

Prostate Units: a new way to approach prostate cancer

Prostate cancer is today the most common male solid neoplasia and the second most common cause of death from cancer.

Since October 2019, Amethyst has organized a new way to approach this widespread pathology: the Prostate Unit Multidisciplinary Oncology Group. The advantage for the patient is a reduction in waiting times, easier to conclude the procedure in the same facility, and the availability of the most modern and valid techniques in the various steps for the management of prostate cancer.

Our Prostate Cancer Unit groups uro-oncological experts from various disciplines. This structure offers the patient the possibility to carry out all the necessary procedures both for an early diagnosis of prostate cancer and for its appropriate treatment and follow-up. This type of agreement between doctors of different specializations is not yet widespread in Italy, but according to Dr. Giovinazzo, Clinical director at Amethyst center in Rome: *"it is the future in the fight against this type of cancer, representing a benefit both for patients and for the health care system"*.

Once the initial examination has been carried out, the patient's further exams and consultations are directly arranged without the need for the patient look for the required specialties. Therefore, the patient does not have to book the examinations alone, perhaps having to look for them at different institutes, nor should he be afraid of forgetting something to do. Instead, he can enter this organization, completing all diagnostic procedure within one month (including histological biopsy diagnosis) and performing a therapeutic procedure within 20-30 days, if necessary.

To ensure complete real-time clinical information to be received and shares by all doctors, Amethyst is a strong pursuer of Radiomics solutions based on machine learning and deep learning technologies, which allow different centers to receive relevant elaborations of patient data. The Multidisciplinary Oncology Group can therefore examine a great deal of clinical and anatomical-pathological data, to ensure the most appropriate diagnostic and staging tests.

Particular attention is paid to the adequacy of the technological equipment for its correct operation and use with the aim of obtaining the best possible result by minimizing the risks relating to the patient's health. The collaboration inside the Prostate Unit extends beyond doctors and toward a pooling of technological resources to allow even those centers that do not have the technology or resources to give prostate patients access to state-of-the-art treatment techniques. Amethyst offers all centers part of the Prostate Unit access to its state-of-the-art 3D Fusion Biopsy diagnostic system, as well as its advanced Clinical linear accelerator radiotherapy machines.

The fusion of multimodal images (PET, CT, magnetic resonance), the study of dosimetry for small radiation fields, the execution of quality controls before the delivery of treatment on the patient and the imaging system during therapy (IGRT - image guided radiotherapy) provide safety to the oncologist radiotherapist to target the tumor in a correct way with best non-invasive healthy organs.

A centralization of diagnostic and therapeutic choices reduces the risk for the patient to undergo unsuitable or unhelpful procedures and therefore increases the effectiveness of treatments. Moreover, such a specialized facility, which carefully follows the patient's entire path, can lead to a reduction in complications and adverse events related to cancer.