

Early TIPS for Ascites Study



PERFORMANCE through collaboration

GORE
VIATORR®
TIPS ENDOPROSTHESIS

Portal Hypertension and Ascites: Clinical Trends

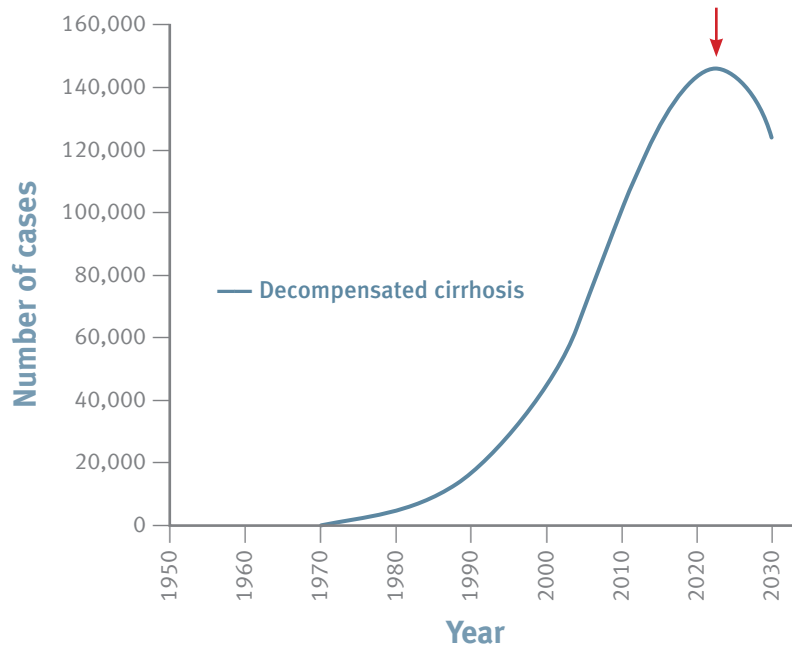
Ascites is the most common complication of cirrhosis, developing in 50% of compensated cirrhosis patients within 10 years¹

▶ According to MarketScan[®] Research Data, portal hypertension and ascites diagnoses have been increasing at a high rate over the past several years²

MARKETSCAN [®] RESEARCH DATA PROCEDURE / DIAGNOSIS	CALENDAR YEAR				CAGR
	2005	2006	2007	2008	
Paracentesis					
IP	200376	216301	245890	257891	8.78%
OP	N/A	149772	154408	175164	8.15%
Total	N/A	366073	400298	433055	8.76%
Cirrhosis					
Alcoholic	180896	191033	204976	191349	1.89%
w/o Alcohol	181768	196314	215861	201665	3.52%
Total	362664	387347	420837	393014	2.72%
Portal Hypertension	69240	77464	90534	123098	21.14%
Ascites	247773	273372	306430	358143	13.07%
TIPS	4836	4992	5735	5254	2.80%



