COURSE DIRECTOR/FACULTY TEACHING BIOGRAPHICAL SKETCH
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NAME: Kathleen F. Mittendorf

INSTITUTION POSITION TITLE: Senior Staff Scientist

GRADUATE PROGRAM POSITION TITLE: Research 2 Co-course Director

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
DePauw University, Greencastle, IN	BA	05/2010	Biochemistry
Vanderbilt University, Nashville, TN	PhD	08/2015	Biochemistry (Molecular Biophysics)
Oregon Health & Sciences University	Other	05/2020	Human Investigations Program
Kaiser Permanente Northwest, Portland, OR	Other (Mentored career development project, investigator level)	06/2021	Applied genomics, qualitative research, and implementation science

A. Course Title(s): Research 2

B. Please provide a brief statement of expertise and/or skill set that you offer for students taking the course(s) you are responsible for teaching. *If you will be asked to teach an online course, please list completed training and/or education related to distance learning. In addition, please include a description of your knowledge and content expertise related to genetic counselor specific education. Please describe training or experiences which have supported the development of your teaching skills. Please describe any future plan for obtaining training to support the ongoing development of teaching skills*) **(Standard A2.5.2):**

My expertise in translational genomics research makes me well-suited to co-direct research courses in the field of genetic counseling. I have been conducting research as a doctorate-level scientist in these domains since 2015 and have received formal training in both quantitative and qualitative approaches to translational genomics. I have been involved in the design and conduct of multiple large translational genomics projects and clinical trials where I held leadership roles and was involved in training or functional supervision of staff. Examples include work on NHGRI ClinGen's Actionability Working Group, the NHGRI CSER consortium, the NHGRI eMERGE Network, and an NCI Cancer Moonshot project (FOREST). I am a site principal investigator and co-investigator on the R01 that funded PREMM model development with Dr. Sapna Syngal, a leading Lynch syndrome expert. I am key personnel on an R21 for the development of a tool that automates clinical decision support linked to patient genomic results.

I have been involved in student education and training since my undergraduate years, where I was a university-hired tutor, tutoring students in STEM coursework, and a teaching assistant in an undergrad laboratory (Biochem 240). In graduate school, I was TA's for the graduate structural biology course and mentored an undergraduate student in the lab, whose work from my mentorship period was published and who recently received her doctorate degree. I have mentored multiple undergraduate staff, as well as developed formal research staff training materials in a number of competencies. I was a committee member on a 2022 graduate of the VU MGC program and am currently

thesis advisor to a student in the MGC class of 2024. During these MGC advisor roles, I have developed trainings for research conduct that are relevant to co-direction of the Research 2 course.

Selected Publications in Translational Genomics as Lead Author:

a) **Mittendorf KF**, Lewis HS, Duenas DM, Eubanks DJ, Gilmore MJ, Goddard KAB, Joseph G, Kauffman TL, Kraft SA, Lindberg NM, Reyes AA, Shuster E, Syngal S, Ukaegbu C, Zepp JM, Wilfond BS, Porter KM. Literacy-adapted, electronic family history assessment for genetics referral in primary care: patient user insights from qualitative interviews. *Hered Cancer Clin Pract*. 2022. 20:22. PMCID: PMC9188215.

b) **Mittendorf KF**, Knerr S, Kauffman TL, Lindberg NM, Anderson KP, Feigelson HS, Gilmore MJ, Hunter JE, Joseph G, Kraft SA, Zepp JM, Syngal S, Wilfond BS, Goddard KAB. Systemic Barriers to Risk-Reducing Interventions for Hereditary Cancer Syndromes: Implications for Health Care Inequities. *JCO Precis Oncol.* 2021 Nov 3;5: PO.21.00233. eCollection. PMCID: PMC8585306

c) **Mittendorf KF**, Kauffman TL, Amendola LM, Anderson KP, Biesecker BB, Dorschner MO, Duenas DM, Eubanks DJ, Feigelson HS, Gilmore MJ, Hunter JE, Joseph G, Kraft SA, Lee SSJ, Leo, MC, Liles EG, Lindberg NM, Muessig KR, Okuyama S, Porter KM, Riddle LS, Rolf BA, Rope AF, Zepp JM, Jarvik GP, Wilfond BS, Goddard KAB, CHARM study team. Cancer Health Assessments Reaching Many (CHARM): A clinical trial assessing a multimodal cancer genetics services delivery program and its impact on diverse populations. *Contemp Clin Trials.* 2021; 106:106432. PMCID: PMC8336568

d) **Mittendorf KF**, Ukaegbu C, Gilmore MJ, Lindberg NM, Kauffman TL, Eubanks DJ, Shuster E, Allen J, McMullen C, Feigelson HS, Anderson KP, Leo MC, Hunter JE, Sasaki SO, Zepp JM, Syngal S, Wilfond BS, Goddard KAB. Adaptation and early implementation of the PREdiction model for gene mutations (PREMM 5™) for Lynch syndrome risk assessment in a diverse population. *Fam Cancer.* 2022. https://doi.org/10.1007/s10689-021-00243-3. PMCID: PMC8458476

