



**CAPITAL  
DIGESTIVE  
CARE<sup>SM</sup>**

*First in Digestive Health*

# **CAPITAL DIGESTIVE CARE INCREASES LIVER ELASTOGRAPHY VOLUME BY 171% WITH NEXT GENERATION AI GUIDED DEVICE**

## **BACKGROUND**

### **FATTY LIVER DISEASE**

Fatty liver disease is the fastest-growing segment of chronic liver disease, with an estimated one in three adults suffering from Metabolic Dysfunction-Associated Steatotic Liver Disease aka. MASLD (previously NAFLD)<sup>1</sup>. In parallel, NALFD related mortality has been steadily increasing since the early 90s<sup>1</sup>.

### **CAPITAL DIGESTIVE CARE**

Case study site: Norfolk, VA  
Providers on site: 9 Gastroenterologists

Capital Digestive Care is the largest gastroenterology group in the Mid-Atlantic states.

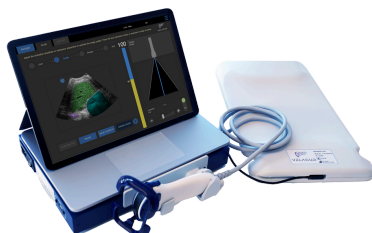
## **THE CHALLENGE**

With early detection and intervention, fatty liver disease can be halted or even reversed. The recommended clinical guidance is to screen patients with FIB-4 followed by ultrasound-based elastography. As wait times for liver elastography procedures at Dr. Smith's Capital Digestive Care (CDC) location began to extend into months, they needed to increase capacity to effectively screen and monitor patients for MASLD at the point of care. Their challenge was identifying and implementing a non-invasive point-of-care liver assessment device that would provide accurate, efficient measurements and maintain sustainable economics without disrupting the clinic's workflow.

## **THE SOLUTION**

AI guided ultrasound elastography device that measures liver stiffness and attenuation, the two key indicators of fatty liver disease, at the point of care. Velacur by Sonic Incytes offers providers:

- Real-time results
- Low up-front costs
- AI guidance



## **PROJECT LEAD**



Dr. John H. Smith is a board-certified, fellowship-trained gastroenterologist at Capital Digestive Care in Norfolk, Virginia. Dr. Smith has served as an assistant professor of internal medicine at Uniformed Services University of the Health Sciences. He was head of the gastroenterology and endoscopy department as well as assistant program director of the internal medicine residency program at the Naval Medical Center Portsmouth.



**90%**

procedures successfully reimbursed through CPT code 76981



**9.7** min

average active scan time after initial learning curve



**171%**

increase in volume of liver elastography procedures

In the spring of 2023, Dr. Smith introduced a Velacur device into his practice. Over the following year Dr. Smith’s CDC location performed over 2,500 liver elastography procedures with Velacur. During this period CDC increased their elastography procedure volume by 171%, reduced the wait time for liver elastography to under 30 days and successfully collected reimbursement on 90% of claims for Velacur using CPT code 76981. The key drivers of these outcomes were Velacur’s: (1) seamless workflow integration , (2) technological advantages and (3) economic viability.

**SHORT SCANNER LEARNING CURVE**

Staffing challenges like high turnover rates make it essential that new technologies are easy to learn and enable operators to quickly develop proficiency. Scanners using Velacur developed proficiency quickly, reducing their total procedure time, on average, by 35% after their initial 50 scans (Fig 1). Resulting in an average scan time of under 10 minutes after an operator’s first 50 scans.

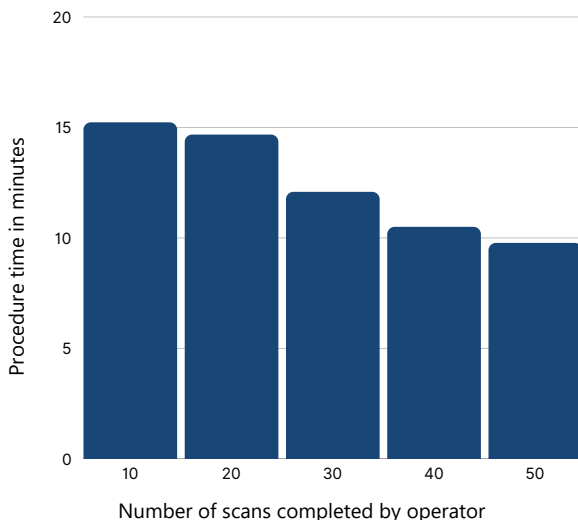


Fig 1. Reduction in scan time during learning period

**GROWING SCAN VOLUME**

Demand for liver elastography at CDC has continued to grow, with a marked increase in the number of scans quarter over quarter. To keep up with demand CDC incrementally brought on three additional devices, increasing their total scanning capacity by 171% and completing 698 scans in Q2 of 2024.