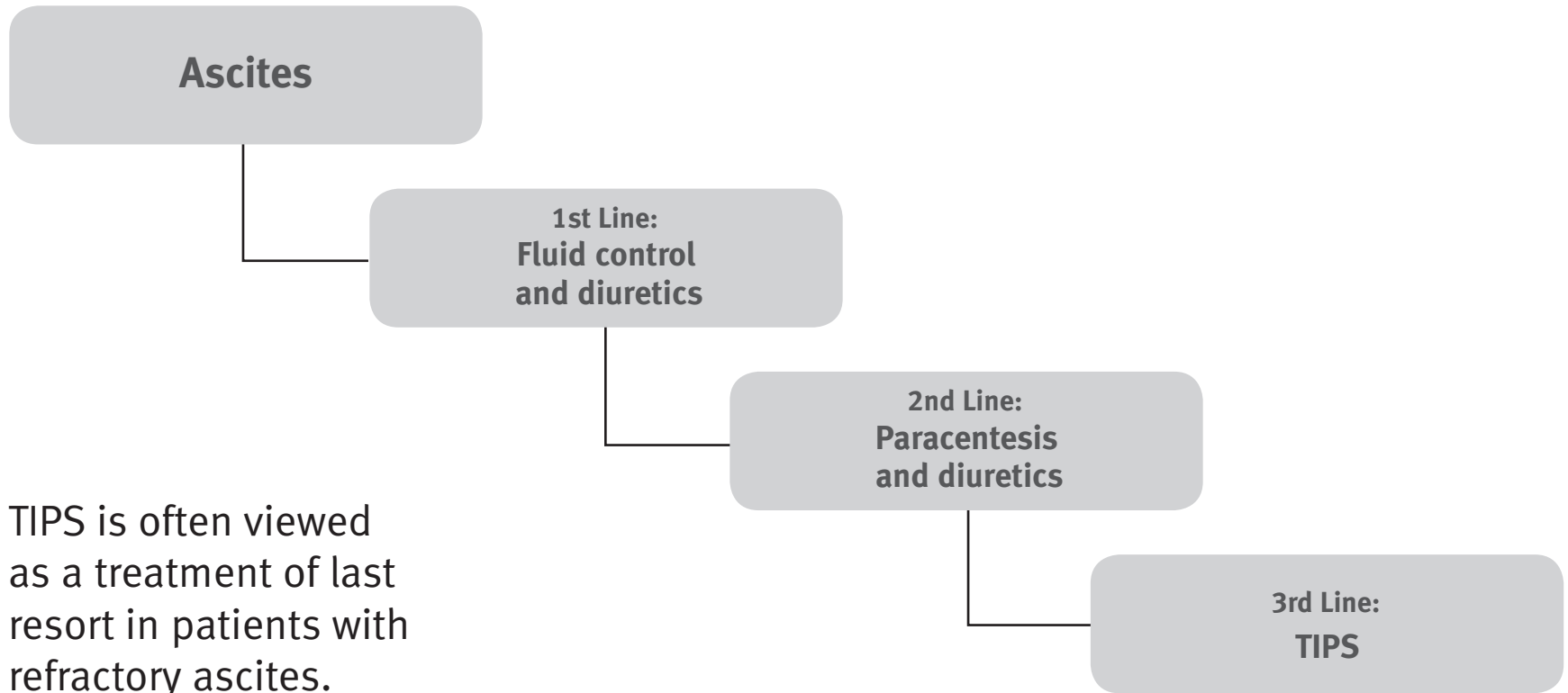
Decompensated Cirrhosis: Clinical Trends



According to one recent publication, the number of HCV patients with decompensated cirrhosis in the US is projected to peak in approximately 10 years.³

Based on data and information from Davis GL, Alter MJ, El-Serag H, Poynard T, Jennings LW. Aging of hepatitis C virus (HCV)-infected persons in the United States: a multiple cohort model of HCV prevalence and disease progression. *Gastroenterology* 2010;138(2):513-521, 521.e1-521.e6.

