BioCer

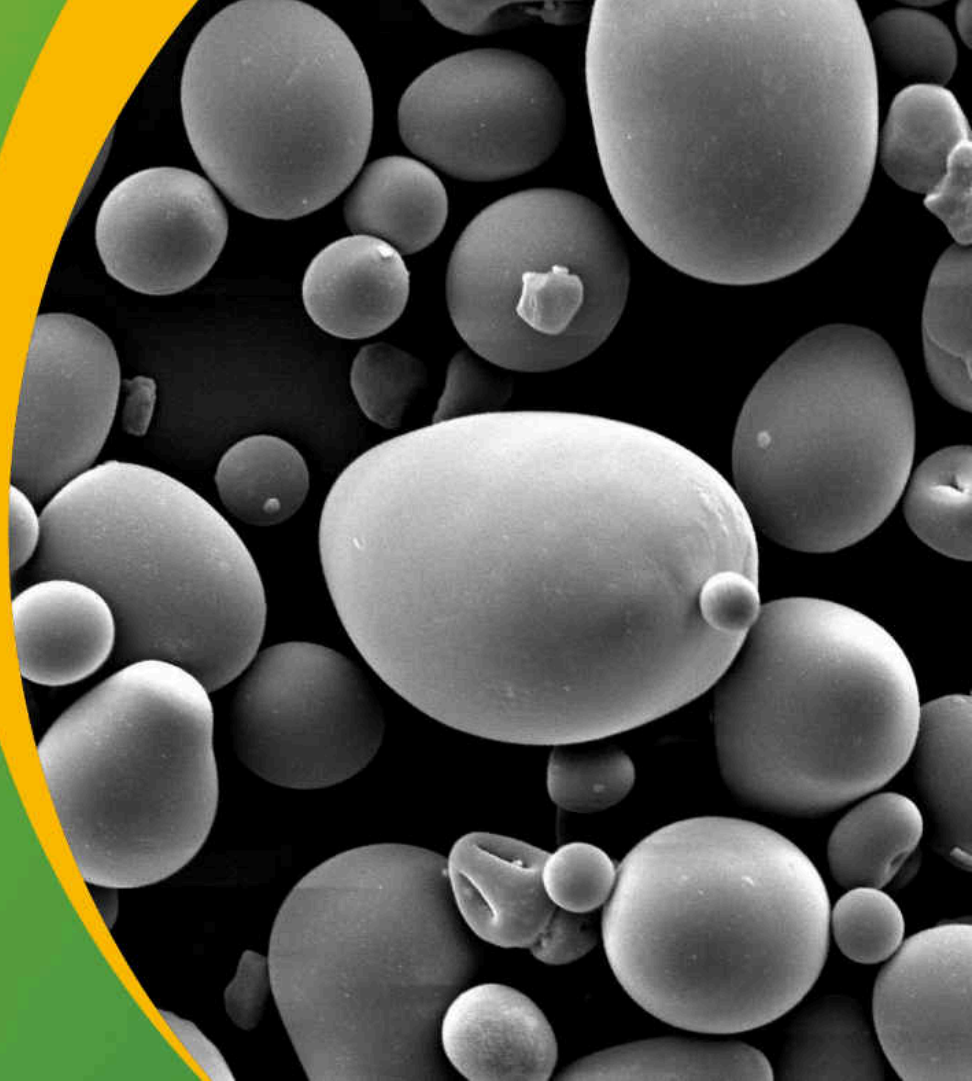
HaemoCer™

Endoscopic Applicator



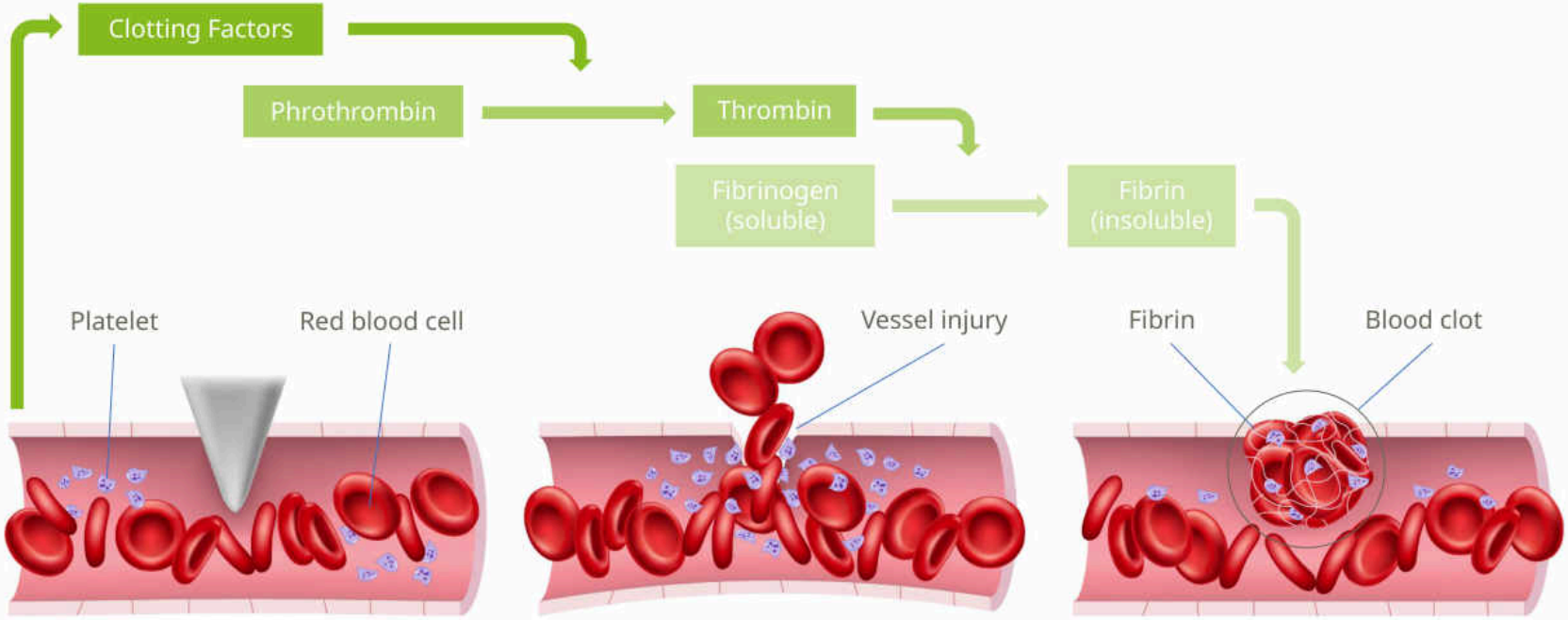
BioCer

Modo de acción



Fases de Coagulación

BioCer



Vaso sanguíneo dañado
