PROMOTION RECOMMENDATION
The University of Michigan
School of Public Health
Department of Epidemiology

Celeste L. Pearce, associate professor of epidemiology, with tenure, Department of Epidemiology, School of Public Health, is recommended for promotion to professor of epidemiology, with tenure, Department of Epidemiology, School of Public Health.

Academic Degrees:
Ph.D.	2002	University of Southern California
M.P.H.	1995	University of Michigan
B.A.	1990	California State University

Professional Record:
2016-Present	Co-Leader, Cancer Epidemiology and Prevention Program, University of Michigan Rogal Cancer Center
2014-Present	Associate Professor, Department of Epidemiology, University of Michigan School of Public Health
2015-2019	Associate Chair, Department of Epidemiology, University of Michigan School of Public Health
2014-2019	Adjunct Associate Professor, Department of Preventive Medicine, Keck School of Medicine, University of Southern California
2008-2014	Assistant Professor, Department of Preventive Medicine, Keck School of Medicine, University of Southern California
2005-2008	Research Assistant Professor, Department of Preventive Medicine, Keck School of Medicine, University of Southern California
2001-2015	Visiting Scientist, Medical and Population Genetics Group, Broad Institute of MIT and Harvard
2001-2005	Visiting Scientist, Department of Molecular Biology, Massachusetts General Hospital

Summary of Evaluation:
Teaching – Since being appointed as associate professor, Professor Pearce has taught three different introductory epidemiology courses for non-majors. These include EPID 503: Strategies and Uses of Epidemiology, an introductory-level course for non-epidemiology majors, and EPID 501: Strategies and Uses of Epidemiology, an introductory-level course for the master of health services administration on-job/on-campus degree program. She also co-developed and taught PH 512: Principles of Epidemiology for Public Health, a masters of public health core course for non-majors designed to meet the new Council on Education for Public Health accreditation requirements. This course was also adapted by Professor Pearce and co-taught in the school's new online masters of public health program in population health sciences. Professor Pearce also made a major contribution by revamping three professional development courses in the Department of Epidemiology to address masters and doctoral students' concerns and priorities. These included EPID 603: Professional Development Seminar for masters students in Epidemiology, EPID 889: Responsible Conduct of Research and Scholarship (RCRS) Doctoral Seminar for first-year doctoral students, and EPID 890: Doctoral Seminar, a second-year doctoral program course designed to provide students with a framework for completing their dissertation proposal. The courses for masters and doctoral students in epidemiology were attended by relatively small numbers of students with scores for Q1 ranging from 3.8 to 4.2 and for Q2 ranging from 4.5-5. Evaluation scores for PH 512 were low for the first offering but improved considerably from the first to second offerings (1.6 increased to 3 for Q1 and 3 increased to 4.3 for Q2 between 2018 and 2019). Professor Pearce has served as a

committee chair for two doctoral students who have successfully defended their dissertations, and is currently a committee chair for four additional students as of Fall 2020. As the director of the Master of Science in Clinical Research (MSCR), she has mentored a large number of masters' students.

Research – Professor Pearce's research focuses primarily on understanding disease etiology in order to exploit opportunities for primary prevention and to improve the outcomes for women who have ovarian cancer. Her research has shed light on the relationship of hormonal exposures to endometriosis and ovarian cancer risk, and has considered the relationship of different menopausal hormone therapeutic combinations, as well as the timing of therapy, in relation to ovarian cancer risk. Her research group published the first paper on lifetime risk of ovarian cancer that incorporated both common genetic variation and lifestyle factors including parity, oral contraceptive use duration, and tubal ligation. Professor Pearce has developed two additional related lines of research centered on life purpose and Arab and Arab-American cancer disparities. The concept of life purpose is reflected in the goals, values, actions, and activities around which individuals organize their lives. Her analysis of data from the Health and Retirement Study (HRS) demonstrated that those with the lowest life purpose had the highest mortality. These findings, published in the *Journal of the American Medical Association* (JAMA) Network Open in 2019, have garnered considerable scientific and lay interest. Her group also has shown that ovarian cancer survivors believe life purpose to be important for their well-being. Recently, Professor Pearce has expanded her research to consider Arab and Arab-American health disparities in Michigan communities. She is currently fielding a cervical cancer screening project in collaboration with the Arab Community Center for Economic and Social Services (ACCESS), a large Arab community center in Dearborn, Michigan and has developed a collaboration with colleagues at the American University of Beirut focused on bladder cancer disparities.