The Ascites Treatment Pathway

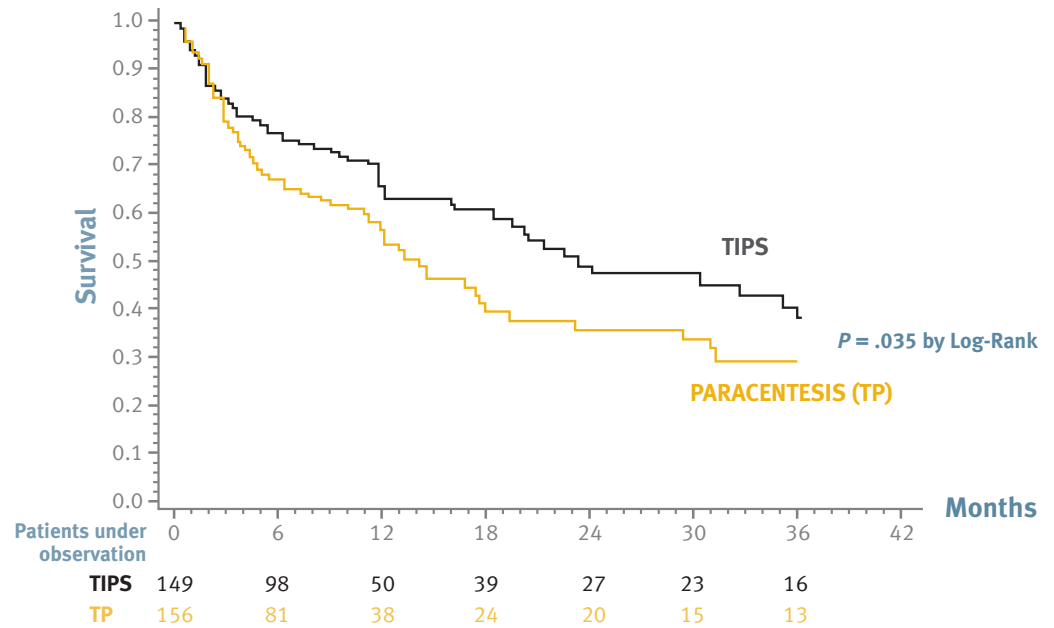


TIPS is often viewed as a treatment of last resort in patients with refractory ascites.

TIPS (Bare Metal) vs. Large Volume Paracentesis

Several studies have been conducted comparing TIPS with bare metal stents to large volume paracentesis in patients with refractory ascites: results have been mixed.¹

However, a recent meta-analysis of these studies found that TIPS patients had significantly longer transplant-free survival than paracentesis patients.⁴



Based on data and information from Salerno F, Cammà C, Enea M, Rössle M, Wong F. Transjugular intrahepatic portosystemic shunt for refractory ascites: a meta-analysis of individual patient data. *Gastroenterology* 2007;133(3):825-834.

Early TIPS for Ascites Study: Rationale

- ▶ The GORE® VIATORR® TIPS Device is now the dominant TIPS market leader in the US and Europe.
- ▶ **Improved Outcomes:**
Independent research has demonstrated improved outcomes with the GORE® VIATORR® TIPS Endoprosthesis (an ePTFE covered stent graft) when compared to bare metal stents.^{5,6}



Survival: GORE® VIATORR® TIPS Device vs. Bare Stents⁵

Survival in patients undergoing transjugular intrahepatic portosystemic shunt: ePTFE-covered stent grafts versus bare stents

	GORE® VIATORR® TIPS Device (n=89)	Bare Stents* (n=89)
Three Month Survival	93%	76%
One Year Survival	88%	64%
Two Year Survival	76%	53%

* 1:1 matched (Age, Child-Pugh, TIPS Indication)



Patency and Clinical Relapse: GORE® VIATORR® TIPS Device vs. Bare Stents⁶

Patency of stents covered with polytetrafluoroethylene in patients treated by transjugular intrahepatic portosystemic shunts: long-term results of a randomized multi-center study

	GORE® VIATORR® TIPS Device (N=39)	Bare Stents (N=41)	P Value
Two Year Primary Patency	76%	36%	0.001
Revisions	9	31	< 0.05
Clinical Relapse	10%	12%	< 0.05
Encephalopathy	33%	49%	< 0.05
Two Year Survival	58%	45%	NS

Early TIPS for Ascites Study

Study Goal:

Determine whether patients with difficult to treat ascites benefit most from TIPS or continued LVP based on primary endpoint of transplant-free survival, as well as numerous secondary endpoints

Study Firsts:

The Early TIPS for Ascites Study will be the first large scale prospective, randomized TIPS vs. LVP study in which:

- The GORE® VIATORR® TIPS Device is used in the TIPS arm
- MELD score is used for inclusion / exclusion
- Patients will be enrolled prior to reaching the refractory ascites stage* (i.e., early intervention)

*As defined by International Ascites Club Criteria



What Does “Early TIPS” Mean?

