

Review of: "Progression-free survival as a primary end-point: Counting the cost"

Marcus Schmidt¹

¹ Universitätsmedizin der Johannes Gutenberg-Universität Mainz

Potential competing interests: Marcus Schmidt reports personal fees from AstraZeneca, BioNTech, Daiichi Sankyo, Eisai, Lilly, MSD, Novartis, Pantarhei Bioscience, Pfizer, Pierre Fabre, Roche, and SeaGen. His institution has received research funding from AstraZeneca, BioNTech, Eisai, Genentech, German Breast Group, Novartis, Palleos, Pantarhei Bioscience, Pierre Fabre, and SeaGen. In addition, he has a patent for EP 2390370 B1 and a patent for EP 2951317 B1 issued.

The author presents a well-written review of the pros and cons of progression-free survival (PFS) and overall survival (OS) as endpoints in oncology trials and poses the central question of whether PFS is a valid surrogate for OS. He emphasizes the importance of toxicity and quality of life (QoL), especially when PFS is used as the primary endpoint for the approval of a new drug. The starting point of his argument is the approval of polatuzumab vedotin as first-line therapy for diffuse large B-cell lymphoma (DLBCL) with a modest gain in PFS but no improvement in OS. Another example cited by the author is sacituzumab govitecan in advanced hormone receptor (HR)-positive and human epidermal growth factor receptor 2 (HER2)-negative breast cancer, which showed improved PFS but no OS in the initial publication [1]. However, this example is misleading and should be amended as improved OS was observed with longer follow-up [2]. An additional endpoint option to defuse the "PFS vs. OS conundrum" could be PFS-2, which shows a better, albeit not perfect, correlation with OS [3]. In fact, Woodford et al. found that PFS-2 consistently outperformed PFS as a surrogate for OS across all subgroups, highlighting its use as a primary study endpoint in future randomized clinical trials in oncology [3]. I suggest also discussing PFS-2 as a potential surrogate for OS in this worthwhile review.

Apart from the points mentioned, this statement provides a good overview of PFS and OS as study endpoints in oncology trials. In particular, the importance of side effects and quality of life in oncology cannot be overemphasized.

Literatur

1. Rugo HS, Bardia A, Marmé F, Cortes J, Schmid P, Loirat D, Trédan O, Ciruelos E, Dalenc F, Pardo PG, Jhaveri KL, Delaney R, Fu O, Lin L, Verret W, Tolaney SM (2022) Sacituzumab Govitecan in Hormone Receptor-Positive/Human Epidermal Growth Factor Receptor 2-Negative Metastatic Breast Cancer. *J Clin Oncol* 40(29):3365–3376. doi:10.1200/JCO.22.01002
2. Rugo HS, Bardia A, Marmé F, Cortés J, Schmid P, Loirat D, Trédan O, Ciruelos E, Dalenc F, Gómez Pardo P, Jhaveri KL, Delaney R, Valdez T, Wang H, Motwani M, Yoon OK, Verret W, Tolaney SM (2023) Overall survival with sacituzumab govitecan in hormone receptor-positive and human epidermal growth factor receptor 2-negative metastatic breast cancer (TROPiCS-02): a randomised, open-label, multicentre, phase 3 trial. *Lancet* 402(10411):1423–1433. doi:10.1016/S0140-6736(23)01245-X

3. Woodford RG, Zhou DD-X, Kok P-S, Lord SJ, Friedlander M, Marschner IC, Simes RJ, Lee CK (2022) The validity of progression-free survival 2 as a surrogate trial end point for overall survival. *Cancer* 128(7):1449–1457.

doi:10.1002/cncr.34085