**PROSTATE CANCER FACTS**

• PCA is a complex disease with many controversial aspects of management.
• It is the most common diagnosed visceral cancer.
• Life time risk is 16% but the risk of dying is only 3%.
• This discrepancy between the cancer incidence and lethality is due to high incidence of incidental cancer (“non significant”) detected. That means a low grade PCA that do not require any active, invasive treatment.
• But why is there a high incidence of indolent PCA? Because of the current diagnostic approach.

**CURRENT APPROACH TO DIAGNOSE PROSTATE CANCER**

<table>
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<th>Ultrasound (US) blinded biopsies are performed</th>
<th>Clinical Prostate Cancer Risk is considered whether? PSA</th>
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<tbody>
<tr>
<td>Overdiagnosis</td>
<td>Overdetection</td>
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<td>Treatment</td>
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**THE PARADIGM SHIFT**

• Improve the selection of patients that will benefit from a biopsy. That means increase the positive detection rate of PCA (the significant cancer).
• Improve the methodology of the biopsy→ change from blinded to target biopsies.
• In the era of robotics, it is reasonable to perform blinded biopses without a previous image of the prostate? Why the prostate is the only organ that blinded biopsies are being performed?
• Multiparametric MRI provides information to reduce overdiagnosis and overtreatment→ DETECT THE SIGNIFICANT CANCER, and avoid to detect the non significant cancer.

**MULTIPARAMETRIC MRI (mpMRI) OF THE PROSTATE**

• Mp MR is an imaging technique that provides an accurate diagnosis and offers an excellent negative predictive value to detect the significant cancer, before biopsy.
• Mp MRI combined with biopsies – target biopsies (not blinded) - consolidate both positive and negative biopsy results and allow patients to be offered more appropriate treatments (active monitoring, radical treatment in full knowledge of the topography of the lesions involved, or local treatment, etc.)
• It does not require advanced equipment, can be performed in any MR centre.
• It is performed with Standardized technique: PIRADS (Prostate Imaging Reporting and Data System) protocol. Fast technique < 30’ examination.
• Mp MRI provides morphological (T2 sequence) and functional (diffusion sequence-DWI-) information, “multiparametric” → mpMRI

**PROPOSED NEW APPROACH**

A patient with Clinical Prostate Cancer Risk → PSA

- mpMRI
  - US Target biopsies
    - Detection rate of Significant cancer
    - Low detection rate of insignificant cancer
  - Avoid OVERDIAGNOSIS & OVERTREATMENT

**PRACTICAL CASE – mpMRI APPROACH**

A 71-year-old male had a previous negative biopsy with a PSA of 8.35 ng/mL. One year later the PSA is 12.32 ng/mL. A mpMRI is requested due to the clinical risk of prostate cancer as PSA is increasing progressively.

**CONCLUSIONS**

• Prostate MR imaging can reduce overdiagnosis and overtreatment of prostate cancer.
• Prostate MRI provides a helpful tool to improve the work up of prostate cancer diagnosis.
• Prostate MRI increases the detection rate of the significant cancer and reduces the detection of low-risk cancer.
• A standardized prostate MRI guidelines – PIRADS – has been settled to implement the technique on the new paradigm shift to manage the diagnosis of prostate cancer.
• It should be validated multicenter data to allow all patients with suspected prostate cancer to benefit from this approach but it should be established a better risk stratification to include patients on the new paradigm to diagnose PCA.

**REFERENCES**