Professor Pearce's funding reflects her leadership in the Rogel Cancer Center and in large cancer consortia. She is currently funded as a program co-leader on the University of Michigan Comprehensive Cancer Center National Cancer Institute (NCI) funded P30 administrative core grant. Additionally, she has been consistently funded at rank as functional principal investigator (PI) and Project Three Director for the Department of Defense (DOD) funded Multidisciplinary Ovarian Cancer Outcomes Group. The functional PI designation was made because the DOD required that the PI be an associate professor, and Professor Pearce was an assistant professor at the time of the original award. Professor Pearce has additional external funding as a co-investigator on a DOD funded grant and on an NIH grant. From 2013-2015, Professor Pearce was a multiple PI of a R21 and a functional PI of the Multidisciplinary Ovarian Cancer Outcomes Group. Prior to 2014, Professor Pearce notably held two R01 awards as the PI at her previous institution and historically has maintained robust levels of support as a co-investigator. Professor Pearce has published 154 peer-reviewed papers, 84 since her appointment as associate professor. She has two additional papers under review, one a senior-author paper. Among her publications, she is first or second author on four and senior/corresponding author on 11 manuscripts. Her research is published in several high impact scientific journals including the *Journal of the National Cancer Association*, *Journal of the American Medical Association (JAMA)*, *Epidemiology*, *International Journal of Epidemiology*, *International Journal of Cancer*, *Cancer Causes and Control*, *American Journal of Epidemiology*, and *Nature Genetics*. Professor Pearce's research has been widely cited and she received an Altmetric Score of 1900 in May 2019 for her paper on life purpose and mortality published in *JAMA Network Open*, the 6th highest score ever from a University of Michigan School of Public Health faculty member. Professor Pearce has delivered numerous external invited lectures at prominent venues such as the annual American Association of Cancer Research (AACR) meeting, AACR Specialized Ovarian Cancer meeting, Marsha Rivkin Ovarian Cancer meeting and the Canadian Conference on Ovarian Cancer Research.

Recent and Significant Publications:

Pearce, C.L., Stram, D.O., Ness, R.B., Stram, D.A., Roman, L.D., Templeman, C., Lee, A.W., Menon, U., Fasching, P.A., McAlpine, J.N., Doherty, J.A., Modugno, F., Schildkraut, J.M., Rossing, M.A., Huntsman, D.G., Wu, A.H., Berchuck, A., Pike, M.C., Pharoah, P.D. (2015) Population distribution of lifetime risk of ovarian cancer in the United States. *Cancer Epidemiol Biomarkers Prev.* 24(4):671-6.

Wu, A.H., Pearce, C.L., Lee, A.W., Tseng, C., Jotwani, A., Patel, P., Pike, M.C. (2017) Timing of births and oral contraceptive use influences ovarian cancer risk. *Int J Cancer.* 141(12):2392-2399.

Alimujiang, A., Khoja, L., Wiensch, A., Pike, M.C., Webb, P.M., Chenevix-Trench, G., Chase, A., Richardson, J., Pearce, C.L. (2019) "I am not a statistic" ovarian cancer survivors' views of factors that influenced their long-term survival. *Gynecol Oncol.* 155(3):461-467.

Alimujiang, A., Wiensch, A., Boss, J., Fleischer, N.L., Mondul, A.M., McLean, K., Mukherjee, B., Pearce, C.L. (2019) Association Between Life Purpose and Mortality Among US Adults Older Than 50 Years. *JAMA Netw Open.* 2(5):e194270.

Liu, G., Mukherjee, B., Lee, S., Lee, A.W., Wu, A.H., Bandera, E.V., Jensen, A., Rossing, M.A., Moysich, K.B., Chang-Claude, J., Doherty, J.A., Gentry-Maharaj, A., Kiemeney, L., Gayther, S.A., Modugno, F., Massuger, L., Goode, E.L., Fridley, B.L., Terry, K.L., Cramer, D.W., Ramus, S.J., Anton-Culver, H., Ziogas, A., Tyrer, J.P., Schildkraut, J.M., Kjaer, S.K., Webb, P.M., Ness, R.B., Menon, U., Berchuck, A., Pharoah, P.D., Risch, H., Pearce, C.L., Ovarian Cancer Association Consortium. (2018) Robust Tests for Additive Gene-Environment Interaction in Case- Control Studies Using Gene-Environment Independence. *Am J Epidemiol.* 1;187(2):366-377.

