

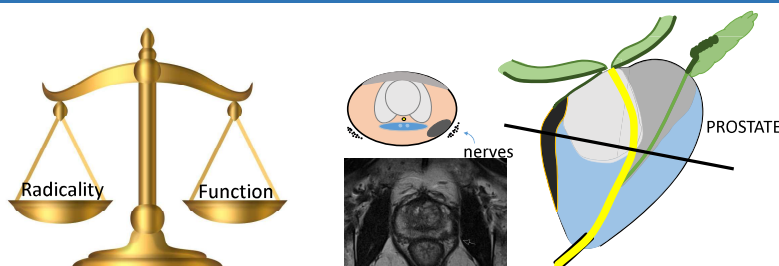
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ISPM Prostate

A Clinical Decision Support System for Prostate Cancer Treatment

Clinical Problem



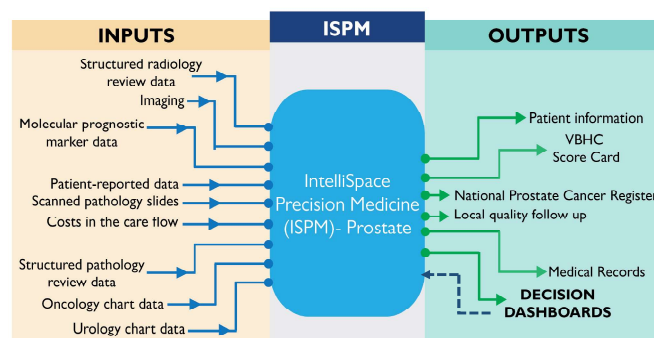
- The quality of care is multi-metric and comprises a trade-off between complete removal of the tumor and the loss of functions relying on tissue close to the prostate
- Tumor location is difficult to visualize
- Prostate cancer care is multi-modal – urology, radiology, pathology, oncology, etc.
- Data are poorly structured with very little system integration
- Feedback to the care flow is limited
- The use of patient-reported data is underdeveloped

Major objective

Enable personalized treatment to improve the quality of care and increase productivity by:

- integrated visualization of multiparametric data, and
- Big Data-driven predictive modelling

Data flow automated by ISPM



Possible improvements using ISPM

Patient outcomes

- Better oncological outcome – resection margins
- Better functional outcome – urine continence and sexual function
- Patient satisfaction

Efficiency

- Register data once, use often – system integration

Patient safety

- Reduce loss of information in the care flow
- Better and more efficient decisions at medical treatment conferences

Quality reporting/Value-based health care (VBHC)

- Real time quality data, including patient-reported data
- Stratification by risk group – co-morbidity, family history, prognosis, etc.
- Real time, individual feedback to clinical staff
- Improved staff satisfaction

Prediction modelling

- Include known models in the software
- Develop new models (800+ patients expected by end of 2019)
- Visualize prediction models in intuitive ways

