

TITLE: Impact of adult population screening for liver cirrhosis using routine blood tests on transient elastography referrals in primary care: A prospective intervention study.

Flores JE¹, Trambas C¹, Natasha Jovanovic¹, Bree James¹, Thompson AJ¹, [Howell J](#)¹.

¹ St Vincent's Hospital, Melbourne

Background and Aims: Late diagnosis of cirrhosis is common due to a lack of population screening programs. This study evaluated the effect of reflex reporting of Aspartate to Platelet Index (APRI) for routine blood test events on vibration controlled transient elastography (VCTE) referral rate.

Methods: This prospective intervention study was conducted 19 May 2024 to 18 May 2025 at one tertiary hospital and statewide pathology service. Reflex calculation and reporting of APRI on routine blood test events in adults > 18 years who had elevated ALT (laboratory upper limit 30IU/mL females, 35IU/mL males) commenced on November 19, 2024. Reports recommended VCTE be ordered for APRI > 1.0 with a link to VCTE referral. Monthly rate of VCTE referrals and proportion from primary care in the 6 months post intervention were compared to 6 months pre-intervention via regression modelling and Chi square test respectively.

Results: 8,339 individuals had elevated ALT and APRI reported; 686 (8%) had APRI>1. Median age of those with APRI>1 was 58 years (IQR 43, 71 years) and most were male (62% vs 38%, p<0.001). Mean rate of individuals with APRI>1 requiring VCTE referral was 114 per month.

There were 1,192 VCTE referrals during the study; 73 (6.1%) were from non-hepatology specialists including GPs. Mean weekly number of VCTE referrals increased from 0.09 per week pre-intervention to 0.53 per week post-intervention (post-estimation linear trend p=0.014). The proportion of referrals from non-hepatology specialists increased from 3.0% (20/ 664) pre-intervention to 10.0% (53/ 528) post intervention (χ^2 p<0.001). 17% (9/ 53) of people referred by non-hepatology specialists post intervention had F3 or 4 stage fibrosis on VCTE, compared to 5% (1/20) pre-intervention.

Conclusion: Reflex reporting of APRI is a low-cost, potentially scalable intervention that increased the proportion of VCTE referrals from non-liver specialists and increased diagnosis of cirrhosis.