La lesión en el revestimiento del vaso sanguíneo desencadena la liberación de factores de coagulación

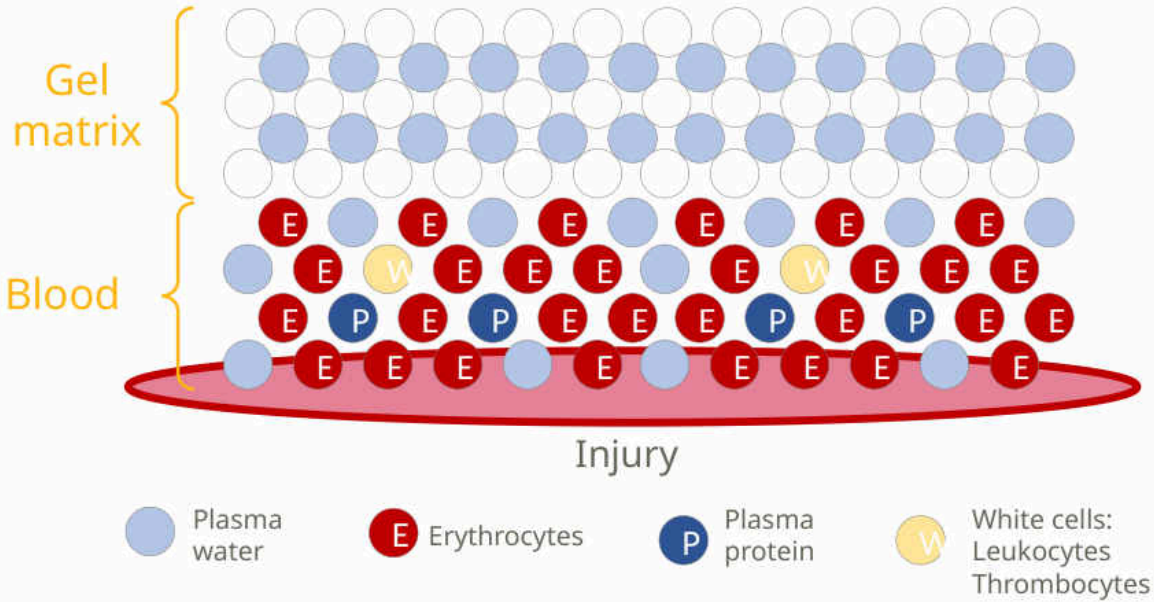
Formación del tapón plaquetario
La vasoconstricción limita el flujo sanguíneo y las plaquetas forman un tapón pegajoso

