

Supplementary Materials

Optimizing therapeutic approaches for HR+/HER2- advanced breast cancer: clinical perspectives on biomarkers and treatment strategies post-CDK4/6 inhibitor progression

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Supplementary Table 1. Overview of main umbrella trials investigating second-line treatments in HR+/HER2- advanced breast cancer (ABC) following progression on CDK4/6 inhibitors combined with endocrine therapy (ET)

Trial name (Trial ID)	Phase	Treatment investigated	Estimated completion date	Termination Status
ELEVATE (NCT05563220)	Phase Ib/II	Elacestrant/abemaciclib, everolimus, abemaciclib/ribociclib, palbociclib/abemaciclib/ribociclib, capivasertib	2026-08	Recruiting
MULAN (NCT04355858)	Phase II	SHR7390, famitinib, SHR3162, pyrotinib, capecitabine, SHR1210, everolimus, nab paclitaxel, SHR2554, SHR3680, SHR6390, SHR1701, fulvestrant, aromatase inhibitor, bevacizumab	2025-04	Recruiting
TACTIVE-U (sub-study A: NCT05548127; sub-study B: NCT05573555)	Phase Ib/II	ARV-471/abemaciclib (sub-study A); ARV-471/ribociclib (sub-study B)	2025-09 (sub-study A) 2027-01 (sub-study B)	Active, not recruiting (sub-study A) Recruiting (sub-study B)
MORPHEUS- BREAST CANCER (NCT04802759)	Phase Ib/II	Giredestrant monotherapy or giredestrant/abemaciclib, ipatasertib, inavolisib, ribociclib, everolimus, samuraciclib, atezolizumab, abemaciclib/atezolizumab (Cohort 1)	2026-10	Recruiting
Morpheus-panBC (NCT03424005)	Phase I/II	Inavolisib/abemaciclib/fulvestrant, inavolisib/ribociclib/fulvestrant, inavolisib/ribociclib/letrozole, inavolisib/abemaciclib/letrozole (Cohort 3)	2028-05	Recruiting
MORPHEUS-HR+ Breast Cancer^[1] (NCT03280563)	Phase I/II	Fulvestrant (control), fulvestrant/atezolizumab, fulvestrant/atezolizumab/abemaciclib	2024-09	Completed

OP-1250-003 (NCT05508906)	Phase I	OP-1250 (palazestrant)/ribociclib, alpelisib, everolimus	2026-06	Recruiting
GERTRUDE (NCT05933395)	Phase II	Neratinib/fulvestrant, alpelisib/fulvestrant, everolimus/fulvestrant, abemaciclib/fulvestrant	2031-10	Recruiting
ELAINE-3 (NCT05696626)	Phase III	Lasofexifene/abemaciclib, fulvestrant/abemaciclib	2028-04	Recruiting

BC: Breast cancer; HR: hormone receptor.

Cited reference: 1. Jung KH, Im S-A, Yardley D et al. Abstract PS12-08: MORPHEUS Hormone Receptor-Positive Breast Cancer: interim analysis of a Phase Ib/II, study of fulvestrant ± atezolizumab and abemaciclib triplet treatment in patients metastatic disease. Cancer Research 2024;84:PS12-08-PS12-08.

[DOI: 10.1158/1538-7445.SABCS23-PS12-08]