TRANSMURAL BIOTECH

USE CASES

quantusMM

Medical Imaging with Artificial Intelligence

quantusMM — Breast Pathology Diagnosis

Product Description

quantusMM is a non-invasive, artificial intelligence-based test that provides support for diagnosing breast pathologies, including breast cancer, with 92% accuracy. Developed in collaboration with the Basque Health Service (Osakidetza) and the Biodonostia Institute. It analyzes mammographic images and classifies the results according to a category system, detecting malignant nodules and microcalcifications in less than two minutes. Compatible with most current mammography machines.

Epidemiological Context

Breast cancer is the most common malignant tumor in women in Spain and worldwide. Early detection via mammography is the standard screening method, but waiting lists and a shortage of specialized radiologists lead to critical diagnostic delays. quantusMM acts as an automated second reader, streamlining the process and reducing false negatives.

Use Cases

CU-MM-01: Mass Breast Cancer Screening in Public Health Programs

Stakeholders	Radiologist, primary care physician, women aged 45–70 participating in a screening program
Main Workflow	The patient undergoes a mammogram at a screening center. quantusMM automatically analyzes the image and classifies the risk in less than 2 minutes. The radiologist reviews the highest-risk cases first.
Key Benefit	Reduced diagnosis time. Automatic prioritization of suspicious cases. Support for radiologists with heavy workloads.
Success Metrics	Sensitivity and specificity, early detection rate, reduced wait time

CU-MM-02: Automated Second Reading in Hospitals

Stakeholders	Senior radiologist, hospital breast unit
Main Workflow	The hospital uses quantusMM for systematic second readings on all mammograms. Cases where the algorithm and the radiologist disagree are referred to a second human specialist.
Key Benefit	Reduction in false negatives. Increased diagnostic confidence. Compatible with European double-reading protocols.
Success Metrics	Algorithm-radiologist agreement rate; reduction in unnecessary biopsies

CU-MM-03: Prioritization of Waiting Lists in Oncology Emergencies

Stakeholders	Oncologist, breast unit manager, patient on the waiting list
Main Workflow	quantusMM automatically analyzes the risk associated with all mammograms awaiting interpretation and helps organize the radiologist's workload by level of urgency.
Key Benefit	High-risk patients receive priority care. Reduced time to treatment in cases of malignancy.
Success Metrics	Average time from mammogram to definitive diagnosis, staging rate at diagnosis

CU-MM-04: Expansion into Emerging Markets with Limited Access to Specialists

Stakeholders	Hospitals in Brazil (Unimed), Latin American and Asian countries
Main Workflow	quantusMM (ANVISA-certified in Brazil) is implemented in hospitals with a shortage of specialized radiologists. The AI performs the initial analysis, and positive cases are referred.
Key Benefit	It democratizes access to high-quality diagnostics. It leverages CE certification, which is valid for Asian and Latin American markets.
Success Metrics	Number of hospitals where the system is deployed, volume of mammograms processed, early detection rate by region

CU-MM-05: Integration with Private Insurance — Added Value for the Insured

Stakeholders	Insurance company (ASISA, Sanitas, Mapfre Salud, etc.), female policyholder over 40 years of age
Main Workflow	The insurance provider offers an annual breast screening with AI analysis included in the premium plan. The patient receives the digital risk report along with her primary care physician.
Key Benefit	Competitive differentiation for the insurance company. Reduction in claims due to early detection. Improved satisfaction and customer loyalty.
Success Metrics	Policyholder NPS, reduction in the average cost of cancer treatment in the portfolio