HERNIA MODEL

Carmen Coddington
Bryan Jepson
Laura Platner
Taylor Powers

Dr. Jon Gould- UW School of Medicine and Public Health
Prof. Thomas Yen- BME Department

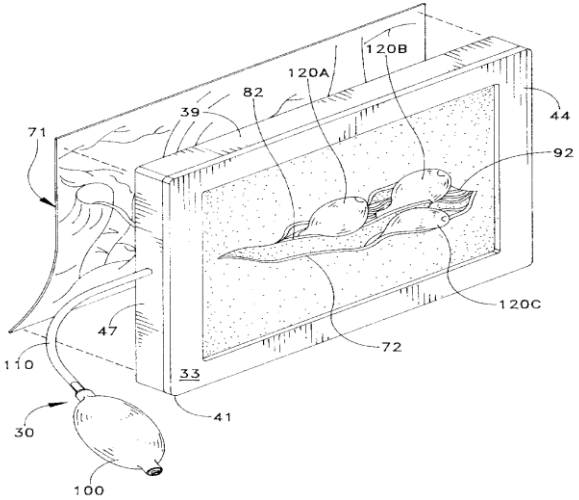
Points of Interest

- Client Information
- Background
- Problem Statement
- Design Criteria
- Competition
- Materials
- Design Matrix
- Final Design
- Future Work
- Questions

Competition

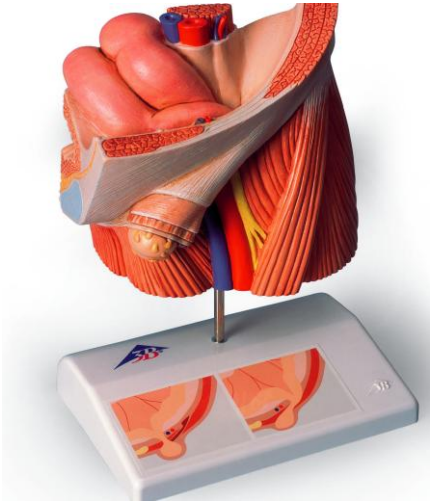
manikinsimulator.com/images/hernia.jpg

Simulab Inguinal Hernia Model



www.freepatentsonline.com/5908302.html

Inguinal hernia model patented by Goldfarb



http://www.a3bs.com/genital-pelvis-models/inguinal-hernia-model-h13,p_65_31_0_0_310.html

American 3B Scientific Inguinal Hernia

Materials

- Silicone
- Polyvinyl Chloride (PVC)
- Polyurethane
- Latex

http://www.oncallmedicalsupplies.com/acatalog/ZKJ-240-Ularge.j

Design Matrix

	Weight		Silicone	Latex	Polyurethane	Polyvinyl chloride
Cost	0.25		1	3	3	4
Durability	0.85		3	3	4	4
Appearance	1		4	4	2	1
Realistic texture	1		4	4	2	1
Feasibility	0.5		4	3	2	1
Safety	0.75		4	1	4	4
Diverse application	0.45		4	3	3	1
TOTAL			17.6	13.9	13.5	10.35

