Cancer Genetics Syllabus

Fall 2021
GS11 1012: Cancer Genetic Counseling
Credit Hours: _____2_____
Meeting Location (Building/Room # or WebEx/Zoom):
In Person B.612
Zoom Link:
https://mdacc.zoom.us/j/85369909979?pwd=ajhrc3EyeWpJWUVWY2dyb2F0eHJhUT09

Program Required Course: ✓ Yes ____ No
Approval Code _✓_ Yes ____ No
(If yes, the Course Director or the Course Designee will provide the approval code.)
Audit Permitted: _____ Yes _✓__ No
Classes Begin:__8/18/2021___
Classes End: __12/8/2021____
Final Exam Week:___12/8/2021___

Class Meeting Schedule:

Day	Time
Wednesdays	3:00-5:00pm (unless otherwise noted on schedule)

Course Co-Director:
Jessie Corredor, MS, CGC
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Course Co-Director:
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NOTE: Individual meetings are available upon request, please contact us with any questions.

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2. Maureen Mork, MS, CGC
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Course description:
This course is taught by the faculty and staff of UT MD Anderson Cancer Center and includes lectures by experts in basic science cancer research, clinical oncology, pathology and cancer genetic counseling. Some of the topics covered include overview of cancer biology and clinical oncology, hereditary colon cancer syndromes, hereditary breast cancer syndromes, rare cancer syndromes, management of high risk patients, collecting a cancer-focused family history, hereditary cancer risk assessment models and tools, and psychosocial aspects of cancer risk assessment and counseling. Students will expand and refine the knowledge and skills learned in this course during their clinical cancer genetics rotation.

Textbook/Supplemental Reading Materials

- **Required Summer Reading:**
  Breast Cancer NCCN Guide
  Colon Cancer NCCN Guide

- **Required Textbooks:**
  Schneider, K. Counseling About Cancer: Strategies for Genetic Counseling, 3rd edition. Wiley-Liss, Inc., 2011. ISBN-10 0470081503

- **Recommended Textbooks:**
  Offit, K. Clinical Cancer Genetics: Risk Counseling & Management. Wiley-Liss, Inc., 1998. ISBN 0-471-14655-2

- **Software:**
  CancerGene computer software: you will be required to use the CancerGene program during the course and throughout the cancer genetic rotations. Please have the latest version installed on your personal computers at the start of each cancer genetic rotation. Some MDACC computers also have software installed.
  http://www4.utsouthwestern.edu/breasthealth/cagene/

- **Required Readings:** Required readings (and some recommended readings) will be posted to the class Google drive in each week's respective folder. Some of the readings will be up by the start of the course, and other readings will be posted as we get closer to that week's lecture. Each lecture will have 4-5 required readings. **If a lecturer has provided both required and recommended readings, the required readings will be denoted with "(req)" in the file name. If a lecture has provided only required readings, then no designation will be made and all posted readings are considered required.** You will not be notified once the readings are posted, but you are expected to check the folders for readings each week.

Course Objective/s:

Upon successful completion of this course, students should be able to:

1. Assess individuals and their relatives' probability of a hereditary cancer syndrome through risk assessment of their personal and family history.
2. Demonstrate and utilize a depth and breadth of knowledge around the clinical features, genetics, and high-risk management of common hereditary breast, GI, GYN, and other rare cancer syndromes.
3. Identify, assess, and determine genetic testing options to be used in genetic counseling practice based on patient and family history risk assessment.
4. Describe the implications of genetic testing results on screening and prevention for hereditary cancer syndromes
5. Apply hereditary cancer risk assessment models and tools.
6. Discuss central psychosocial aspects of cancer risk assessment and counseling.

Student responsibilities and expectations:

- Reading Assignments – You are expected to have read the assigned materials before each class. Readings marked as *required* **must** be read before class; readings marked as *recommended* will provide valuable information but are not mandatory. Course instructors reserve the right to administer pop reading quizzes throughout the course.

- Assignments – These will be assigned and posted as the course progresses. The purpose of the assignments is to further your understanding of the information presented in the lectures and provide introduction to the clinical cancer genetic risk assessment process. Assignments can be found on the Google Drive. **Please check the "Course Grading/Due Dates" table for each assignment to know when each assignment is due and how to turn it in.**

- Course Evaluation – You will be provided a course evaluation from GSBS at the end of the semester. These are required. Evaluations are used to improve the course for future classes. Your feedback will be compiled and returned to us anonymously.

- Cameras- For virtual classes, we request that you keep your cameras on during classes. If you need to turn them off for specific circumstances you may, however keeping your camera on leads to better attention and retention of information.

