GUSTAVE ROUSSY
CANCER CAMPUS
GRAND PARIS

ASCO | 2020

Press release

BREAST CANCERS:
certain genetic abnormalities might predict efficacy of ribociclib

Ribociclib has been demonstrated to increase patient survival significantly when given in combination with hormone therapy treatment of hormone-dependent (HR+, HER-) breast cancer. Professor Fabrice André is presenting at an oral ASCO session a study that tests whether genetic abnormalities could predict efficacy of ribociclib.

Oral presentation
by **Prof. Fabrice André**

▶ READ THE ABSTRACT
N° 1009

▶ EXPLANATIONS IN VIDEO

Breast cancer is the commonest cancer in women. Two thirds of these cases are hormone responsive (HR+): the presence of oestrogen or progesterone receptors is a marker for stimulation of tumour growth by the female hormones produced naturally in the body. Standard therapy of such cancers therefore depends on administration of endocrine therapies (tamoxifen, LH-RH agonists or anti-aromatases), which oppose the stimulatory action of these hormones on tumour growth.

For all those women, whose tumor cells do not overexpress the human epidermal growth factor (HER2-), the development of inhibitors constitutes a major advance. This orally administered targeted therapy acts by inhibiting a category of enzymes – the cyclin-dependent kinases – which play a major role in signalling pathways in the cell cycle and tumour proliferation. Used in conjunction with hormone therapy these agents reinforce the activity of the latter and slow the growth of hormone-responsive cancer cells.

A number of studies have demonstrated the efficacy of inhibitor agents. Ribociclib combined with standard endocrine therapy is therefore licensed in menopausal women with locally advanced or metastatic breast cancer (HR + HER2-). As example, in the MONALEESA 7 phase III international multicentre study , it was shown that ribociclib decreased the likelihood of death (HR: hazard ratio for death, 0.71; 95% CI, 0.54 to 0.95).

Unfortunately, not all patients respond identically to an effective treatment. Therapies are becoming increasingly targeted so that anti-cancer treatment is more effective and "personalised" because of its being tailored to the specific features of each tumour. Determining those patients who will most benefit is becoming a major element in oncological practice. The study presented in an oral session at ASCO 2020 by Professor Fabrice André, Research Director at Gustave Roussy, addresses this problem. ***"The objective was to elucidate which genetic abnormalities are associated with greater or lesser responsiveness to ribociclib in combination with endocrine therapy,"*** **explained the oncologist.** The objective was to find those biomarkers which were predictive of ribociclib efficacy, ***"which would also help us***

> **"The objective of the study was to elucidate which genetic abnormalities are associated with greater or lesser responsiveness to ribociclib.**

to define their role in comparison with other treatments." To achieve this, the research group took the data from sequencing of tumour DNA circulating in the blood of patients who had participated in the various studies evaluating ribociclib (MONALEESA-2, -3 and -7). By gathering all these data, the largest genome data base (a total cohort of 1,503 patients) in relation to anti-CDK4 efficacy in breast cancer was assembled. 82 genetic alterations were examined, those having a frequency of at least 2%, involving a minimum of 15 patients in each arm of the studies evaluating ribociclib. The conclusion was that seven of the abnormalities, including the BRCA 1 and 2 mutation, appear to be significantly associated with potential efficacy (FRS2, MDM2, PRKCA, ERBB2, AKT1, E17K and BRCA 1/2). Three other changes in circulating tumour DNA, by contrast, were associated with potential resistance to the drug (CHD4, ATM and CDNKN2A/2B/2C).

In conclusion, this study reports several genetics alterations that could be associated with different levels of benefit for ribociclib. This study should only be considered as hypothesis generating since candidate alterations are rare. Further studies will aim at assessing the clinical utility of detecting these alterations.

Further studies will aim at assessing the clinical utility of detecting these alterations.

LEARN ABOUT
about
Gustave Roussy at l'ASCO
gustaveroussy.fr/en/asco2020

PRESS CONTACT

GUSTAVE ROUSSY
Media relations
CLAIRE PARISEL
Tel. 33 (0)1 42 11 50 59 – 33 (0)6 17 66 00 26
claire.parisel@gustaveroussy.fr

www.gustaveroussy.fr/en

Regarding Gustave Roussy
Gustave Roussy, the leading cancer center in Europe, is a comprehensive hub of expertise in oncology, entirely devoted to patients. It employs 3,100 professional staff engaged in patient care, research and teaching.

GUSTAVE ROUSSY
CANCER CAMPUS
GRAND PARIS