

MSInsight Joins PREDI-LYNCH Project to Advance Non-Invasive Cancer Detection in Lynch Syndrome — Aligning With Hereditary Cancer Awareness Week

Paris, September 2025 – MSInsight, a French precision oncology start-up, is proud to announce its participation in PREDI-LYNCH[®], a six-year Horizon Europe consortium led by Oslo University Hospital. This ambitious project seeks to develop validated, non-invasive liquid biopsy tests to improve early cancer detection in people with Lynch syndrome (LS), one of the most common hereditary cancer syndromes.

The project launched in May 2025, and MSInsight is now pleased to share its role as a partner during Hereditary Cancer Awareness Week, underscoring the importance of raising awareness and building solutions for families at genetic risk of cancer.

Lynch Syndrome: A Major Unmet Need

Lynch syndrome is caused by inherited mutations in DNA mismatch repair (MMR) genes and greatly increases the lifetime risk of cancer (Dominguez-Valentin et al., 2019). People with this condition face a 50–80% chance of developing colorectal cancer, along with higher risks of endometrial, ovarian, gastric, and urinary tract cancers. The exact risk depends on which gene is affected: MLH1 and MSH2 mutations carry the highest risk, while MSH6 and PMS2 mutations are associated with lower—though still significant—risk (Dominguez-Valentin et al., 2019).

LS is responsible for an estimated 2-4% of all colorectal cancers in general, increasing to about 5% in studies that perform universal germline testing (Abu-Ghazaleh et al., 2022; Dinh et al., 2011). Improving early detection for LS carriers is thus both a preventive strategy and a path to improving survival across major cancer types.

Epidemiological modelling suggests that about 1 in 440 individuals of European ancestry carry LS-associated mutations. When applied to population estimates, this translates to approximately 2 million carriers in Europe. Yet only ~5% of these individuals are under active surveillance (PREDI-LYNCH estimates). This diagnostic gap underscores a profound public health challenge: despite the high lifetime risks, most carriers remain undiagnosed, untreated, or without appropriate monitoring.

About the PREDI-LYNCH Project

Approved by the European Commission in May 2025 with a total budget of €13.6 million, PREDI-LYNCH is a six-year (2025–2031) Horizon Europe initiative coordinated by Oslo University Hospital (OUS) and Pr. Mev Dominguez. The project brings together 28 leading institutions across 16 European countries to:

- Develop non-invasive liquid biopsy tests for the detection of colorectal, endometrial, and urothelial cancers in LS carriers.
- Validate biomarkers through multi-center trials, ensuring clinical robustness across diverse European healthcare systems.
- Integrate AI-based analytics to improve biomarker discovery, prediction, and longitudinal monitoring.

- Assess socio-economic and ethical aspects, ensuring new technologies are accessible, cost-effective, and patient-centered.

According to OUS, the project is motivated by the fact that current surveillance methods for LS patients (such as regular colonoscopies) are invasive, burdensome, and inconsistently followed. By shifting toward non-invasive tools like liquid biopsies, PREDI-LYNCH seeks to improve compliance, reduce delays in diagnosis, and ultimately save lives (OUS Research, 2025).

MSInsight's Role: Leveraging MSIcare in PREDI-LYNCH

MSInsight contributes its expertise in microsatellite instability (MSI) diagnostics—a hallmark of Lynch syndrome—associated cancers—working closely with French partners at Inserm, Sorbonne University and La Pitié-Salpêtrière Hospital. The company's flagship solution, MSIcare, applies next-generation sequencing (NGS) and artificial intelligence algorithms to improve MSI detection accuracy (Ratovomanana et al., 2021).

While MSI testing is already a cornerstone of treatment selection in oncology—particularly for determining eligibility for immunotherapy—current diagnostic tools remain limited. Published studies have shown that traditional approaches can misclassify MSI status, with potentially serious consequences for patients (André et al., 2024).

By integrating MSIcare into the PREDI-LYNCH project, MSInsight will support the development of liquid-biopsy-based MSI detection, allowing non-invasive cancer prediction and surveillance in LS carriers. This work will build on the platform's proven accuracy in tumor tissue samples and extend it into liquid-based diagnostics.

“Joining PREDI-LYNCH allows MSInsight to contribute directly to one of Europe’s most ambitious hereditary cancer screening projects,” said Arnaud Cutivet, CEO of MSInsight, “We are dedicated to making diagnostics more accurate and accessible, particularly for patients who face lifelong cancer risks due to their genetics.”

A Timely Commitment: Hereditary Cancer Awareness Week

The timing of MSInsight's announcement reflects a broader commitment to public awareness. Hereditary Cancer Awareness Week draws attention to the millions of families worldwide living with inherited cancer risks. For LS carriers, awareness is often the first step to life-saving interventions, including surveillance, early detection, and preventive therapies.

In addition to our work on Lynch syndrome, we are committed to advancing the diagnosis of children affected by CMMRD (Constitutional Mismatch Repair Deficiency), an ultra-rare hereditary cancer syndrome with an estimated incidence of 1 in 1,000,000 births. CMMRD dramatically increases the risk of multiple, aggressive tumors at a very young age. This initiative is conducted in collaboration with Inserm, Sorbonne University, and Paris Hospitals. Improving early and accurate detection of CMMRD is

“Hereditary Cancer Awareness Week is a reminder that innovation in science must translate into better patient outcomes,” added Sydney Normand, Chief of Staff at MSInsight. “Through projects like PREDI-LYNCH, we aim to ensure that carriers of Lynch or CMMRD syndromes benefit from early, less invasive diagnostic solutions.”

essential to enable appropriate surveillance, timely care, and ultimately better outcomes for these children.

About MSInsight

Founded in Paris in 2022, MSInsight is a precision oncology start-up focused on improving cancer care through advanced diagnostics. The company builds on two decades of academic research from the “Microsatellite Instability and Cancer” team at Sorbonne University and Inserm, led by Prof. Alex Duval, a global expert in MSI. MSInsight’s flagship platform, MSicare, integrates bioinformatics, artificial intelligence, and NGS to deliver accurate MSI/dMMR detection. Already clinically validated in tumor tissue, MSicare is being expanded to blood-based applications, enabling non-invasive diagnostics that can transform cancer care. The company has been recognized as a winner of the 25th i-Lab Innovation Competition in France and collaborates with leading laboratories across Europe and the United States to validate and scale its technology. By combining cutting-edge science with a patient-focused mission, MSInsight is helping to redefine diagnostics in both sporadic and hereditary cancer contexts.

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References

Abu-Ghazaleh et al. (2022), *Genes*, 13(2), 315.

Dinh, T. A et al. (2011), *Cancer Prevention Research*, 4(1), 9–22.

Dominguez-Valentin, M., et al. (2019), *Journal of Clinical Oncology*, 38(2), 136–147.

OUS Research. (2025, May 15). *PREDI-LYNCH: Validated non-invasive liquid biopsy tests for cancer PREDiction in LYNCH Syndrome*. Oslo University Hospital. <https://www.ous-research.no/home/ous/news/26143>

Ratovomanana, T., et al. (2021), *Gastroenterology*, 160(4), 1404–1417.

André, T. et al. (2024), *New England Journal of Medicine*, 391 (21), 2014-2026