

# Experiences in Open and Laparoscopic Liver Surgery with GELITA TUFT-IT® - the first gelatine-based non-woven hemostat

Marcus Murnauer

University Hospital Augsburg, Germany

Clinic for General-, Visceral- and Transplant Surgery



## Developments in Liver Surgery

Increased safety in liver surgery through technical advances

- **Surgical techniques**

Ultrasonic dissection

Coagulation systems

Intraoperative ultrasound

- **Anesthesia**

Continuous Central Venous Pressure measurement

Perioperative management

Management of complications

## Developments in Liver Surgery

Increased requirements in liver surgery due to enlarged indication complexity

- Many patients with polychemotherapy
- More often multiple metastases, oligometastatic concepts
- Increasing use of parenchymal augmentation techniques (portal vein occlusion by ligation (PVL) or embolization (PVE), two-stage resections, associating liver partition and portal vein ligation (ALLPS), etc.)

## Blood Loss - A Central Issue in the Liver Surgery

Intra- and postoperative blood loss and transfusion have a significant impact on:

- Mortality
- Morbidity
- Length of hospital stay

Hallet et al., The impact of red blood cell transfusions on perioperative outcomes in the contemporary era of liver resection. *Surgery*. 2016;159:1591-9.

Kooby et al., Influence of transfusions on perioperative and long-term outcome in patient following hepatic resection for colorectal metastases. *Ann Surg*. 2003;237:860-9.

Fan et al., Continuous improvement of survival outcomes of resection of hepatocellular carcinoma: A 20-year experience. *Ann Surg*. 2011;253:745-58.

Ibrahim et al., Intraoperative blood loss is a risk factor for complications in donors after liver donor hepatectomy. *Liver Transplant*. 2006;12:950-7.

## Blood Loss - A Central Issue in the Liver Surgery

### Intraoperative blood loss

- „Inflow control“
- „Outflow control“
- Ultrasonic dissection
- Bipolar sealing devices



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Expert opinion on advanced techniques for hemostasis in  
liver surgery

D.M. Manas <sup>a,\*</sup>, J. Figueras <sup>b</sup>, D. Azoulay <sup>c</sup>,  
J.C. Garcia Valdecasas <sup>d</sup>, J. French <sup>a</sup>, E. Dixon <sup>e</sup>, N. O'Rourke <sup>f</sup>,  
N. Grovale <sup>g</sup>, V. Mazzaferro <sup>h</sup>

<sup>a</sup>Newcastle Upon Tyne and Newcastle NHS Trust, Tyne and Wear, NE1 7RU, UK

<sup>b</sup>Josep Trueta Hospital in Girona, Avinguda de França, S/N, 17007 Girona, Spain

<sup>c</sup>Henri Mondor Hospital, 51 Avenue du Maréchal de Lattre de Tassigny, 94010 Créteil, France

<sup>d</sup>University of Barcelona, Gran Via de Les Corts Catalanes, 585, 08007 Barcelona, Spain

<sup>e</sup>University of Calgary, 2500 University Dr NW, Calgary, AB T2N 1N4, Canada

<sup>f</sup>Wesley Medical Centre, 30 Chasely St, Auchenflower, QLD 4066, Australia

<sup>g</sup>Medtronic Regional Clinical Center, Via Aurelia 475-477, 00165 Rome, Italy

<sup>h</sup>National Cancer Institute, Via Venezian 1, 20133 Milano, Italy

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## **Blood Loss - A Central Issue in the Liver Surgery**

### Postoperative blood loss

- Clean surgical technique
- Increased central venous pressure before occlusion of the abdominal cavity
- Usage of hemostats

# Hemostats in Liver Surgery

J Hepatobiliary Pancreat Sci (2016) 23:609–621  
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REVIEW ARTICLE

## **An update on topical haemostatic agents in liver surgery: systematic review and meta analysis**

**Raffaele Brustia · Benjamin Granger · Olivier Scatton**

Published online: 31 August 2016

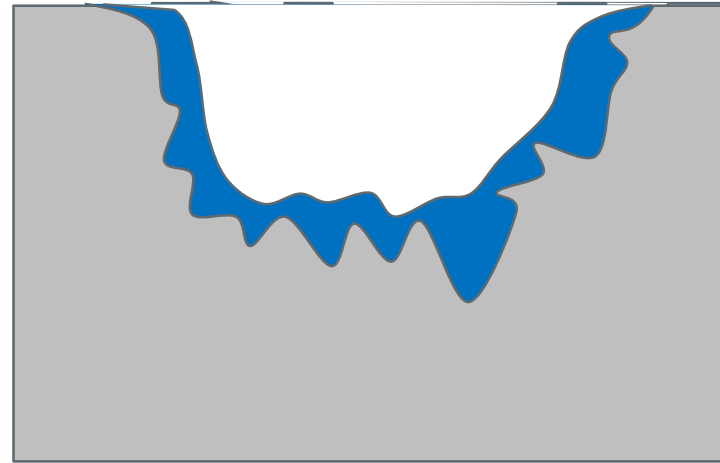
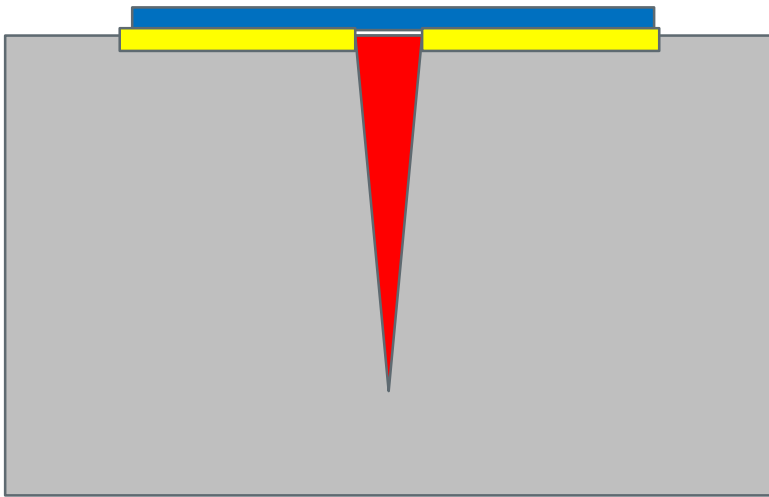
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## Hemostats in Liver Surgery