- If you are experiencing any difficulty in class, on assignments, or tests, please contact one of the course directors. We are happy to help you grasp certain materials or determine learning strategies to help you improve.

Grading System: Letter Grade A-F	
Student Assessment and Grading Criteria (assignments will be posted in Google Drive)	
Tumor Studies Assignment (15%)	**Description:** The goal of this assignment is to work through different clinical scenarios related to colon cancer tumor studies. In part A of the assignment, you will complete a worksheet that guides you through possible tumor study results and how those results impact the likelihood of the patient having a hereditary colon cancer syndrome. In part B of the assignment, you will complete a tumor studies chart guiding you through multiple MSI/IHC results, the most likely cause of those results, and what genetic testing options you would choose in each scenario. Please see the assignment pages for full instructions. **Due Date: 8/25/2021** **How to turn in:** Via email
Cancer Dictionary (5%)	**Description**: Create a dictionary of commonly used cancer-related terminology that will help you throughout your cancer course and rotations. Define/describe the terms listed on the assignment page. The purpose of this assignment is to help expand your cancer vocabulary so you can more easily digest lectures and better understand your patient's diagnosis while on future rotations. **Due Date: 9/15/2021** **How to turn in:** Via email
HBOC/Lynch Counseling Outlines (5%)	**Description:** For each of the clinical situations provided on the assignment sheet, build an outline for how you would approach this specific case in a clinical setting. You will provide an outline sections related to case prep, contracting, family history, risk assessment, patient education, testing strategy, and psychosocial considerations. You will also provide patient visual aids that you may use in a counseling session. The purpose of this assignment is to prepare for seeing patients commonly referred for a cancer genetics evaluation. See assignment sheet for full details. **Due Date: 10/6/2021** **How to turn in:** Via email
Pedigree Assignment and Midterm (25%)	**Description:** The midterm grade is made up of two components, the pedigree assignment due the day of the midterm, and an exam portion. The Pedigree assignment provides clinical case scenarios with accompanying questions to help guide you through drawing cancer pedigrees, risk assessment, genetic testing selection, implications of genetic testing results, and management of hereditary cancer syndromes. The midterm exam, which will be completed in canvas, aims to insure retention of important cancer genetic counseling concepts. **Due Date: 10/13/2021** **How to turn in:** Pedigree assignment: Via email Midterm exam portion: Via canvas
Hereditary Cancer Presentation (20%)	**Description:** Each student will be randomly assigned an inherited cancer syndrome case. Students must review the case information to create a differential diagnosis and then perform further research to identify the correct cancer syndrome. <u>The student must email the facilitating genetic counselor to confirm they have the correct diagnosis</u>. Students will then prepare a presentation reviewing the case, overview and description of the cancer syndrome, cancer risks, screening and/or surgical recommendations, genetic test selection, patient resources, psychosocial concerns, as well as other information as listed on the assignment sheet. **Due Date: 11/17/2021** **How to turn in:** In class presentation on 11/17/2021- details specified on assignment instructions

In the Family Reflection Assignment (Completion/part of discussion/participation grade)	**Description:** Watch the film "In the Family", documenting the difficult choices faced by a 27 year old BRCA carrier and other families chronicled in the film. Answer questions related to the documentary that are provided on the assignment worksheet. This assignment will provide insight into the patient experience and psychosocial aspects of a hereditary cancer syndrome. **Due Date: 12/8/2021** **How to turn in:** Via Email
Cancer Rotation Binder (Completion)	**Description:** Throughout the semester put together a virtual "binder" with resources/fact sheets/papers/etc., that you find helpful to have easily accessible on your cancer rotation. See below for further details. **Due Date: 12/8/2021** **How to turn it in**: Via email or share with course coordinators via google drive
Final Exam (25%)	**Description:** The final exam for this course is cumulative, covering information presented throughout the course. **Due Date: 12/8/2021** **How to turn in:** In class exam
Class Discussion & Participation (5%)	**Description:** The final 5% of the grade for this course will be based on in class participation. Throughout the semester we will have in class role-plays, case scenarios, and open discussion time. We want to see all students participating in these activities in order to gain experience with hypothetical counseling situations before moving onto their clinic rotation.