Formación del coágulo
Las hebras de fibrina se adhieren al tapón para formar un coágulo insoluble.

© Dee-sign – stock.adobe.com

Haemostasis

Dual Mode of Action



Gel matrix actúa como **una barrera mecánica** que ayuda a detener el sangrado de la herida

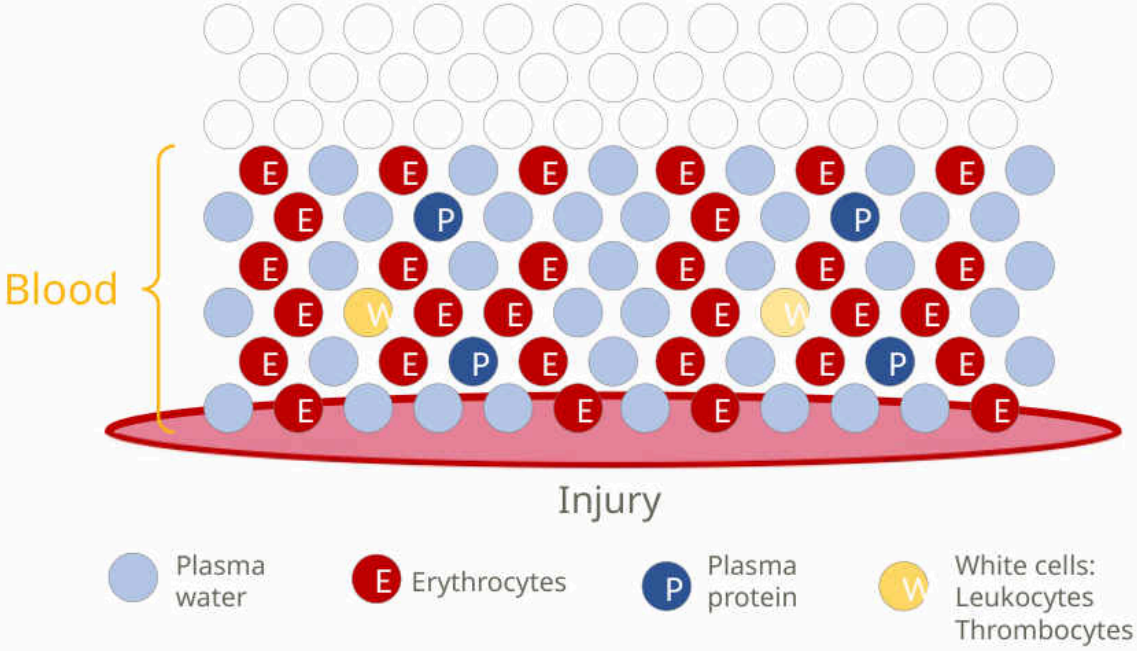
El aumento de la **concentración de los componentes de las células** acelera la coagulación