- Very inconsistent data
- High bias in all studies
  
- Most liver surgeons use some kind of hemostat

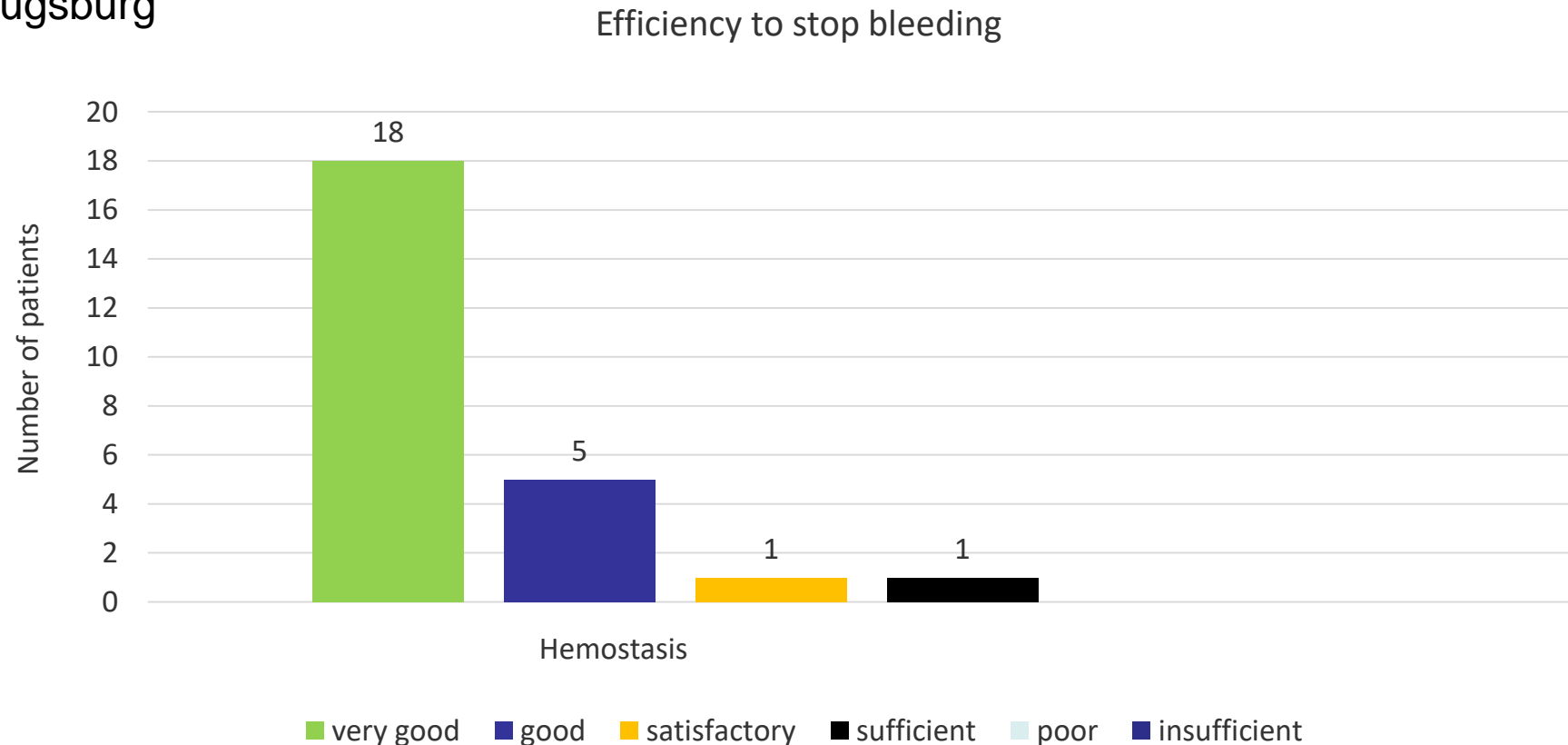


## Hemostats in Liver Surgery



## Experiences with GELITA TUFT-IT®

Application of GELITA TUFT-IT® in 25 consecutive liver resections at the University Hospital Augsburg





Watch the video on our GELITA MEDICAL YouTube channel  
<https://www.youtube.com/user/GelitaMedical>

## Summary

- Hemostats are widely used in liver surgery
- Knowledge about the portfolio and the applications are essential

### Benefits of GELITA TUFT-IT®

- Easy to use in both open as well as laparoscopic
- Good to very good hemostasis in a variety of liver resections
- Repositionable
- Adapts to the structure of the resection surface
- No acidic environment at the edge of the wound
- Cost saving