

Phase III Study Evaluating Palbociclib (PD-0332991), a Cyclin-Dependent Kinase (CDK) 4/6 Inhibitor in Patients With Hormone-receptor-positive, HER2-normal Primary Breast Cancer With High Relapse Risk After Neoadjuvant Chemotherapy.

Clinical summary

About one third of patients with hormone-receptor (HR)-positive, HER2-normal breast cancer and residual disease after neoadjuvant chemotherapy have a substantial risk of relapse. The clinical-pathologic stage - estrogen/grade (CPS-EG) combining clinical stage before neoadjuvant treatment, pathological stage after neoadjuvant treatment, grading and estrogen-receptor status can be used to identify these high-risk patients. The CPS-EG score was additionally validated in 2453 patients with HR-positive/HER2-normal tumors from the German neoadjuvant studies' meta-database. 24% of these patients had a score of 3 or higher and showed a 3-years DFS of 74% despite adequate local therapy and adjuvant endocrine treatment. Cyclin dependent kinases (CDK), a group of serine/threonine kinases, play a key role in regulating cell cycle progression by interacting with specific cyclin proteins in luminal-type tumors. , PD-0332991 (palbociclib) is an oral, highly selective inhibitor of CDK4/6 kinase activity that prevents cellular DNA synthesis by prohibiting progression of the cell cycle from G1 to S phase through blocking retinoblastoma (Rb) phosphorylation. Preclinical studies identified luminal ER subtype, elevated expression of cyclin D1 and Rb protein, and reduced p16 expression as being associated with sensitivity to palbociclib. The PENELOPEB study is designed to demonstrate that in the background of standard anti-hormonal therapy palbociclib provides superior invasive disease-free survival (iDFS) compared to placebo in pre- and postmenopausal women with HR-positive/HER2-normal early breast cancer at high risk of relapse after showing less than pathological complete response to neoadjuvant taxane- containing chemotherapy. Considering the high risk of recurrence in patients after neoadjuvant chemotherapy and a high CPS-EG score, palbociclib appears to be an attractive option with a favourable safety profile for these patients.

Conditions

This trial is treating patients with hormone receptor positive / HER2 normal breast cancer

Trial Acronym

PENELOPE-B

Cancer

Breast

Trial Identifiers

NCT01864746

GBG78/BIG 1-13/NSABP-B-54-I, 2013-001040-62, ANZ 1402, NC100

Age: 18 to 75

Phase: III

For full trial details, visit trials.cancervic.org.au/details/vct1_nct01864746