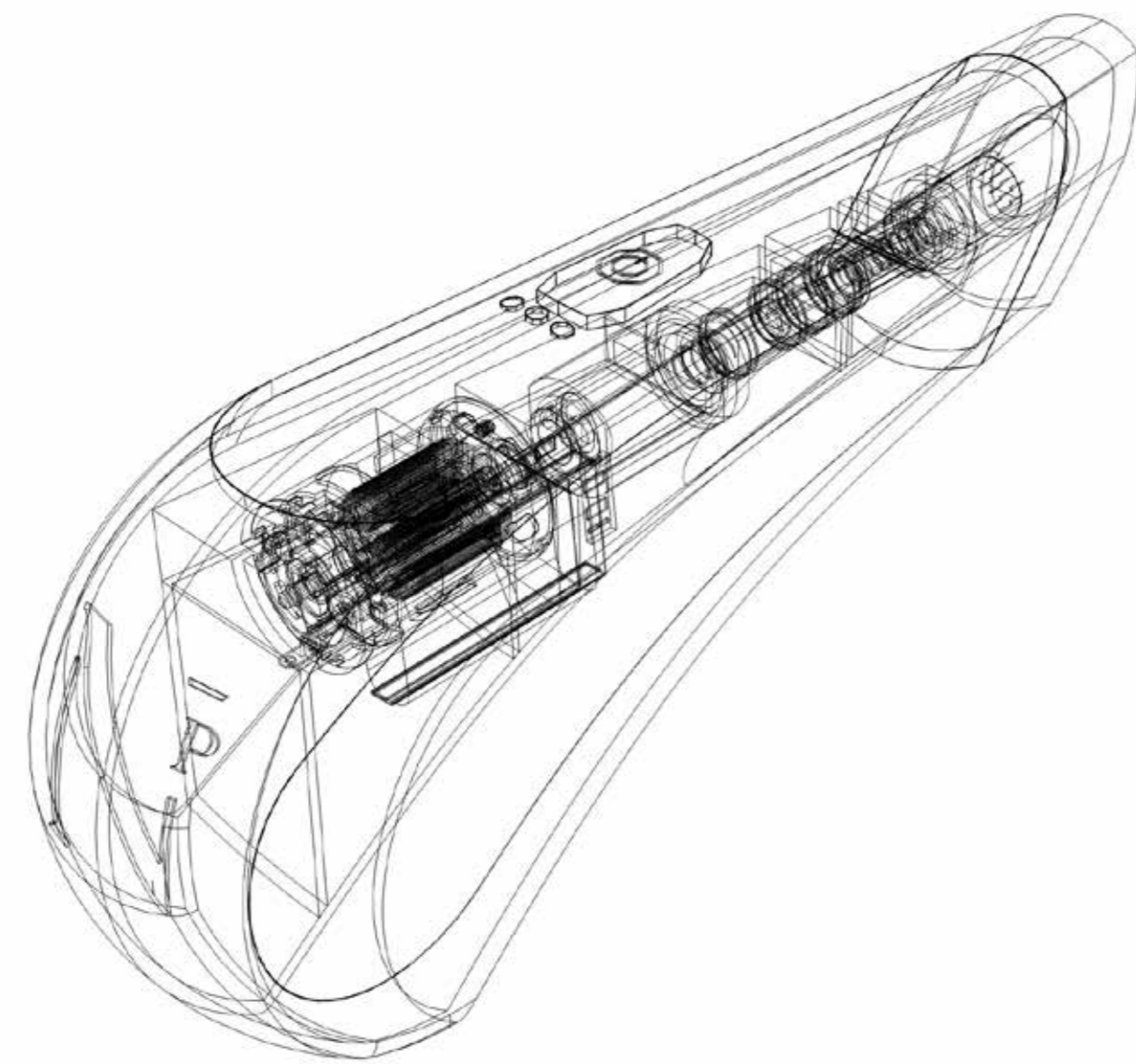
DESIGN | CAD IDEATION



Initial CAD model that was CNC machined and tested for size. Form was used as a base for in-context renders.