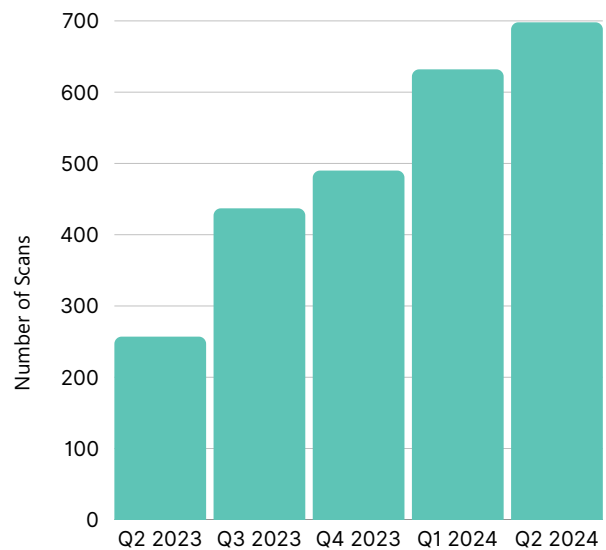


Fig 2. Scans Performed By Quarter

## SUCCESSFUL REIMBURSEMENT

In 2018, CPT code 76981 was introduced for ultrasound elastography with imaging. As a new code, there have been concerns about payers willingness to accept it. As shown in Fig 3, during the first 15 months of use, CDC was reimbursed for 90% of all Velacur procedures billed under CPT code 76981. The volume of collected claims increased in parallel to the volume of scans completed.

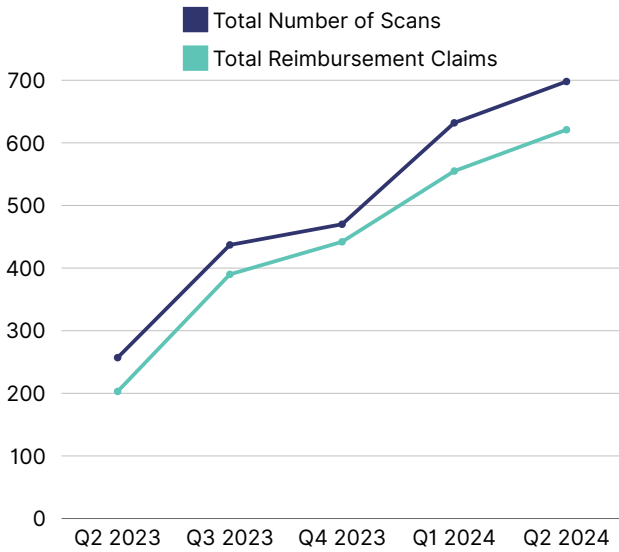


Fig 3. Reimbursed Claims by Quarter

As you can see from Fig 4, CDC has a diverse payer breakdown with a mix of commercial and non-commercial payers. This indicates that CDC had success in collecting claims for Velacur from a variety of payers.

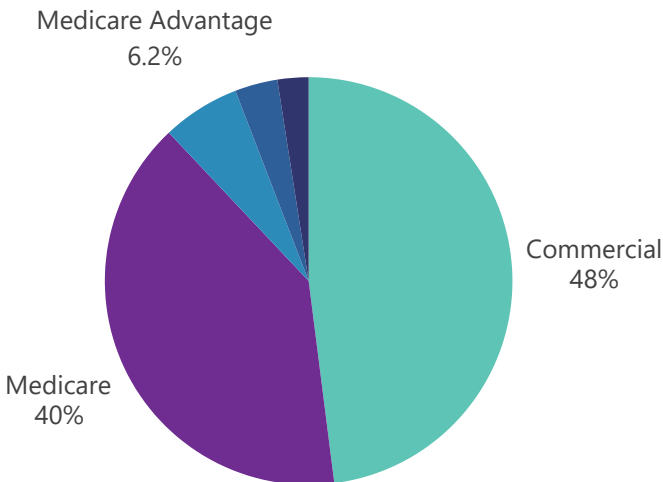


Fig 4. CDC Payer Breakdown by Type

## WIDE RANGE OF BODY TYPES SCANNED

CDC had success performing scans on patients with a wide range of BMIs. The data set reported in the case study represents patients with BMIs ranging from 16.3 to 50.1, with an average BMI of 31.1 kg/m<sup>2</sup>.

