The landscape of HR+/HER2- advanced breast cancer treatment has been significantly transformed by the advent of CDK4/6 inhibitors. These agents, now recommended by international guidelines as the standard of care in combination with endocrine therapy, have demonstrated substantial improvements in progression-free survival (PFS) and overall survival (OS) in randomized clinical trials.

However, understanding the true long-term impact of CDK4/6 inhibitors requires integrating real-world evidence (RWE) with clinical trial data. This presentation aims to elucidate the long-term survival benefits of CDK4/6 inhibitors in HR+/HER2- advanced breast cancer, leveraging insights from large-scale real-world datasets such as the Flatiron Health database and the P-VERIFY study.

Analysis of real-world data indicates that patients treated with CDK4/6 inhibitors plus endocrine therapy experience significant improvements in both OS and PFS compared to those receiving endocrine therapy alone. Notably, real-world median OS and PFS closely mirror or even surpass those reported in clinical trials, underscoring the robustness of CDK4/6 inhibitor efficacy in routine clinical practice.

Furthermore, comparative real-world studies show no significant differences in survival outcomes among the three approved CDK4/6 inhibitors—palbociclib, ribociclib, and abemaciclib. These findings highlight the importance of individualized treatment decisions, taking into account patient characteristics, comorbidities, safety profiles, and genomic biomarkers.

Ultimately, real-world evidence substantiates the long-term survival benefits of CDK4/6 inhibitors for patients with HR+/HER2- advanced breast cancer, validating their pivotal role in current treatment paradigms. By tailoring therapy to each patient’s unique clinical profile and leveraging both clinical trial and real-world data, clinicians can optimize outcomes and ensure that the full potential of CDK4/6 inhibitors is realized in clinical practice.