Early TIPS = Use of TIPS earlier in the treatment pathway:

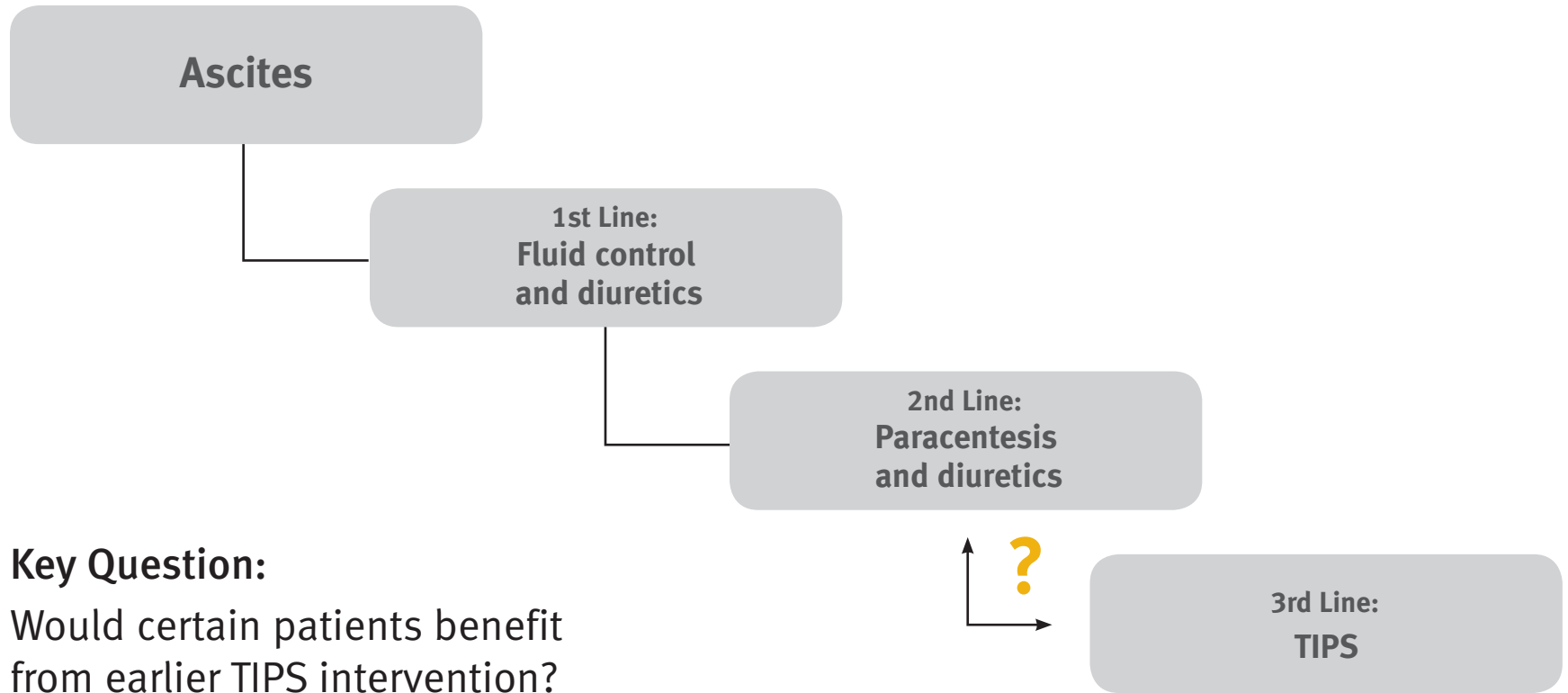
- Prior to reaching refractory ascites stage*
- MELD < 18 required for enrollment

Study investigators are hypothesizing that earlier TIPS intervention will improve patient outcomes compared to previous TIPS vs. LVP studies

