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Gender medicine in the programs of the Italian public institutions: the role of FNOMCeO

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About 400,000 active medical doctors of the Italian health system did not receive any pre-graduate education on health and gender medicine. Since June 13th 2019 in Italy we have, as the first country in Europe, a specific law for the application and spreading of gender medicine in the national health system.

FNOMCeO (National Federation of the Orders of Doctors and Dentists) is a public institution, subsidiary of the State, whose main purpose is to update the Code of Ethics for Italian physicians and to check that they respect it. According to the Code of Ethics the post graduated-education on gender medicine is mandatory. Both FNOMCeO and the Provincial Medical Councils are accredited providers for continual medical education and they have been organizing residential post-graduate training courses for several years.

In 2014 FNOMCeO set up a specific Committee for Health and Gender Medicine composed of both experts and Presidents or Vice-Presidents of the Local Medical Councils (Table 1). The aims of the Commit-

tee are to plan post-graduate training courses, to inform citizens, to take part to the national and international network for gender medicine, to cooperate with other Italian public institutions and to encourage clinical research (Table 2).

Since 2014 this committee has been organizing 20 residential courses and workshops, and it has been taking part of symposia organized by the most important national scientific societies (for example, general practitioners, hospital doctors, etc.). In the last 10 months Italian medical doctors or dentists have received more than 28,000 CME credits through a FNOMCeO course in distance learning (FAD). The committee is also planning new distance learning courses focused on cardiovascular, respiratory tract and other gender specific diseases.

In consideration of the need of implementing post-graduate education on health and gender medicine for Italian physicians, FNOMCeO is cooperating with other public institutions (university, scientific societies, regional and national governments etc.) to promote an adequate post-graduated education on gender medicine.

As to the information to citizens we plan to develop the FNOMCeO website through a page dedicated to gender medicine, countering of fake news.

Moreover a new working group was set up. Its aim is to focus on the law on disabilities and to propose a

Table 1. FNOMCeO Committee for Health and Gender Medicine

Coordinator Teresita Mazzei

Experts Giovannella Baggio, Walter Malorni, Raffella Michieli, Annamaria Moretti, Cecilia Politi

FNOMCeO referee Brunello Pollifrone

Members Luisa Antonini, Annamaria Bascelli, Patrizia Biancucci, Fabiola Bologna, Ornella Cappelli, Anna Maria Celesti, Domenica Espugnato De Chiara, Caterina Ermio, Anna Maria Ferrari, Flavia Franconi, Anna Rita Frullini, Rosa Maria Gaudio, Luciana Insalaco, Franco Lavalle, Concetta Liberatore, Cristina Monachesi, Paola Pedrini, Rita Salvatori, Sabrina Santaniello, Rosa Maria Scalise, Chiara Scibetta, Maria Franca Tegas

revision of the indicators based on gender differences.

More clinical studies focused on gender differences could lead towards a personalised medicine and more health appropriateness and effectiveness.

The FNOMCeO Committee for Health and Gender Medicine stresses its commitment to cooperate both with other national and local health institutions and with scientific societies in order to support a gender approach and develop a fair health system to improve children's, women's, men's and seniors' health.

Table 2. The aims of FNOMCeO Committee for Health and Gender Medicine

To plan post-graduate medical education

To inform citizens

To take part to the National and International Network for Gender Medicine

To cooperate with other Italian public institutions

To encourage clinical research

The 'Hospital Coordinating Group on Gender Health Promotion': at the IFO – Istituti Fisioterapici Ospitalieri – a center which uses gender as a health determinant

Marialuisa Appetecchia

Coordinator of the IRCCS Regina Elena National Cancer Institute and San Gallicano Dermatological Institute (IFO) Coordinating Group on Gender Health Promotion; Head of the Oncological Endocrinology Unit, IRCCS IFO, Rome

The IFO Gender Health Coordination Group started its activity in 2018, when it was set up with a resolution as a result of a successful convergence of interests of some of the IFO's professionals and the Hospital's Strategic Board with the intention of launching, disseminating, expanding and above all stimulating research and knowledge in the field of gender differences in oncology and dermatology. Despite the exceptional evolution of medical research in recent decades, little attention has been paid so far to this aspect of medical science. An analysis of the literature shows that gender influences the pathophysiology, clinical signs, outcome and therapy of tumors and dermatological diseases. Therefore, this variable should be an important stratification factor and be considered in daily clinical practice and in all pre-clinical and clinical trials.

A better understanding of the existing differences could, in fact, direct therapeutic strategies towards increasingly personalized treatments and, therefore, towards more effective clinical management. In the field of oncology, over the last few decades, studies have proven to be biased in terms of gender, including in the field of research; suffice it to mention that in 1977 the Food and Drug Administration excluded women from phase I and II of clinical trials. The efficacy of chemotherapy differs in the two sexes/genders; how-

ever, the differences in the clinical characteristics of neoplasms, with the same histology and stage, are at times observed but not considered in daily clinical practice and guidelines. Relatively little is known about the gender differences in cancer therapy and their impact in the clinical management of the disease.

The low representation of women in clinical trials is certainly a crucial factor that has limited data collection to date. Moreover, due to the retrospective nature of these trials, there are many confusing factors (e.g., age, stage of disease, co-morbidity) that can influence the results to the point that the data emerging from the literature on gender differences is partial, fragmentary and at times contradictory. In general, it has been observed that some chemotherapy drugs have a better response rate in women than in men, without a significant increase in toxicity (e.g., cisplatin and irinotecan), while in other cases a higher toxicity in women is not associated with an increase in response (e.g., 5-fluorouracil). It has been observed that women develop cardiomyopathy and nephropathy less frequently than men, following treatment with anthracyclines, and that levels of reproductive hormones in women are inversely correlated with cardiac health; even the own anti-tumor activity exerted by anthracyclines seems to show a gender disparity. Studies conducted on murine models have shown a significantly greater reduction in tumor in male animals treated with anthracyclines than in females. The side effects of antineoplastic drugs are also strongly dependent on the peculiarities that the various tissues and organs have in the two sexes. For example, women have a higher incidence of oral mucositis, but lower rates of intestinal toxicity than men. Women are also more susceptible to nausea and vomiting, due to the lower activity of antiemetic drugs. While the molecular mechanisms underly-