Final Design

Silicone

- Resilient
- Definable properties
- Various applications

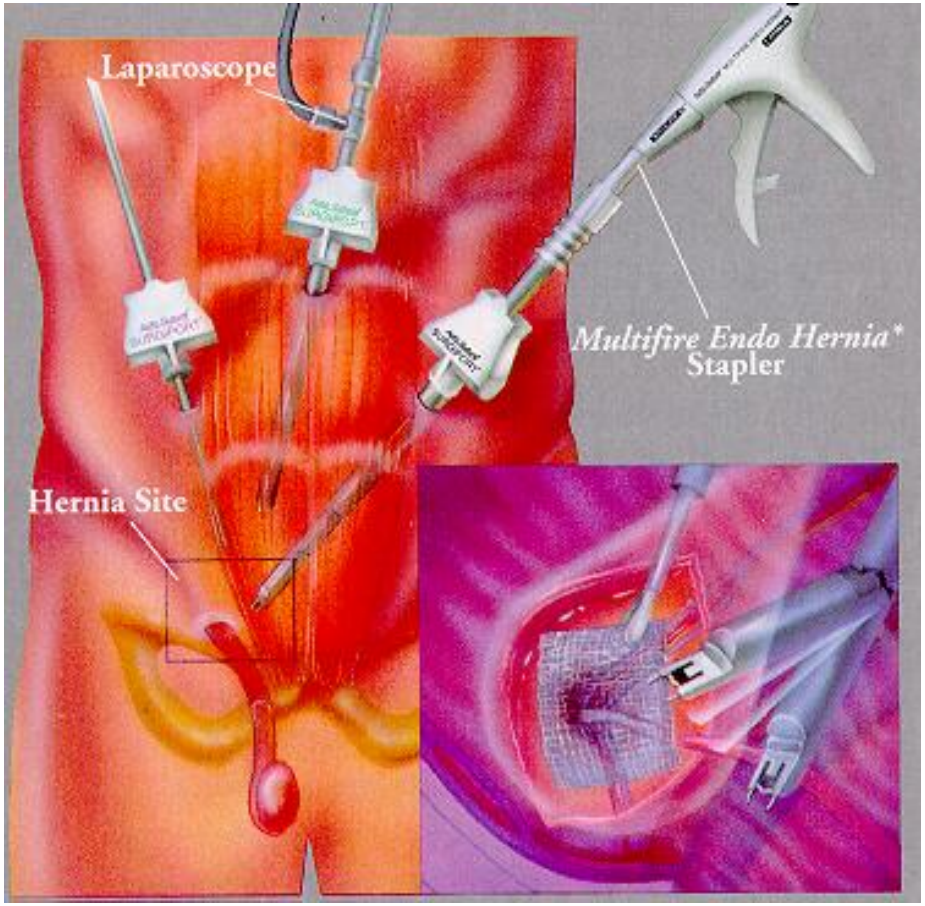
Pelvic skeleton model

- Serves as model base
- Realistic suspension and attachment

https://www.sspinc.com/department/silicone-elastomers-71.cfm?productsAndServices

Key Model Features

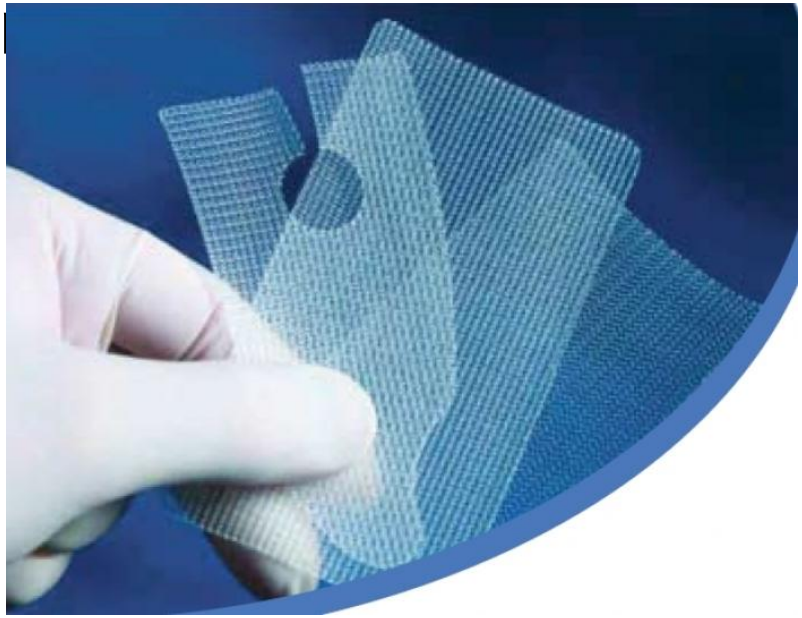
- Replaceable parts
- Silicone gel
- Magnet system
- Laparoscope ports



http://www.smallscars.com/images/medart/hiatalhernia/hernia.jpg

Future Work

- Make molds to make silicon pieces out of
- Finalize how we are going to secure every part of the model
- Figure out how we are going to simulate tacki



http://www.nordicsurgical.com/media/images/uploaded/16-mesh-hand.full.jpg

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Questions?