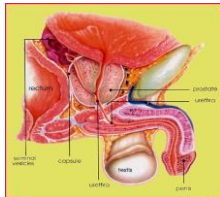


## Situation of the problem / Aim of the project

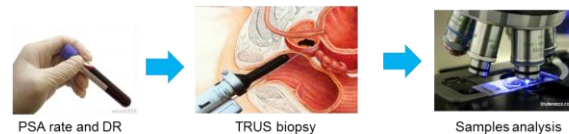


### Prostate cancer:

- 50 000 new cases/year in France
- 25% of cancers for male population.
- 15 % of death by cancer

**Need of imaging system to localize the cancerous regions.**

### Current diagnostic:



### Result:

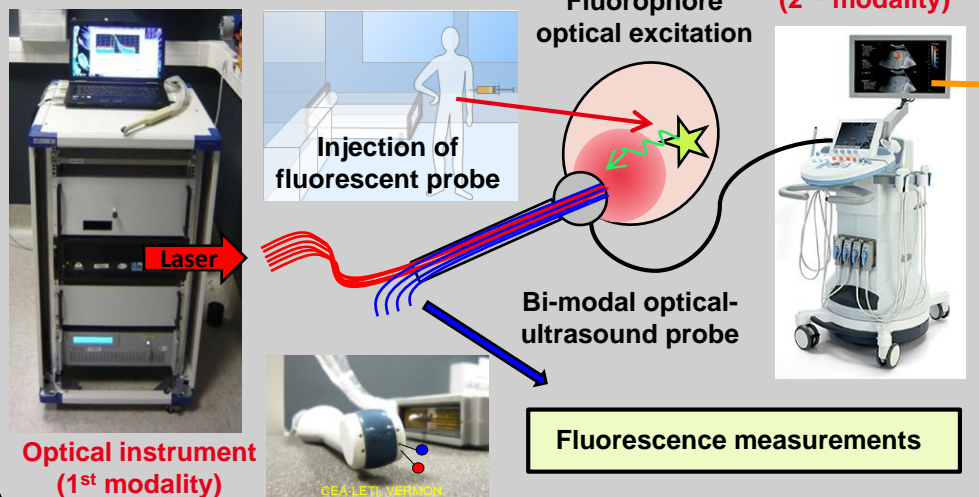
- Normal
- Abnormal
  - Benign
  - Cancer

**No way to localize nodules for biopsies.**

⇒ Several series of biopsies necessary to reach the region.  
⇒ Invasive process.

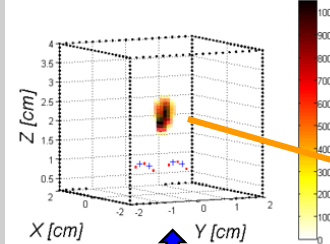
## Bi-Modal imaging system using fluorescence (1) and ultrasound (2)

### Bi-modal measurements



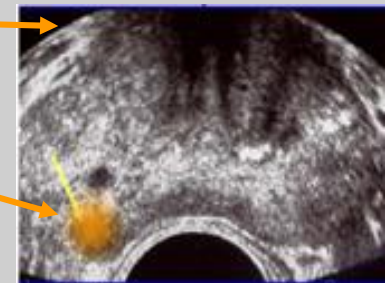
### Analysis and final imaging

#### 3D localization in probe referential



**Computing and data analysis**

#### Bimodal image



**Superposition of the both modalities**