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KEY-WORDS:
FECAL MICROBIOTA · CANCER · DIET

PROFILE

I am a second-year PhD student in Clinicobiome, graduated in Chemistry and Pharmaceutical Technology.

AFFILIATION

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LANGUAGES



Mother language



Level B2

HOW TO REACH ME

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PROJECT TITLE

Microbiota and diet in cancer patients

Steps of the research

- Investigation, through literature research, of know-how regarding the relationship between gut microbiota, cancer and diet, with a specific focus on breast cancer.
- Investigation of the predictive role of fecal microbiota composition in terms of therapeutic efficacy by metagenomic analysis of fecal microbiota collected from hormone receptor-positive metastatic breast cancer patients before treatment with CDK4/6 inhibitors in combination with endocrine therapy.
- Metagenomic analysis of the variation of fecal microbiota induced by fasting-mimicking diet cycles in patients affected by triple-negative breast cancer treated with chemotherapy.

Main Results

Potential predictive role of fecal microbiota composition based on significant compositional differences at species level found in responders to CDK4/6-inhibitors therapy compared non-responders.

Research Contribution

Preliminary results suggest a predictive role of fecal microbiota in terms of therapeutic efficacy that could be exploited at clinical level to select properly patients suitable for a certain therapy avoiding adverse effects and high costs caused by cancer therapy. Targeted antibiotic depletion or oral administration of probiotics could modulate gut microbiota to increase efficacy of antitumoral therapy.

Collaborations

Istitute Gustave Roussy - Paris, France
Istituto Nazionale dei Tumori - Milan, Italy

Why should you care?

Breast cancer represents cancer with the highest incidence in the female population and, although mortality has been significantly reduced using targeted therapies and immunotherapy, new screening and intervention strategies that can improve the effectiveness of existing therapies and reduce adverse effects are required. One possible strategy could be the modulation of the gut microbiota.