C. Positions, certification, and honors *(include dates)***:**

I. Positions and employment:

2021-present	Senior Staff Scientist, Vanderbilt-Ingram Cancer Center, Vanderbilt University Medical Center, Nashville, TN
2017-2021	Research Associate III, Center for Health Research, Kaiser Permanente Northwest, Portland, OR
2016-2017	Staff Scientist, Vanderbilt-Ingram Cancer Center, Vanderbilt University Medical Center, Nashville, TN
2015-2016	Research Analyst III, My Cancer Genome, Vanderbilt-Ingram Cancer Center, Vanderbilt University Medical Center, Nashville, TN
2010-2015	Graduate student, Ph.D. candidate, Department of Biochemistry, Molecular Biophysics Training Program, Vanderbilt University, Nashville, TN
2008-2010	Quantitative Reasoning Consultant, DePauw University, Greencastle IN 2007-2009
2007-2010	Undergraduate Researcher, DePauw University, Greencastle, IN

II. Certification (please include specific field): N/A

III. Honors:

2017	Keynote Address: DePauw University Academic Awards Convocation
2015	2015 Karpay Award in Structural Biology
2012-13	Molecular Biophysics Training Program Training Grant (T31)
2010-15	University Graduate Fellowship Award (Stipend Supplement Enticement)
2010-15	NSF Graduate Research Fellowship
2008-10	Barry M. Goldwater Scholarship
2006-10	National Merit Scholar
2006-10	Full Tuition Merit Scholarship, DePauw University

D. Please list your Teaching/Mentorship/Clinical Supervision/Leadership Activities. *(within the last 5 years)***:**

2022-Present	VU MGC Thesis Committee Member
2022-Present	VU MGC Thesis Adivsor
2022-Present	VUMC Pride ERG Educational Workgroup Member
2020-2021	KPNW Pride BRG Communications Chair
2017-2020	KPNW Pride Leadership Team, Champion Role

E. Professional Activities *(Within the last 5 years):*

2021-Present	VUMC Pride ERG Member
2021-Present	VUMC Disability ERG Member
2017-2021	KPNW Pride BRG Member

F. Research, funded grants and/or scholastic endeavors including accepted abstracts and other publications: *(Please only include accomplishments from the last 5 years):*

For brevity, only includes research endeavors related directly to genetic counseling; complete list of published work in MyBibliography: https://www.ncbi.nlm.nih.gov/myncbi/1ZudIk8cVstcat/bibliography/public/

1. Hereditary Cancer

I have been working directly in the field of hereditary cancer since 2017 (see above for selected publications as lead author). Examples of my work include (a) work on the Cancer Health Assessments Reaching Many (CHARM) study, investigating strategies to improve access to genetic counseling and testing for diverse patients with increased risk of hereditary cancer syndromes, (b) work evaluating barriers to and uptake of hereditary cancer-related risk reducing care

a) Knerr S, Guo B, **Mittendorf KF,** Feigelson HS, Gilmore MJ, Jarvik GP, Kauffman TL, Keast E, Lynch FL, Muessig KR, Okuyama S, Veenstra DL, Zepp JM, Goddard KAB, Devine B. Risk-reducing surgery in unaffected individuals receiving cancer genetic testing in an integrated health care system. Cancer. 2022 Aug 15;128(16):3090-3098. doi: 10.1002/cncr.34349. Epub 2022 Jun 9. PMID: 35679147; PMCID: PMC9308746.
b) Lindberg NM, **Mittendorf KF**, Duenas DM, Anderson K, Koomas A, Kraft SA, Okuyama S, Shipman KJ, Vandermeer ML, Goddard KA, Wilfond BS, McMullen C. Engaging Patient Advisory Committees to Inform a Genomic Cancer Risk Study: Lessons for Future Efforts. *Perm J*. 2022 Jun 29;26(2):28-39. doi: 10.7812/TPP/21.091. Epub 2022 Jun 17. PMID: 35933674; PMCID: PMC9662241.
c) Lindberg NM, Gutierrez AM, **Mittendorf KF,** Ramos MA, Anguiano B, Angelo F, Joseph G. Creating accessible Spanish language materials for Clinical Sequencing Evidence-Generating Research consortium genomic projects: challenges and lessons learned. *Per Med*. 2021 Sep;18(5):441-454. doi: 10.2217/pme-2020-0075. Epub 2021 Aug 27. PubMed PMID: 34448595; PMCID: PMC8438935.
d) **Mittendorf KF,** Hunter JE, Schneider JL, Shuster E, Rope AF, Zepp J, Gilmore MJ, Muessig KR, Davis JV, Kauffman TL, Bergen KM, Wiesner GL, Acheson LS, Peterson SK, Syngal S, Reiss JA, Goddard KAB. Recommended care and care adherence following a diagnosis of Lynch syndrome: a mixed-methods study. Hered Cancer Clin Pract. 2019 Dec 16;17:31. doi: 10.1186/s13053-019-0130-8. PMID: 31890059; PMCID: PMC6915941.

