

Did You Know? Cervical Cancer

Cervical cancer is the 3rd most common

There are 471,000 new cases/year in the world, including

The cervix is a cylindrical organ 2 to 4 cm long. It is

 A supra vaginal portion that extends the cervix: it is the end-cervix which extends with the endometrium.

pierced in the center of its lower part of the external

locoregional clinical examination (FIGO classification).

This classification has limits because it does not take

into account the lymph node involvement. MRI is

therefore complementary to clinical examination to

Prevalence is higher in Africa and Asia than in Europe.

surrounded by vaginal fornix that divide it into 2 parts:

- A vaginal portion called the ectocervix which is

The extension report is always based on the

gynecological cancer that affects young women.

3,400 new cases/year in France.

orifice of the cervix.

optimize therapeutic planning.

Take home message

- The main cause of cervical cancer is persistent infection with a virus that is transmitted sexually (human papillomavirus or HPV)
- Cervical cancer usually appears 10 to 15 years after persistent infection with the virus
- This type of cancer is of good prognosis when detected at an early stage



In Olea Sphere® ?

MRI is a complementary imaging technique useful for evaluating indeterminate masses by ultrasound.

The application «Female Pelvis» allows to visualize the morphological images and to calculate parametric maps.

Multiparametric display facilitates simultaneous interpretation of images, positioning of regions of interest and provides quantitative analysis of the tumor.

With the DWI (Diffusion Weighted Imaging) module, the value of ADC can be calculated. This case presents an obvious hypersignal in diffusion which shows a tumor residue and is accompanied by a fall of the ADC (hypo-signal on the ADC map, ROI: 0.61 10-3 mm2 /s) (Picture 1).

"Permeability" module allows an analysis of the enhancement kinetics during the perfusion examination with descriptive parameters (e.g. Washin, etc.) and quantitative (e.g. Ktrans, Kep, Ve and Vp) based on a pharmacokinetic model (Extended Tofts) (Picture 2).

Perfusion and diffusion parameters can be biomarkers that are predictive of therapeutic response.

Complications

- Direct extension (extension of cancer to neighboring organs and tissues)
- Lymphatic dissemination (cancer spreads to neighboring and distant lymph nodes)
- Remote metastasis (a cancer spread out of the pelvis is considered as distant metastasis)

Possible treatment

- The initial assessment is essential
- HPV vaccination (but 25-30% of HPV are not sensitive to the vaccine)
- External radiotherapy (sometimes in addition to chemotherapy)
- Brachytherapy (internal radiotherapy)
- Hysterectomy (ablation of the uterus)





Sources: = (Ref 1) https://www.chint.nih.gov/pubmed/15538578 = http://docteurimago.fr/actualites/medicale-et-technique/perfusion-levaluation-reliquets-tumoraux/ = http://docteurimago.fr/actualites/medicale-et-technique/perfusion-levaluation-reliquets-tumoraux/ = http://www.stmet.org/rc/org/stmet/htm/Article/2016/2010/2020-35647-617/sc/htm_fullifexthr/2_BALLPYGUEP_Cpdf = http://www.stmet.org/actores-col-uteus-tailements = http://www.stmet.org/actores-col-uteus-tailements = http://www.stmet.org/actores-col-uteus-tailements = http://www.stmet.org/actores-tumoraut/= http://www.stmet.org/rc/org/stmet/htm/Article/2016/2010/2020-35647-617/sc/htm_fullifexthr/2_BALLPYGUEP_Cpdf = http://www.stmet.org/actores-tumoraut/= http://

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