

AI-Driven Patient Detection Surfaces Approximately 1,200 Likely-Undiagnosed GEP-NET Patients in UK Primary Care

~1,200 likely-undiagnosed GEP-NET patients detected in 24M UK primary care records, flagged patients averaging 5-7 years younger than those already diagnosed.

ÉPALINGES, SWITZERLAND, June 29, 2026 /EINPresswire.com/ -- In a collaboration with a leading global pharmaceutical company, [Volv Global applied](#) machine learning to 24 million UK primary care records, surfacing approximately 1,200 likely-undiagnosed GEP-NET patients – and finding they are 5-7 years younger than those currently diagnosed.

In brief

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Christopher Rudolf, CEO and Founder, Volv Global

validation.



- Approximately 1,200 UK patients have records consistent with undiagnosed GEP-NETs – roughly one additional patient for every three currently diagnosed.
- Patients flagged by the model are 5-7 years younger on average than those with confirmed diagnoses, suggesting earlier-stage detection may be achievable.
- The model achieved a ROC-AUC of 0.756 evaluated when discriminating GEP-NETs from clinically similar mimic conditions – a harder and more clinically meaningful benchmark than comparison to general population.
- The methodology is reproducible and transferable across geographies and data environments, with outputs designed to support clinician review and prospective

GEP-NETs are rare malignancies whose non-specific symptoms – commonly attributed to irritable bowel syndrome, inflammatory bowel disease, or diabetes – mean patients typically wait nearly five years before receiving a confirmed diagnosis. Prognosis is closely tied to grade and stage at diagnosis; five-year survival rates for high-grade disease (G3) may be as low as 25%.

A leading global pharmaceutical company approached Volv Global to determine whether an detectable undiagnosed GEP-NET population existed within UK routine primary care records. The challenge was compounded by coding imprecision: a significant proportion of NET patients carry non-specific diagnostic codes, meaning a straightforward code-based query would systematically under-count the true population.

Volv Global applied its proprietary machine learning methodology – operating through the inTrigue framework – to the Optimum Patient Care Research Database (OPCRD), covering approximately 24 million de-identified records from around 1,100 UK GP practices. A positive cohort of 1,857 GEP-NET patients was constructed using a procedure that recovers patients not captured by direct code queries. The negative cohort was drawn from clinically relevant comparator conditions, ensuring model performance was evaluated against a meaningful real-world discrimination task.

Comprehensive phenotypic characterisation of the diagnosed cohort confirmed the multi-system burden documented in the clinical literature. Gastrointestinal, respiratory, and neurological symptoms were all significantly more prevalent in the GEP-NET cohort than in a matched random population, and treatment patterns confirmed the underrepresentation of specialist therapies in primary care records.

The patient-finding model achieved a test set ROC-AUC of 0.756 and PR-AUC of 0.427. Applied to a subset of 6.8 million patients and extrapolated across the full database, it [estimated](#)



Press Release

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[approximately 1,200 likely-undiagnosed patients](#) at a precision of 0.85. The most predictive features were clinically coherent with the known pre-diagnostic presentation of GEP-NETs, providing a transparent basis for clinician review.

Demographic analysis found that [patients flagged by the model were 5–7 years younger on average](#) than those already diagnosed. Volv Global interprets this carefully: the age difference is a demographic observation and the hypothesis that these patients may be at an earlier disease stage would require prospective validation to confirm. No claim is made regarding clinical outcomes or treatment benefit on the basis of this finding. However, earlier detection would mean a potential significant uplift in 5-year survival rates as seen with similar cases of early detection with other cancers.

"GEP-NETs sit at the intersection of clinical complexity and data fragmentation. The non-specific symptom profile, combined with coding imprecision in primary care records, makes them a genuinely hard problem – and that is precisely where machine learning applied to population-scale real-world data can change what is possible. This work demonstrates that a meaningful undiagnosed population exists and can be characterised. The next step is prospective deployment." – Christopher Rudolf, CEO and Founder, Volv Global

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