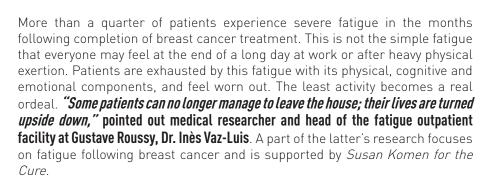
# **GUSTAVE ROUSSY IN ASCO 2019**

Press release / Oral session / Chicago, 1st June 2019

## **ARTIFICIAL INTELLIGENCE**

Artificial intelligence can predict the chances of post-treatment fatigue in breast cancer.

Research results presented at the 2019 ASCO Conference show for the first time that artificial intelligence can help predict the chances of development of severe fatigue in women due to undergo treatment for breast cancer. This is before they commence treatment and even before they show clinical symptoms associated with such asthenia. This work, conducted on patients in the CANTO (CANcer TOxicities) cohort, demonstrates the value of exploring the possibilities that artificial intelligence may offer for curing breast cancer while restricting the possible sequelae to a minimum.



Gustave Roussy medical researchers in collaboration with colleagues at the *Memorial Sloan-Kettering Cancer Center* tried to develop a test which can recognise at the time of diagnosis of breast cancer, before institution of treatment, which women are likely to be affected by fatigue. The aim is to recommend, within the bounds of the possible, alternative, better-tolerated therapies.

The researchers used patients from the CANTO cohort, sponsored by Unicancer and coordinated by Professor Fabrice André, Inserm Research Director and Gustave Roussy oncologist with a special interest in breast cancer. This is mainly financed by the Agence Nationale de la Recherche (National Research Agency) through the "Investments in the Future" programme. It is a very large cohort study initiated in 2012 which recruited 12,000 patients from more than 20 centres in France. Having selected those patients who were not fatigued before being treated, their genome was sequenced looking for various genetic polymorphisms (variations in gene sequences, performed using Genmed). Then, employing an artificial intelligence technique, combinations of genetic polymorphisms which might cause post-treatment fatigue were identified. "We noted that the presence of a number of genetic disruptions related to signal transmission between synapses resulted in an increased probability of developing cognitive fatigue following breast cancer treatment," reported Professor André. This

might explain why these women mainly manifest cognitive fatigue following

treatment.



### ORAL SESSION

Saturday 1st June from 8:36 to 8:48 am (Chicago time) Room S102

READ THE ABSTRACT
N° 11515

USING ARTIFICIAL
INTELLIGENCE
To cure breast cancer
with the minimum of
possible sequelae



"Thanks to this technique, we managed to predict cognitive fatigue in patients before they had experienced other clinical symptoms," stated Dr. Vaz-Luis.

A study conducted by Dr. Vaz-Luis and presented in October 2018 at the European Society for Medical Oncology (ESMO 2018) Congress, had previously identified clinical factors associated with the risk of having chronic fatigue at one year after breast cancer treatment: young patients, smokers and those with one or more other conditions in addition to their breast cancer.

## LISTEN TO Dr. VAZ-LUIS'S EXPLANATIONS



# **CANTO COHORT:**

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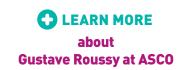
**12,000 patients** 

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**26 centres in France** 

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**Sponsored by Unicancer** 



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