

Case Study #1: Elecsys GAAD

WHAT THIS TECHNOLOGY DOES

Hepatocellular carcinoma is the most common cancer affecting the liver, and the third-most common cause of cancer death. In early, curable stages, HCC often has non-alerting symptoms. Therefore, it is recommended that everyone with cirrhosis is tested twice yearly. This testing involves a combination of ultrasound scan and blood testing every six months.

Elecsys GAAD is a fully regulated, accurate test that combines two blood tests with gender and age. If raised, it can indicate the presence of HCC and therefore can be implemented alongside routine surveillance tests to assist in finding HCC earlier.

NHS COST-SAVINGS AND PRODUCTIVITY

Compared to current methods, for a cohort of 100,000 patients over a lifetime of twice-yearly surveillance, the standard of care testing with ultrasound and blood tests would result in 132,000 false positives. These would then require follow-up testing with MRI or CT.

With Elecsys GAAD, this would be reduced to 79,000, with associated cost savings of [£7,301,492](#) and a corresponding reduction in waiting lists for imaging diagnostics. Assuming a 10-year life expectancy following HCC detection, the number of required MRIs and CTs would therefore fall by 5,300 each year.

HOW IT SUPPORTS NHS TRANSFORMATION

Treatment to Prevention

The primary advantage of this technology is its ability to identify high-risk individuals with chronic liver disease who are at an increased risk of developing liver cancer, allowing for targeted prevention and intervention at an earlier stage. In doing so, these devices shift the focus from reactive treatment to proactive prevention.

Analogue to Digital

Elecsys GAAD relies on digital platforms for processing and interpreting biomarker data. These digital tools improve diagnostic accuracy and support decision-making, transitioning the NHS from analogue to digital.

FURTHER EVIDENCE

[EE201 Cost-Effectiveness Analysis of GAAD Algorithm for Hepatocellular Carcinoma Surveillance of Cirrhotic Patients Using Italian Real-World Data](#), Porta et al. (2025), Value in Health

[Surveillance Imaging and GAAD/GALAD Scores for Detection of Hepatocellular Carcinoma in Patients with Chronic Hepatitis](#), Huang et al. (2024), PubMed