THE HEPQUANT SHUNT TEST PREDICTS THE LIKELIHOOD OF FINDING ESOPHAGEAL VARICES AND PARTICULARLY LARGE VARICES AT ENDOSCOPY

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Background

- Large esophageal varices are an ominous complication of advanced chronic liver disease due to risk for variceal hemorrhage and clinical decompensation.
- When detected, large esophageal varices require treatment.
- Small esophageal varices require surveillance.
- The linkage of HepQuant SHUNT testing to varices was suggested in the US multicenter HALT-C study and recently evaluated in the US multicenter SHUNT-V study.

Aim

The aim was to define the association of parameters of the HepQuant SHUNT test to endoscopic findings of large esophageal varices.

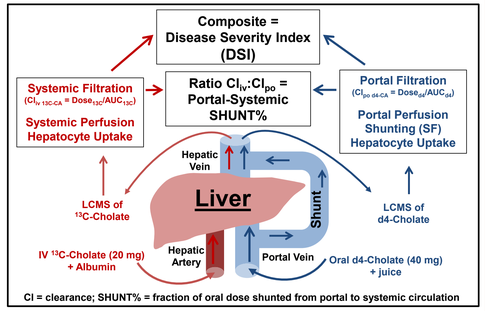
Specifically, we examined the relationships of HepQuant's Diseases Severity Index (DSI), and SHUNT% to

- Large esophageal varices
- Any esophageal varices

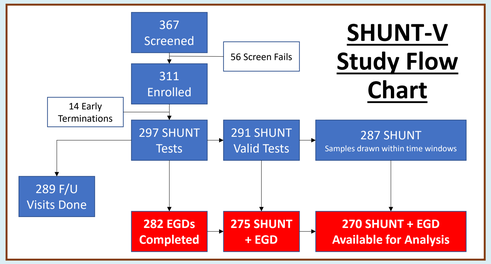
Subject Inclusion/Exclusion

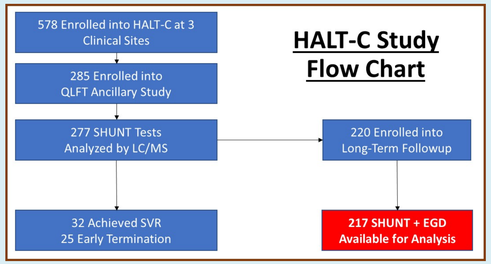
- Clinical Sites: 3 in Halt-C (N=217); 27 in SHUNT-V (N=270)
- Advanced Liver Fibrosis (both studies)
- Compensated Cirrhosis (both studies)
- Clinically stable Child-Pugh B cirrhosis (SHUNT-V only)
- Exclusion: Prior variceal hemorrhage (both studies)
- Exclusion: Prior diagnosis of large varices (SHUNT-V)

HepQuant SHUNT Test Method



Results





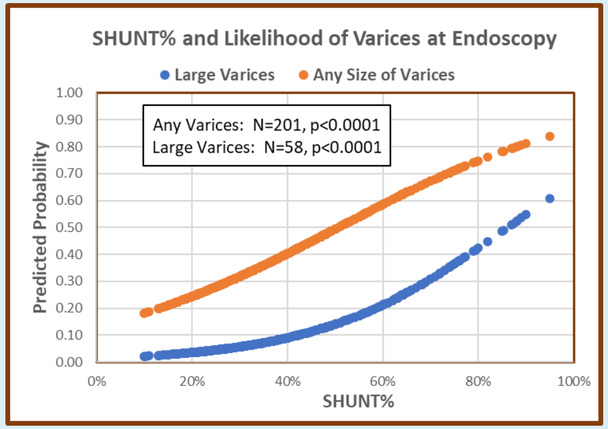
Patient Characteristics at Baseline

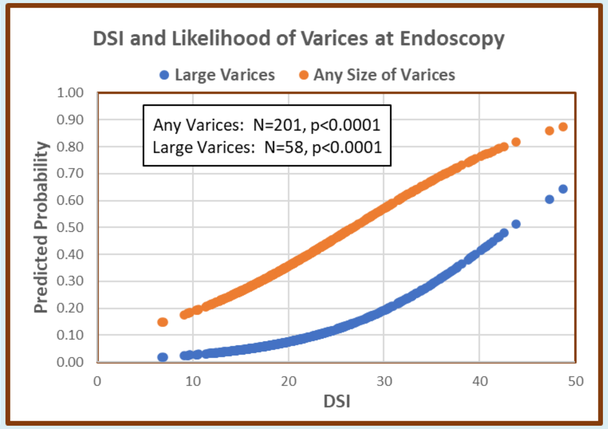
	SHUNT-V	HALT-C	p value
N, Subjects	270	217	
Age (yrs, mean)	61.5	49.9	<0.0001
BMI (mean)	33.4	29.6	<0.0001
White Race (%)	93%	74%	<0.0001
Male Gender (%)	50%	75%	<0.0001
Obese (%)	64%	42%	<0.0001
Chronic HCV (%)	23%	100%	<0.0001
NASH (%)	50%	0%	<0.0001
Bili., Total (mg/dL)	0.9 ± 0.8	0.8 ± 0.4	NS
Albumin (g/dL)	4.1 ± 0.5	3.8 ± 0.4	<0.0001
INR	1.1 ± 0.3	1.0 ± 0.1	<0.0001
Creatinine (mg/dL)	0.9 ± 0.3	0.8 ± 0.2	<0.0001
Platelet Count (nL^{-1})	148 ± 69	163 ± 67	0.016
MELD score	8.6 ± 3.0	6.9 ± 1.3	<0.0001
CTP score	5.4 ± 0.9	5.3 ± 0.5	NS

HepQuant SHUNT Test Parameters at Baseline

Systemic HFR(mL/min/kg)	3.3 ± 1.1	4.2 ± 1.3	<0.0001
Portal HFR(mL/min/kg)	10.1 ± 6.7	13.0 ± 6.1	<0.0001
DSI Score	24.5 ± 8.1	19.5 ± 5.7	<0.0001
SHUNT%	41.7 ± 18.7	38.1 ± 15.6	0.024
STAT (μM per 75 kg weight)	1.71 ± 1.62	1.14 ± 0.75	<0.0001

Relationship of SHUNT% (Left Panel) and DSI (Right Panel) to Likelihood of Large Varices or Any Size Varices was Highly Significant (both studies combined, N=487)





Conclusions and Key Takeaways

- The HepQuant DSI and SHUNT% predict the likelihood of finding esophageal varices, particularly large varices, at endoscopy across a wide spectrum of patient characteristics, disease etiologies, and severity of CLD.
- The HepQuant SHUNT may be useful in the decision to avoid or proceed with endoscopic screening or surveillance.

References

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Disclosures

The SHUNT-V Study was sponsored by HepQuant LLC; Mitchell L Shiffman, MD, member of HepQuant SAB; K. Rajender Reddy, MD, past member of HepQuant SAB; Steve M. Helmke, PhD, HepQuant employee (CSO) and equity member, intellectual property in HepQuant technology; Gregory T. Everson, MD, HepQuant employee (CEO) and equity member, intellectual property in HepQuant technology.

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