



USE CASES

quantusPR

Medical Imaging with Artificial Intelligence

quantusPR — Detection of Significant Prostate Cancer Lesions

Product Description

quantusPR® is a non-invasive, fast, reliable, and easy-to-use test for the automatic detection of significant prostate cancer lesions based on biparametric MRI data. Its technology is based on the analysis of MRI images using three types of sequences (T2W, ADC, and DWI). It is an artificial intelligence-based tool designed to streamline the radiologist's workflow: it automates the assessment of compliance with the PI-RADS v2.1 guidelines, performs segmentation of the prostate gland, and detects potential suspicious lesions, enabling faster and more accurate analysis. It is presented as a web application that is easy for specialists to use, allowing them to upload MRI images for automatic analysis and receive reliable results in just a few minutes; it is compatible with the HL7 FHIR protocol through its REST services

Epidemiological Context

quantusPR® has been designed with a clear focus on the male population and is intended as a tool for prostate cancer, providing significant assistance in screening high-risk patients, monitoring patients, and prioritizing waiting lists. Prostate cancer is one of the most common malignant tumors in men, and multiparametric magnetic resonance imaging has become a key tool in its diagnosis, following the PI-RADS system to standardize the risk assessment of lesions. However, interpreting these studies requires specific expertise and is subject to inter-observer variability, against a backdrop of growing demand for prostate MRIs and limited availability of radiologists specializing in prostate imaging.

Use Cases

CU-PR-01: Mass Screening for Prostate Cancer

Stakeholders	Radiologist, prostate cancer screening program
Main Workflow	In prostate cancer screening programs, quantusPR automatically analyzes MRI scans and classifies risk, allowing the radiologist to prioritize the review of cases with the highest probability of malignancy and optimize the workflow.
Key Benefit	Prioritizes the review of studies with the highest suspicion of malignancy. Optimizes the radiology department's workflow in high-volume screening programs.
Success Metrics	Time to review high-risk cases, detection rate of significant lesions, reduction in reading time per study.

CU-PR-02: Follow-up of Patients Under Active Surveillance

Stakeholders	Urologist, patient with low-risk prostate cancer under active surveillance
Main Workflow	For each follow-up MRI within an active surveillance program, quantusPR analyzes the image and provides an updated assessment of the detected lesions, which the specialist compares with the patient's previous studies to evaluate the stability or progression of the disease.
Key Benefit	Provides objective, comparable data across successive follow-up visits. Supports the decision to continue active surveillance or proceed to treatment.
Success Metrics	Consistency of follow-up, time to detection of progression, and alignment of the clinical decision with the observed course of the disease.