Service – Professor Pearce has demonstrated high levels of service to the department, school, and university, as well as at the national level. She served as the associate chair of the Department of Epidemiology from 2015 to 2019. In this role, Professor Pearce focused on changes to the curriculum and mentoring of students in the doctoral program. She also oversaw implementation of changes to the master's curriculum mandated by the revised Council on Education for Public Health guidelines. Professor Pearce has held leadership roles in several other departmental committees since 2014. She also serves as the school representative to the Michigan Cancer Consortium and co-leads the Cancer Epidemiology and Prevention Program of the Rogel Cancer Center. Professor Pearce's extensive external service reflects her leadership in the area of ovarian cancer research. She has served as the chair of the Multidisciplinary Ovarian Cancer Outcomes Group and of the Ovarian Cancer Association Consortium Data Access Coordinating Committee. Professor Pearce was the first epidemiologist asked to be a member of the scientific advisory board for the Ovarian Cancer Research Alliance, the largest ovarian cancer research and advocacy organization in the United States, and she is a member of the Ovarian Cancer Association Consortium steering committee. Additionally, she founded the Michigan Ovarian Cancer Science and Innovation Consortium (MOSAIC), a statewide interdisciplinary research group. Professor Pearce actively participates in grant reviews for major funders of ovarian cancer research (Ovarian Cancer Research Alliance, Marsha Rivkin Foundation). She also provides service as a peer reviewer for top cancer epidemiology journals including the *International Journal of Cancer*, *Cancer Research*, and *Cancer Epidemiology Biomarkers and Prevention*.

External Reviewers:

Reviewer A: "It is clear that Dr. Pearce is an established leader in cancer research, particularly in ovarian cancer, with exceptional scholarly accomplishments and contributions to cancer research."

Reviewer B: "Her work on the complex effects of oral contraceptives and other environmental risk factors and their interaction with genetic risk scores is particularly compelling and has important translational implications. Her novel methods for additive gene-environment interaction tests are groundbreaking and an important advance in the field."

Reviewer C: "Dr. Pearce is a wonderful successful impactful team scientist who has enjoyed a productive career and who from every metric will continue to produce the highest quality science. She is a leader in the field who takes a multi-disciplinary approach to further our understanding of factors related to etiology, and outcomes with implications for risk prediction in ovarian cancer."

Reviewer D: "Dr. Pearce was a founding member of the Ovarian Cancer Association Consortium (OCAC)... [As] leader of OCAC, Dr. Pearce has led studies to understand the association between hormonal exposures and ovarian cancer risk. This work has been incorporated into board exams in the clinically relevant medical disciplines, which demonstrates the importance of this line of research."

Reviewer E: "I would put Dr. Pearce as in the top 5-10% of those conducting epidemiological research in the area of ovarian cancer."

Reviewer F: "While her work in ovarian cancer has been highly impactful, I believe her initiation and leadership of the life purpose studies is the best demonstration of her creativity of thought and ability to develop new and interesting hypotheses. Her paper on this topic published this past year (Alimujiang et al., *JAMA Network Open* 2019) set off a great deal of discussion and interest in the field of cancer, including in cancer health disparities where this kind of creative thinking can have a major impact."

Summary of Recommendation:
Professor Pearce is a highly visible leader in the area of ovarian cancer research. Her research on ovarian cancer is widely cited and has helped to create a bridge between the Department of Epidemiology and the Rogel Cancer Center. She has been integral in reshaping the department curriculum, teaching introductory epidemiology and professional development courses, and developing a new course for the school's online master of public health program. She has been an outstanding citizen of the department, school, and university community, as well as a highly visible leader in the broader public health and cancer communities. It is with the support of the School of Public Health Executive Committee that we recommend Celeste L. Pearce for promotion to professor of epidemiology, with tenure, Department of Epidemiology, in the School of Public Health.

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F. DuBois Bowman, Ph.D.
Dean, School of Public Health

May 2021