Molecular analysis could improve the early detection and prevention of endometrial cancer

June 17 2019

IDIBELL-ICO researchers. Credit: Gemma

The use of molecular biomarkers in minimally invasive sampling opens a promising perspective for the early detection of endometrial cancer. This is the conclusion reached by the members of Screenwide research group, formed by researchers from the Bellvitge Biomedical Research Institute (IDIBELL) and the Catalan Institute of Oncology (ICO-Hospitalet). The article that they have prepared, and that has been published in the *International Journal of Cancer*, highlights the gaps that exist in current knowledge to accelerate the implementation of new technologies, with the aim of improving the screening and the early detection in clinical environments of this type of women cancer.

Due to the anatomical continuity between the uterine cavity and the cervix, the genomic exploitation of the biological material from the Papanicolaou test, or cervical cytology, which is routinely used in cervical cancer prevention programs, represents, together with other methods of non-invasive sampling, a unique opportunity to detect signs of upper genital tract disease. This fact can contribute to improve the diagnosis and prevention of endometrial cancer.

Currently, strategies for detecting the signs of this cancer are limited to high-risk populations and symptomatic women, since 90% of endometrial cancers present with abnormal bleeding. The new analyzes will not only clearly benefit these cases: their potential could have an impact on better screening of asymptomatic women. Molecular tests can help refine current diagnostic algorithms, since they will reduce the failure rate of classical histological diagnosis. In addition, minimally invasive methods are more appropriate in large populations of asymptomatic women, since they are much better tolerated. The first women to benefit from this new screening approach will probably be those with a family history of cancer, as in the case of Lynch syndrome, due to its high underlying risk.

The Screenwide group was created in 2016 with the aim of developing

tools for early detection and screening of endometrial and ovarian cancer. The team is led by the epidemiology group (Dr. Laura Costas), with the alliance of pathology groups (Dr. Xavier Matias-Guiu), gynecology (Dr. Jordi Ponce), oncology (Dr. Josep Maria Piulats), Procure (Dr. Álvaro Aytés), and genetic counseling (Dr. Joan Brunet). The group has the international collaboration of the Endometrial Cancer Epidemiology Consortium (Dr. Sara Olson), the John Hopkins University (Dr. Bert Vogelstein) and the Forecee Consortium (Dr. Martin Widschwendter); and, nationally, with the Vall d'Hebron Research Institute (VHIR, Dr. Eva Colás), among others. During the last two years, the combined effort of this multidisciplinary group has allowed the recruitment of almost 500 women and the gathering of more than 1,600 biological samples. All this information will be the basis to be able to evaluate new detection strategies for endometrial and ovarian cancer at an early stage.

More information: Laura Costas et al, New perspectives on screening and early detection of endometrial cancer, *International Journal of Cancer* (2019). DOI: 10.1002/ijc.32514

Provided by IDIBELL-Bellvitge Biomedical Research Institute