DESIGN | FORM REFINEMENT

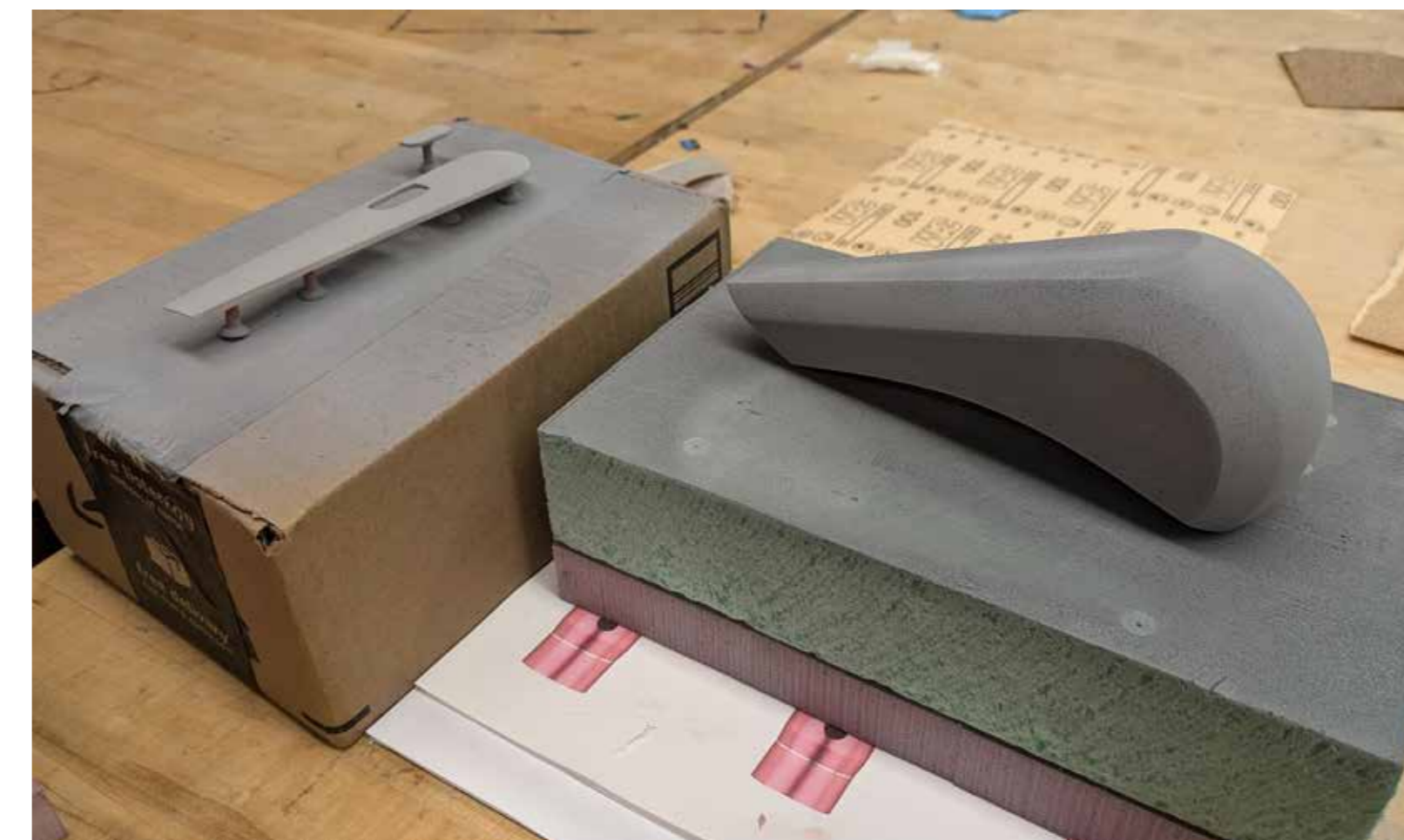
