

CHALLENGER



SOLVER



ENDOPATH

Towards an early, objective, and cost-effective diagnostic tool to identify endometriosis at a primary care level.

InnoBuyer onboarded duos composed of a EIC Solver (SME previously or currently funded by the EIC) and a Challenger (public institution) to co-create a solution for an unmet innovation need (the Challenge) working together over a 10-month period. Following successful pilots, challengers received support from InnoBuyer and experts to design simplified ToR. Each project was backed by €65,000 in financial support—€10,000 for the challenger and €55,000 for the solver.

THE NEED

Endometriosis is often missed in primary care because symptoms overlap with common gynaecological conditions and diagnosis has relied on invasive confirmation. Therefore, there is an average of 7–11 years of delay for its diagnosis. In Catalonia, ASSIR centres are the first contact for women with chronic pelvic pain, dysmenorrhoea, or infertility. Clinicians must balance two risks: failing to identify patients who need early intervention and over-referring to specialist hospitals with **limited capacity, driving delays, inconsistent care, and greater patient burden.**

The EndoPath pilot addresses this gap by enabling earlier, objective suspicion in primary care. Beneficiaries include ASSIR professionals (midwives, GPs, gynaecologists), who need minimally invasive, actionable triage tools, and women of reproductive age facing long diagnostic journeys and unnecessary procedures. System stakeholders (CatSalut managers, hospital specialists, and innovation/procurement teams) are also affected, since accurate early identification shapes referrals, waiting lists, and costs. EndoPath reframes the pathway around cervical-fluid protein biomarkers collected with simple swabs, compatible with routine practice and future self-sampling, laying the groundwork for a scalable, non-invasive IVD aligned with procurement and adoption processes, ultimately supporting faster, fairer, and more efficient care.

THE SOLUTION

EndoPath co-created a **primary-care-anchored approach using cervical fluid protein biomarkers to inform clinical suspicion and referral.** The solution comprised: (1) discovery and shortlisting of biomarkers meeting predefined thresholds ($p < 0.05$, fold change > 1.5 , $AUC > 0.7$); (2) a plan to translate candidates into a qualitative immunoassay and diagnostic algorithm; and (3) alignment with Catalan innovation pathways (PMC/PPI) and CE-marking requirements.

THE IMPACT

Preliminary analyses identified differentially expressed proteins in endometriosis, validating cervical fluid as a diagnostic matrix and informing targeted verification in ASSIR-collected samples. Product adaptations included prioritising biomarkers measurable from routine swabs, ensuring compatibility with primary care, and exploring self-sampling for future point-of-care use. The clinical algorithm is being refined to ensure performance across typical ASSIR phenotypes (pain, dysmenorrhoea, infertility). Overall, **the pilot converted a conceptual biomarker idea into a clinically aligned development pathway that can be procured, scaled and regulated.** By enabling earlier, evidence-based suspicion in ASSIRs, the approach is expected to reduce unnecessary referrals and shorten time-to-specialist review and diagnosis versus purely clinical triage; verification studies will quantify these gains.

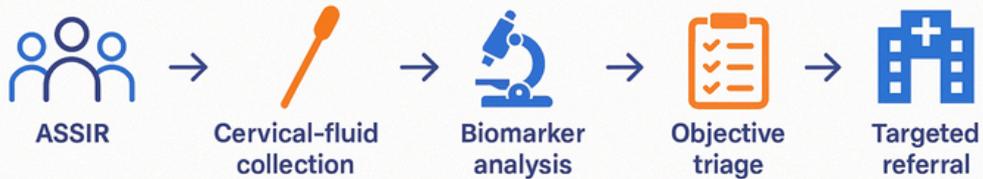
HOW ENDOPATH TRANSFORMS THE DIAGNOSTIC JOURNEY

CURRENT PATHWAY



7-10 YEARS DELAY

ENDOPATH PATHWAY



FROM 7-10 YEARS TO <1 YEAR

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THE MOST VALUABLE PART WAS CO-DESIGN WITH PRIMARY CARE. LISTENING TO ASSIR TEAMS RESHAPED OUR MILESTONES, LESS ‘LAB FIRST,’ MORE ‘CLINIC READY.’ PIVOTING TO THE HOSPITAL BIOBANK KEPT MOMENTUM WITHOUT COMPROMISING THE PLAN; WHEN PRIMARY-CARE SAMPLES CAUGHT UP, WE WERE READY WITH SHARPER TARGETS. FOR OUR ORGANISATION, THE BIGGEST IMPACT WAS CULTURAL: WE NOW BUILD DIAGNOSTICS WITH ADOPTION IN MIND FROM DAY ONE. WE WILL TAKE FORWARD THE LESSON THAT SUCCESS ISN’T JUST HITTING INITIAL FUNCTIONAL ENDPOINTS; IT’S KEEPING THE PATHWAY CLINICALLY CREDIBLE AND PROCUREMENT READY. THAT’S HOW INNOVATION SURVIVES BEYOND A PILOT AND CHANGES REAL JOURNEYS FOR PATIENTS.

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