Table 1. BMI of Patients Scanned

AVERAGE	31.1 kg/m <sup>2</sup>
MIN	16.3 kg/m <sup>2</sup>
MAX	50.1 kg/m <sup>2</sup>

## RESULTS KEYS TO SUCCESS

### LIVER VISUALIZATION AND AI GUIDANCE

In order to get accurate stiffness and attenuation measurements scanners must position the probe in the intercostal space while minimizing interference with the liver from the surrounding organs, ribs and subcutaneous fat. Next, the scanner must ensure satisfactory quality of shear waves are present in the image. These steps can be challenging, especially for scanners without sonography training or experience.

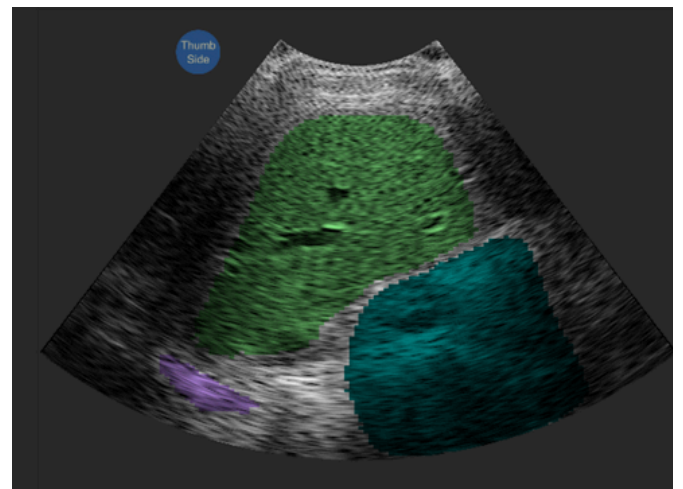


Fig 5. AI Organ Guide

For ease of use, Velacur has enhanced our B-mode imaging with AI. Velacur's AI Organ Guide highlights the liver in green and color codes the surrounding anatomy, making liver identification simple.

## RESULTS KEYS TO SUCCESS CONTINUED

The Wave Quality Overlay highlights the shear waves by coloring the B-mode image in blue. This helps scanners confirm the presence of shear waves throughout the scanning procedure.

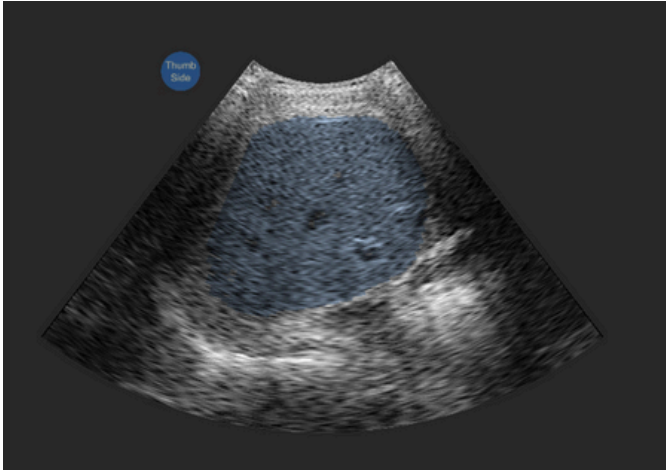


Fig 6. Wave Quality Overlay

### SEAMLESS WORKFLOW INTEGRATION

Without the need for technical operators, CDC leveraged their existing PAs and MAs to perform Velacur scans. Comprehensive hands-on training, remote support and AI guidance enabled CDC's staff to overcome the traditional

### CONCLUSION

The adoption of Velacur has increased the capacity for Dr. Smith, and CDC sites across Virginia, to screen and monitor patients with fatty liver disease. The successful integration, positive staff feedback, and economic benefits of Velacur have helped them provide high quality, timely patient care without sacrificing their bottom line.

learning curve associated with introducing a new device, in an average of 30 scans, with scan times tapering off to under 10 mins after 50 scans. Velacur's portability enabled CDC to share the device between sites as they grew their patient volume. This improved access to liver elastography for patients, and helped CDC maintain positive economics and decrease wait times.

### TECHNOLOGICAL ADVANTAGES

1. Velacur's depth of measurement is twice as deep as that with transient elastography. Velacur's three-dimensional scanning allows for 30x greater tissue volume to be sampled<sup>2</sup>.
2. Velacur was shown to have superior attenuation measurement when compared to FibroScan in a head-to-head study<sup>3</sup>.

### ECONOMIC VIABILITY

Velacur's low upfront cost and successful reimbursement enabled CDC to increase capacity while generating revenue for the practice.

### REFERENCES

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3. Loomba, Rohit1; Ramji, Alnoor2; Hassanein, Tarek3; Yoshida, Eric M.2; Pang, Emily4; Schneider, Caitlin5; Curry, Michael P.6; Afdhal, Nezam H.6. Velacur ACE outperforms FibroScan CAP for diagnosis of MASLD. *Hepatology Communications* 8(4):e0402, April 2024. | DOI: 10.1097/HC9.0000000000000402

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