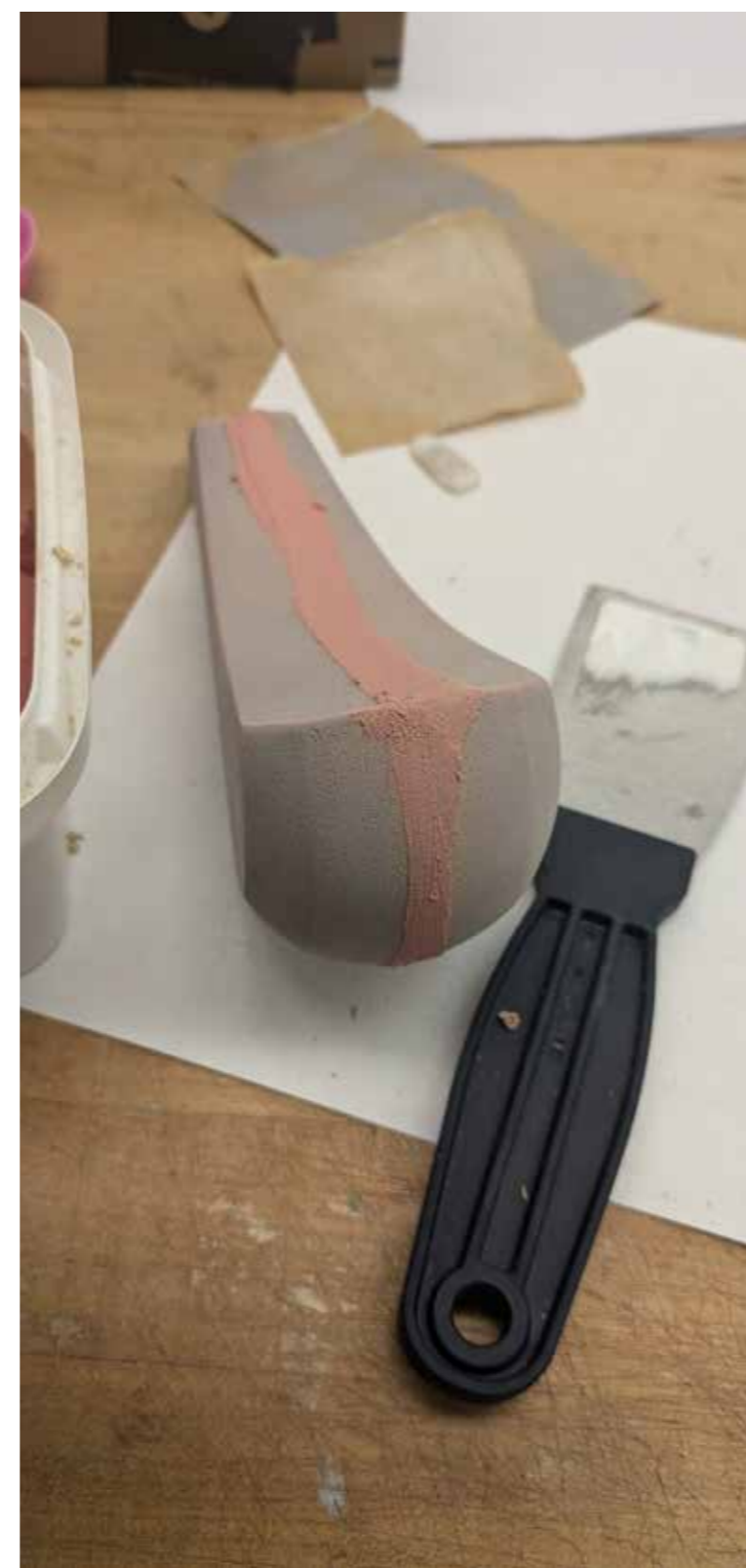


