

Chorionic Villus Sampling- Transcervical Model

Client: Dr. Jesus Iruretagoyena

Advisor: Professor Kreeger

Team Members: Derek Klavas (Leader)
Mason Jellings (Communications)
Jon Mantes (BSAC)
Andy LaCroix (BWIG)

Week of January 30- February 5, 2009

Problem Statement:

Chorionic villus sampling is a prenatal diagnosis procedure that involves extracting placental tissue from the uterus of a pregnant woman in her first trimester of pregnancy. This tissue contains the same genetic information as the unborn fetus. Testing thus allows chromosomal abnormalities and genetic defects to be diagnosed early on in the gestation period. The current, and most difficult, method for chorionic villus sampling requires a catheter to be inserted through the woman's vagina and into the cervix (also known as the transcervical approach). However, doctors currently do not have a model to simulate female anatomical structures and practice the transcervical method. The goal of this project is to develop a realistic and affordable model that precisely replicates the anatomy of a pregnant woman, and be repeatedly used to practice the transcervical approach.

Last week's goals:

- Establish team roles
- Meet with Dr. Iruretagoyena to discuss the project design
- Meet with Professor Kreeger
- Begin brainstorming ideas as a group
- Conduct individual research to gain familiarity with the procedure
- Set up team webpage

Accomplishments:

The entire group met last Friday with Professor Kreeger to discuss the project. We had yet to meet with our client, so knowledge of product specifications was very limited, along with our knowledge of the transcervical procedure.

Each member conducted preliminary research to familiarize themselves with chorionic villus sampling, and to some gain background knowledge before heading into the client meeting.

Andy was able to successfully upload our team photo and get the team web page up and running.

This week's goals: (February 6- February 12, 2009)

- Meet with Dr. Iruretagoneya to discuss the project design and receive design specifications
- Meet with Professor Kreeger to discuss client meeting and PDS
- Brainstorming as a group all possible ideas for design matrix
- Individual research on materials to use for prototype and research for any existing models
- Begin writing PDS
- Contact any faculty that may have expertise in biomechanics or gynecology

Project Difficulties:

It was very hard to find a time to meet with our client last week as he was out of town on business. Because our client is an M.D., it was still hard to schedule a meeting time with him earlier this week, so the meeting has to be conducted Friday February 6th during class time.

Activities:

Member	Description of Activity	Total Hours
Derek	Met with Prof. Kreeger (1/30), individual research , wrote progress report	3.0
Mason	Met with Prof. Kreeger (1/30), individual research, communicated with client via email	2.5
Jon	Met with Prof. Kreeger (1/30), individual research, attended BSAC meeting	2.5
Andy	Met with Prof. Kreeger (1/30), individual research, create web page	3.0

Project Timeline:

Tasks	February				March				April				May	
	6	13	20	27	6	13	20	27	3	10	17	24	1	8
Meetings														
Advisor														
Client														
Product Development														
Research														
Brainstorming														
Design Prototype														
Order Materials														
Manufacture Prototype														
Testing														
Deliverables														
Progress Reports														
PDS														
Midsemester Powerpoint														
Final Poster Presentation														

Expenses:

There are currently no expenses to report.