*As defined by International Ascites Club Criteria

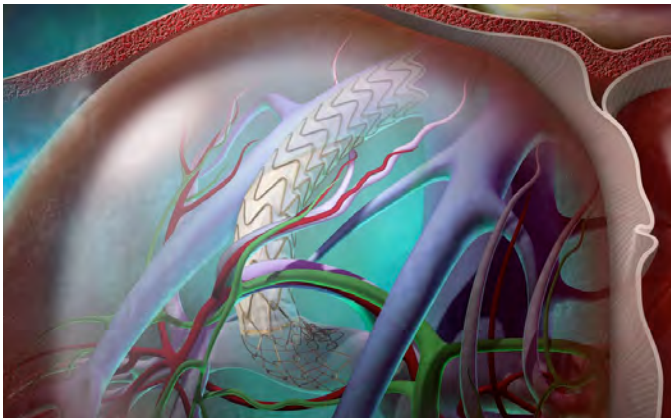


Early TIPS and The Ascites Treatment Pathway



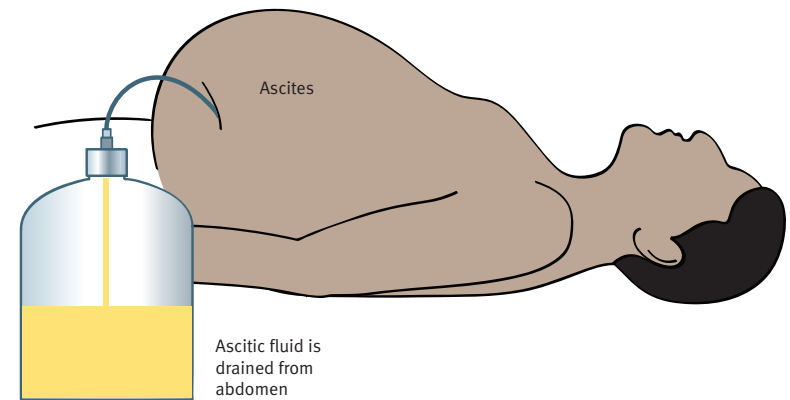
Early TIPS for Ascites Study: Design

GORE® VIATORR® TIPS Device



Large Volume Paracentesis

VS.



- Primary endpoint = transplant-free survival
- 150 patients randomized 1:1
- 20 centers (US and Canada)
- Two year follow-up

Early TIPS for Ascites Study

Data will be collected on many other important endpoints.

Secondary endpoints:

- Overall survival
- Time to transplant
- Frequency of paracenteses
- Hepatic encephalopathy
- Hepatorenal syndrome
- Change in MELD score
- Quality of Life

Early TIPS for Ascites Study

Follow-up evaluations performed at:

- 30 Days
- 3, 6, 12, 18, and 24 months

Patients in control arm (LVP) may cross over to TIPS after six months of enrollment



Early TIPS for Ascites Study: Principal Investigators (PIs)

National Co-PIs

- Thomas Boyer, MD
University of Arizona
- Ziv Haskal, MD
University of Maryland Medical Center