Debossed logo for enhanced grip

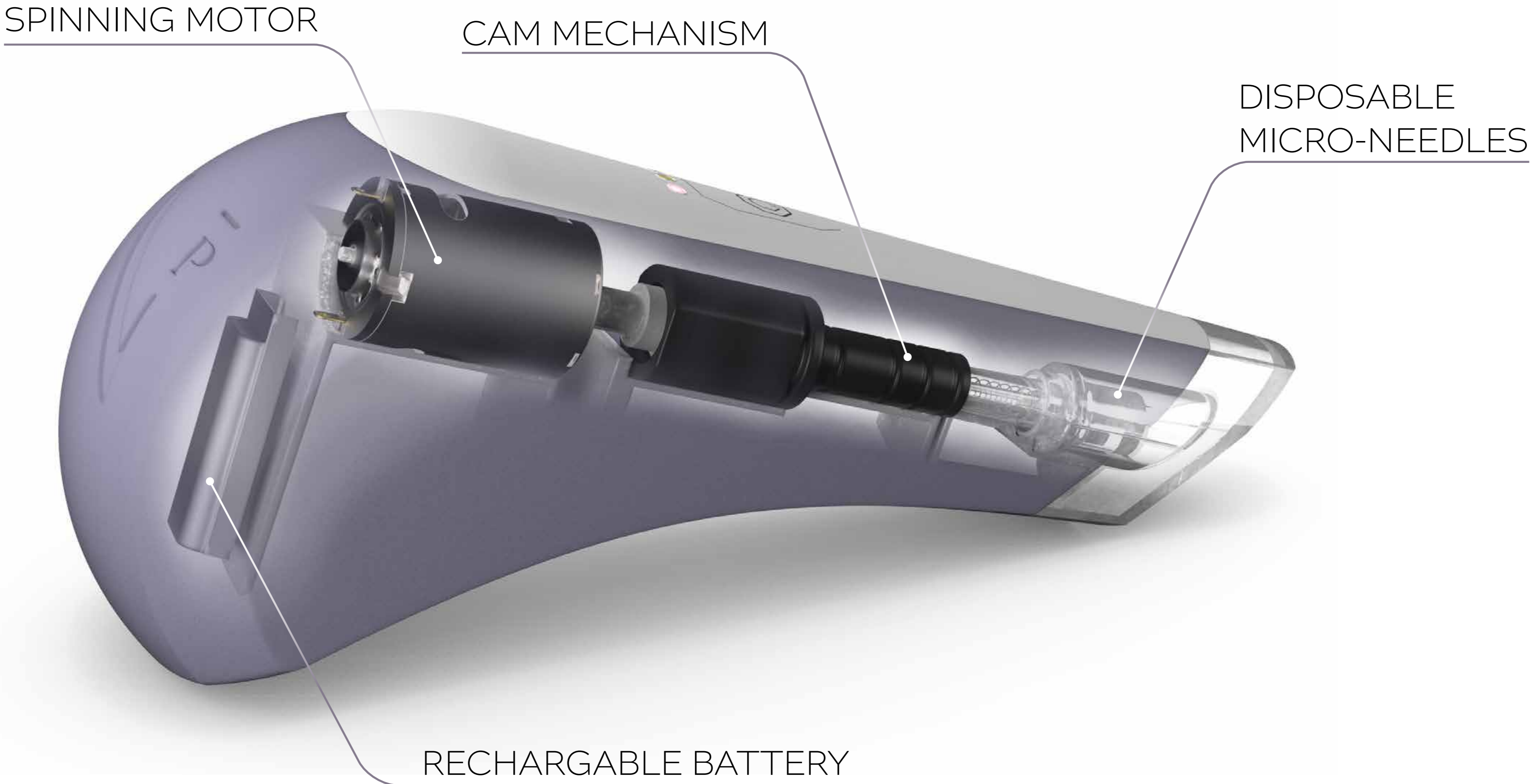
3 speed motor with light indication



DELIVER | GRAY MODEL



DELIVER | INTERNAL VIEW RENDER



DELIVER | RENDERS



N^P

THANK YOU
JACKIE CUNNINGHAM
CUNNINJQ@MAIL.UC.EDU

JACKIE CUNNINGHAM | AUGUST 2024 | POWER TOOL STUDIO