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April 2, 2025

To Whom It May Concern,

I am writing to express my enthusiastic support for Dr. Dilys Walker's proposal to develop and implement an artificial intelligence (AI) tool for the management of Pregnancy of Unknown Location (PUL) at UCSF/ZSFG. As the Chief of the Division of Obstetrics, Gynecology & Reproductive Sciences at Zuckerberg San Francisco General Hospital (ZSFG), I recognize the significant potential of this initiative to enhance patient care and streamline clinical workflows within our division.

Vaginal bleeding accompanied by a positive pregnancy test is a frequent presentation in both emergency and outpatient settings. The paramount concern in such cases is the possibility of an ectopic pregnancy (EP), which occurs in 1–2% of pregnancies and poses serious risks, including substantial morbidity and potential loss of fertility if not promptly diagnosed and treated. The diagnostic process is often complicated by non-specific symptoms that overlap with other early pregnancy conditions. When initial assessments, including transvaginal ultrasound (TVS) and serial  $\beta$ -hCG measurements, fail to localize the pregnancy—a scenario termed Pregnancy of Unknown Location (PUL)—further diagnostic efforts and meticulous follow up are imperative.

At UCSF/ZSFG, we have established comprehensive clinical guidelines for PUL management, most recently updated in 2024. Despite the robustness of these guidelines, their implementation remains labor intensive and subject to variability. Our residents and attending physicians dedicate substantial time to managing a "floater list" of PUL patients, documenting follow-up plans in free-text formats, and interpreting serial laboratory and imaging results. This manual process is not only inefficient but also susceptible to inconsistencies that can lead to diagnostic delays and suboptimal patient outcomes.

Dr. Walker's proposal to develop a 3-in-1 AI-integrated tool within our existing APeX and MyChart systems offers a transformative solution to these challenges. By automating risk stratification, standardizing management recommendations, and facilitating patient communication, this tool promises to enhance diagnostic accuracy, reduce clinical workload, and improve patient engagement and satisfaction. For our division, the implementation of such an AI-driven system would represent a significant advancement in delivering evidence-based, safe, efficient, and equitable care to patients presenting with PUL.

Dr. Walker is exceptionally well prepared to lead this project. As a Professor in the Department of Obstetrics, Gynecology & Reproductive Sciences and the Director of Global Health Research for UCSF's Bixby Center for Global Reproductive Health, she brings a wealth of experience in global maternal health, reproductive health, and implementation science. Her pioneering work includes the



development of PRONTO International, an organization dedicated to improving obstetric and neonatal care through innovative, simulation-based training strategies. Additionally, Dr. Walker has successfully led large-scale initiatives, such as the Preterm Birth Initiative in East Africa, demonstrating her capability to manage complex projects that integrate technology and clinical care. Her expertise in developing and implementing clinical algorithms, combined with her commitment to leveraging technology to enhance patient care, positions her uniquely to spearhead this AI integration project.

We are confident that under Dr. Walker's leadership, this AI tool has the potential to revolutionize the management of PUL within our department, leading to improved clinical decision-making, enhanced workflow efficiency, and better patient outcomes. We wholeheartedly support her proposal and strongly advocate for its funding and implementation.

Sincerely,

A handwritten signature in blue ink, appearing to read 'RJ', with a long, sweeping horizontal flourish extending to the right.

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