2. Precision Oncology

Since 2015, I have worked in bioinformatics applications in somatic cancer genomics and contributed to data models that power the public-facing resource My Cancer Genome (MCG), a website that is viewed 8,000 times a week by individuals in 211 countries and territories. This data model was used in a commercial partnership to power generation of over 40,000 interpretative genomic reports for 31 academic medical centers and commercial labs. I now work on the development of genomic- and biomarker-directed clinical decision support at VUMC.

a) Rahman P, Ye C, **Mittendorf KF,** Lenoue-Newton M, Micheel C, Wolber J, Osterman T, Fabbri D. Accelerated curation of checkpoint inhibitor-induced colitis cases from electronic health records. JAMIA Open. 2023 Apr 1;6(1):ooad017. doi: 10.1093/jamiaopen/ooad017. PMID: 37012912; PMCID: PMC10066800.
b) Holt ME, **Mittendorf KF,** LeNoue-Newton M, Jain NM, Anderson I, Lovly CM, Osterman T, Micheel CM, Levy MA. My Cancer Genome: coevolution of precision oncology and a molecular oncology knowledgebase. *JCO Clin Cancer Inform*. 2021. 5:995-1004. DOI: 10.1200/CCI.21.00084
c) Neha J, **Mittendorf KF**, Holt M, Lenoue-Newton M, Maurer I, Miller C, Stachowiak M, Botyrius M, Cole J, Micheel C, Levy M. The My Cancer genome clinical trial data model and trial curation workflow. *J Am Med Inform Assoc*. 2020. 27:1057-1066. PMCID: PMC7647323

3. Broad Genomics Applications

From 2017-2021, I was a member of the Clinical Genome Resource (ClinGen) Actionability Working Group. I applied standardized literature review to curate reports that were disseminated to the public on clinicalgenome.org. The results of this work are used by the ACMG Secondary Findings WG and the Centers for Disease Control to provide

professional recommendations about return of secondary findings to patients undergoing genome-wide sequencing. I am now a member of the eMERGE Network, where I am in charge of the clinical integration of eMERGE results at VUMC– both for use by study genetic counselors and for use by their institutional care team.

a) Ferket BS, Baldwin Z, Murali P, Pai A, **Mittendorf KF,** Russell HV, Chen F, Lynch FL, Lich KH, Hindorff LA, Savich R, Slavotinek A, Smith HS, Gelb BD, Veenstra DL. Cost-effectiveness frameworks for comparing genome and exome sequencing versus conventional diagnostic pathways: A scoping review and recommended methods. Genet Med. 2022 Oct;24(10):2014-2027. doi: 10.1016/j.gim.2022.06.004. Epub 2022 Jul 14. PMID: 35833928; PMCID: PMC9997042.
b) Paquin RS, **Mittendorf KF**, Lewis MA, Hunter JE, Lee K, Berg JS, Williams MS, Goddard KAB. Expert and lay perspectives on burden, risk, tolerability and acceptability of clinical interventions for genetic disorders. *Genet Med.* 2019 Apr 26. PMCID: PMC6815237
c) Webber EM, Hunter JE, Biesecker LG, Buchanan AH, Clarke EV, Currey E, Dagan-Rosenfeld O, Lee K, Lindor NM, Martin CL, Milosavljevic A, **Mittendorf KF**, Muessig KR, O'Daniel JM, Patel RY, Ramos EM, Rego S, Slavotinek AM, Sobriera NM, Weaver MA, Williams MS, Evans JP, Goddard KAB, on behalf of the ClinGen Resource. Evidence-based assessments of clinical actionability in the context of secondary findings: Updates from ClinGen's Actionability Working Group. *Hum Mut.* 2018;39:1677–1685. PMCID: PMC6211797

Research Support Related to Genetics

R01CA132829 Syngal (PI)
NCI
Development and validation of clinical prediction models for the use and interpretation of multigene hereditary cancer risk assessment.
Role: Co-investigator

R21CA274545 Osterman, Micheel (PI)
NCI
Oncology Knowledge Rapid Alerts: Integrating biomarker-driven clinical decision support for therapy selection at point-of-care
Role: Key Personnel

U01HG011181 Roden, Velez-Edwards, Roden (PI)
NHGRI
Vanderbilt Genome-Electronic Records (VGER) Project
Role: Study Staff (Senior Staff Scientist)

U01CA232829 Wiesner, Orlando (PI)
NCI
Improving identification and healthcare for patients with Inherited Cancer Syndromes: Evidence-based EMR implementation using a web-based computer platform
Role: Study Staff (Senior Staff Scientist)

Park (PI) 01/01/2019 - 12/31/2022
GE Healthcare
Digital Precision Oncology
Role: Study Staff (Senior Staff Scientist)

U01HG007292 Goddard & Wilfond (PI) 08/19 – 05/21
NHGRI
CHARM Administrative Supplement: Research Supplement to Promote Diversity in Health-Related Research
Role: Diversity Supplement PI

U41HG009650 Berg, Goddard, Williams, Watson (PI) 09/17 – 07/21
NHGRI
Expert Curation and EHR Integration (ClinGen)
Role: Study Staff (Research Associate III)