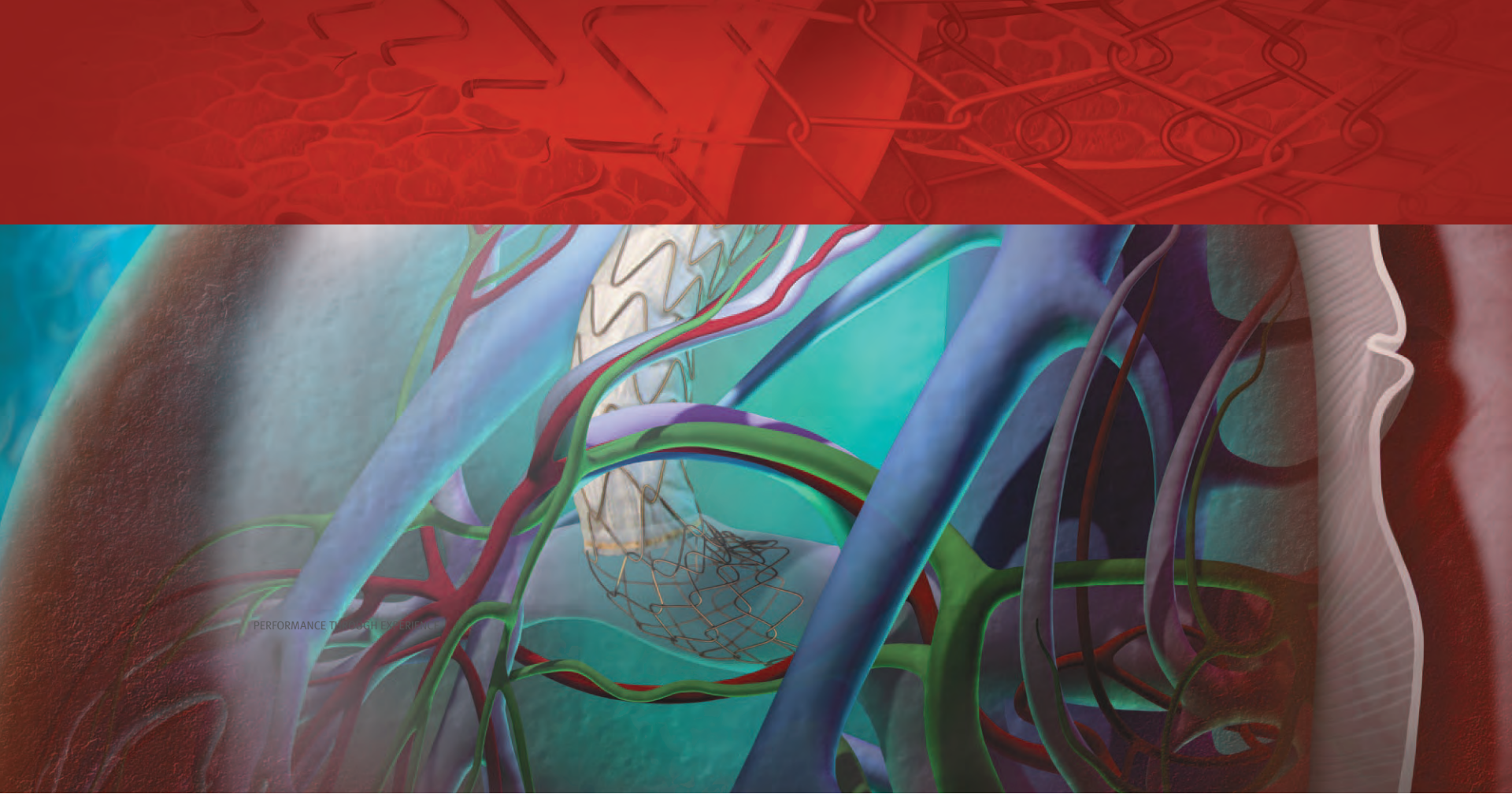
Co-PIs at each study site

- Hepatologist and Interventional Radiologist



References

1. Runyon BA; AASLD Practice Guidelines Committee. Management of adult patients with ascites due to cirrhosis: an update. *Hepatology* 2009;49(6):2087-2107.
2. Thomson Reuters MarketScan® Research Database. New York, NY: Thomson Reuters (Healthcare) Inc; 2010. <http://marketscan.thomsonreuters.com/marketscanportal/?elq=e7bdb25d5279498d9d606899b98a0419>. Updated 2010. Accessed September 2, 2010.
3. Davis GL, Alter MJ, El-Serag H, Poynard T, Jennings LW. Aging of hepatitis C virus (HCV)-infected persons in the United States: a multiple cohort model of HCV prevalence and disease progression. *Gastroenterology* 2010;138(2):513-521, 521.e1-521.e6.
4. Salerno F, Cammà C, Enea M, Rössle M, Wong F. Transjugular intrahepatic portosystemic shunt for refractory ascites: a meta-analysis of individual patient data. *Gastroenterology* 2007;133(3):825-834.
5. Angermayr B, Cejna M, Koenig F, *et al*; Vienna TIPS Study Group. Survival in patients undergoing transjugular intrahepatic portosystemic shunt: ePTFE-covered stentgrafts versus bare stents. *Hepatology* 2003;38(4):1043-1050.
6. Bureau C, Pagan JCG, Layrargues GP, *et al*. Patency of stents covered with polytetrafluoroethylene in patients treated by transjugular intrahepatic portosystemic shunts: long term results of a randomized multicentre study. *Liver International* 2007;27(6):742-747.



PERFORMANCE THROUGH EXPERIENCE

INDICATIONS FOR USE: The GORE VIATORR® TIPS Endoprosthesis is indicated for use in the *de novo* and revision treatment of portal hypertension and its complications such as variceal bleeding, gastropathy, refractory ascites, and / or hepatic hydrothorax. **CONTRAINDICATIONS:** There are no known contraindications for this device. Refer to the *Instructions for Use* at goremedical.com for contraindications, warnings and precautions. Rx Only

Products listed may not be available in all markets.
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