Cancer rotation binder information:
Throughout this course you will be introduced to resources that might be helpful to have in clinic, such as risk charts, prevalence tables, and various guidelines. You will also be creating items that will be useful to refer to in clinic, such as your cancer dictionary and hereditary cancer presentations. Compile this information into a cancer rotation folder on the google drive and please share access with Donika and Jessie. We recommend thinking outside of the box--ask counselors you observe or other students what they have found helpful. Feel free to incorporate items from other classes (ex: pedigree information from Introduction to Genetic Counseling) and think of how it may be best to organize all the resources. Think to yourself "if I was in clinic alone or had a last minute add-on, what information would I want to have at my fingertips?" Remember, this assignment is to HELP you organize and prepare for your introductory rotations. The assignment will largely be graded on completion and the class coordinators will give you feedback on what other resources may be helpful.

CLASS SCHEDULE

Week	Date	Location	Lecture Title	Speaker(s)
1	8/18/2021	B.612	Course Overview (30 min)	Jessie & Donika
		B.612	Introduction to Clinical Cancer Genetics (90 min)	Jessie & Donika
2	8/25/2021	B.612	Lynch Syndrome: Introduction, Risk Assessment, Interpretation of Tumor Studies, Prediction Models (120 min)	Julie Moskowitz, MS

3	9/1/2021	B.612	Overview of FAP and MAP (60 min)	Maureen Mork, MS
		B.612	Overview of Hamartomatous Polyposis syndromes, HDGC, and Hereditary Pancreas Cancer (60 min)	Maureen Mork, MS
4	9/8/2021	**Zoom**	Surveillance & Chemoprevention for Hereditary GI Cancer (60 min)	Patrick Lynch, MD
		Zoom	Genetic Counseling for Hereditary Colon Cancer Syndromes (60 min)	Maureen Mork, MS
5	9/15/2021	**Zoom**	Overview of Hereditary Breast Cancer Syndromes (90 min)	Autumn Vara, MS,
		Zoom	Management for High Risk Breast Cancers (30 mins)	Banu Arun, MD
6	9/22/2021 (NSGC week)	**Zoom**	Surgery & Management for High Risk Gynecologic Cancers (30 min)	Denise Nebgen, MD
		Zoom	Systemic Therapy for Hereditary Ovarian and Breast Cancers (30 min)	Shannon Westin, MD
		Zoom	Management for Increased Risk Patients & Benign Breast Pathology (60 mins)	Therese Bevers, MD
7	9/29/2021	Zoom	Overview of Breast Cancer Risk and HBOC Prediction Models (60 min)	Susan Reilly, MS
		Zoom	Genetic Counseling for Hereditary Breast & GYN Cancer Syndromes (60 mins)	Jessie Corredor, MS and Molly Daniels, MS
8	10/6/2021	Location TBD	Overview of Inherited Genitourinary Cancer Syndromes (45 min)	Donika Saporito, MS
		Location TBD	In-class role plays, pedigrees, NCCN application (60 mins)	Jessie & Donika
9	10/13/2021	Zoom	Advances in Oncology: tumor sequencing and somatic mutations (60 min)	Molly Daniels, MS
		Canvas	**IN CLASS PORTION OF MIDTERM**	Jessie & Donika
10	10/20/2021	B.612	Overview of Hereditary Endocrine Neoplasia Syndromes (120 min)	Jessie/Donika
11	10/27/2021	B.612	Pediatric & Rare Cancer Syndromes (90 min)	Jessie Corredor, MS
		B.612	4:30-5:00pm: Additional in-class pedigree scenarios walk through	
12	11/03/2021	**Zoom**	Overview of General Common Colon, Uterine, and Ovarian Cancer Pathology (45 min)	Alexander Lazar, MD, PhD
		Zoom	Dermatologic Manifestations of Cancer Genetic Syndromes (45 min)	Alexander Lazar, MD, PhD
		Zoom	**4:30-5:00pm: Additional in-class pedigree scenarios/role-play**	Jessie & Donika

13	**11/10/2021 Note: 3–5:15pm**	B.612	NF1, NF2 & Schwannomatosis (60 min)	Jessie Corredor, MS
		B.612	Hereditary Hematologic Malignancies (75 min)	Kevi Gerstein, MS
14	**11/17/2021 Note: 2–5pm**	B.612 (GCs can attend in person or via zoom)	**Hereditary Cancer Project Presentations**	All Counselors
15	12/1/2021	B.612	Preparing for Cancer Rotation: Taking a Cancer Family History, Cancer Resources, and Psychosocial Concerns (120 min)	Jessie & Donika
16	12/8/2021	B.612	**Final Exam (120 min)**	

Zoom link: https://mdacc.zoom.us/j/85369909979?pwd=ajhrc3EyeWpJWUVWY2dyb2F0eHJhUT09