

Oncology meets gender medicine

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On October 26, 2023, the First International Congress on Gender Medicine in Oncology took place in Rome at the Regina Elena National Cancer Institute-IFO IRCCS. The event brought together national and international experts who shared the latest knowledge regarding this emerging and essential dimension of medical oncology. The proposal was an opportunity to share cultural and professional aspects of similar disciplines but also to strengthen bonds of friendship and foster synergistic collaboration with all national and international specialists and institutions that endorse these common objectives.

In oncology, many sex and gender differences have been observed in tumors common to both sexes. Over the past decades, oncology studies have been imbalanced in terms of sex and gender. The experimental animals used in preclinical and clinical studies, including in oncology, are predominantly, if not exclusively, males. From the analysis of literature data, it is clear that sex and gender influence the pathophysiology, clinical signs, outcome and therapy of tumors. Therefore, sex and gender variables should represent important stratification factors and be included in all clinical and pre-clinical trials. It has been observed that the effectiveness of antineoplastic drugs is different between the two sexes, just as the clinical characteristics of tumors with the same histology and stage can vary. Unfortunately, this is not considered in daily clinical attention and guidelines.

The International Congress, designed with the aim of raising aware-

ness and informing participants about the covered topics, aimed to explore sex and gender differences in oncological diseases. This exploration started from differences at the molecular level, in both preclinical and clinical research, and extended to oncological therapies and their side effects. The congress also addressed current issues, including gender language, artificial intelligence, and telemedicine. Finally, it evaluated the emotional experience of individuals suffering from oncological diseases.

Italy is the first country in Europe to have a law regulating the application of gender medicine in the health service, known as the 'National plan for the application and diffusion of gender medicine'. The Plan aims to provide a coordinated and sustainable direction for the diffusion of sex and gender-specific medicine by promoting and guiding health practices that consider differences arising from sex and gender in research, prevention, diagnosis, and treatment. The goal is to ensure people receive quality and appropriate services in a consistent manner across the national territory.

Given the significance of the National Plan, the Ministry of Health decided to establish an Observatory on Gender Medicine at the Italian National Institute of Health [*Istituto Superiore di Sanità*]. This observatory is comprised of working groups focused on the themes outlined in the Plan, and its primary objective is the ongoing monitoring of its implementation.

The Congress President, Marialuisa Appetecchia, who spearheaded this event, is actively engaged as a representative of the Italian Scientific Hospitalization and Care Institutes [*Istituti di Ricovero e Cura a Carattere Scientifico, IRCCS*] network for gender medicine in the Observatory for the application of gender medicine in the national healthcare system. This involvement is in accordance with the provisions outlined in the National Plan on Gender

Medicine, which was approved as an implementing decree in June 2019.

A better understanding of the differences between males and females can guide therapeutic strategies towards increasingly personalized treatments and, consequently, more effective clinical management of neoplastic disease.

The first International Congress has highlighted that in oncology additional investments in research are needed, along with a reform of medical education and political determination to change the approach to healthcare.

It was also aimed at initiating the creation of a network to support this still relatively unknown area of medicine, with the goal of translating the results into actionable initiatives and implementing continuous training for healthcare professionals, especially in the field of oncology.

This significant conference, along with many other events and projects promoted in Italy, represents a fundamental step that will hopefully contribute to the dissemination and concrete application of sex and gender medicine in Italy. This progress aims to lead to the creation of an increasingly personalized approach to medicine.