Haemostasis

BioCer



Apply
HaemoCer PLUS

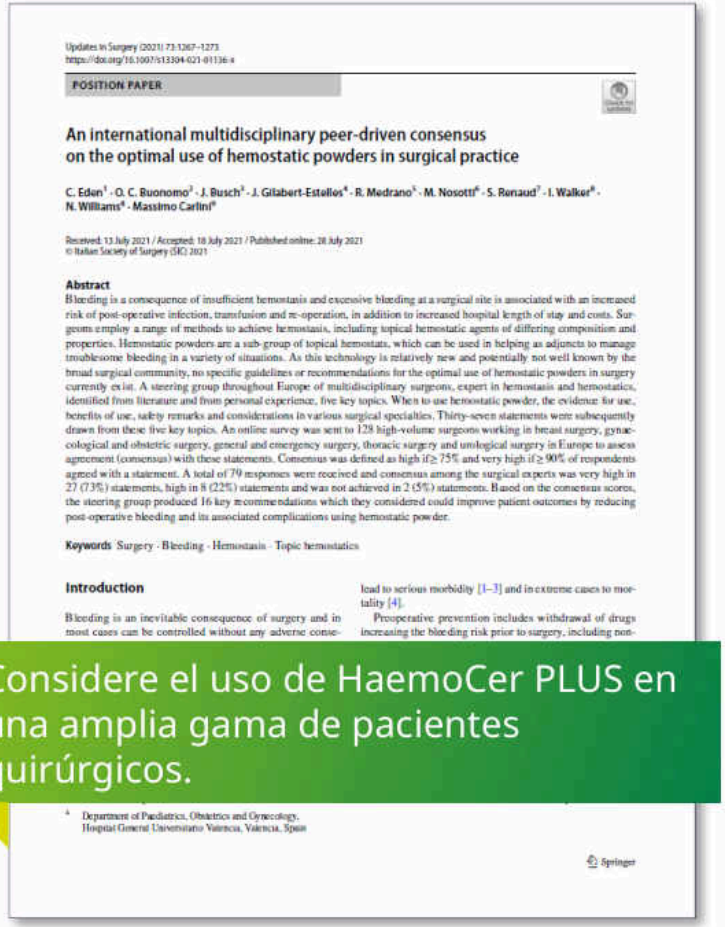




55% blood plasma
(of which approx. 90% water and 10% proteins)

2% white blood cells (leukocytes) and platelets (thrombocytes)

43% red blood cells (erythrocytes)



Updates in Surgery (2021) 73:1267–1273
https://doi.org/10.1007/s13304-021-01136-x

POSITION PAPER

An international multidisciplinary peer-driven consensus on the optimal use of hemostatic powders in surgical practice

C. Eden[1] · O. C. Buonomo[2] · J. Busch[3] · J. Gilabert-Estellés[4] · R. Medrano[5] · M. Nosotti[6] · S. Renaud[7] · I. Walker[8] · N. Williams[9] · Massimo Carlini[9]

Received: 13 July 2021 / Accepted: 18 July 2021 / Published online: 28 July 2021
© Italian Society of Surgery (SIC) 2021

Abstract
Bleeding is a consequence of insufficient hemostasis and excessive bleeding at a surgical site is associated with an increased risk of post-operative infection, transfusion and re-operation, in addition to increased hospital length of stay and costs. Surgeons employ a range of methods to achieve hemostasis, including topical hemostatic agents of differing composition and properties. Hemostatic powders are a sub-group of topical hemostats, which can be used in helping as adjuncts to manage troublesome bleeding in a variety of situations. As this technology is relatively new and potentially not well known by the broad surgical community, no specific guidelines or recommendations for the optimal use of hemostatic powders in surgery currently exist. A steering group throughout Europe of multidisciplinary surgeons, expert in hemostasis and hemostatics, identified from literature and from personal experience, five key topics. When to use hemostatic powder, the evidence for use, benefits of use, safety remarks and considerations in various surgical specialties. Thirty-seven statements were subsequently drawn from these five key topics. An online survey was sent to 128 high-volume surgeons working in breast surgery, gynaecological and obstetric surgery, general and emergency surgery, thoracic surgery and urological surgery in Europe to assess agreement (consensus) with these statements. Consensus was defined as high if ≥ 75% and very high if ≥ 90% of respondents agreed with a statement. A total of 79 responses were received and consensus among the surgical experts was very high in 27 (73%) statements, high in 8 (22%) statements and was not achieved in 2 (5%) statements. Based on the consensus scores, the steering group produced 16 key recommendations which they considered could improve patient outcomes by reducing post-operative bleeding and its associated complications using hemostatic powder.

Keywords Surgery · Bleeding · Hemostasis · Topic hemostatics

Introduction

Bleeding is an inevitable consequence of surgery and in most cases can be controlled without any adverse consequence to serious morbidity [1–3] and in extreme cases to mortality [4].

Preoperative prevention includes withdrawal of drugs increasing the bleeding risk prior to surgery, including non-

[4] Department of Paediatrics, Obstetrics and Gynecology, Hospital General Universitario Valencia, Valencia, Spain

Springer

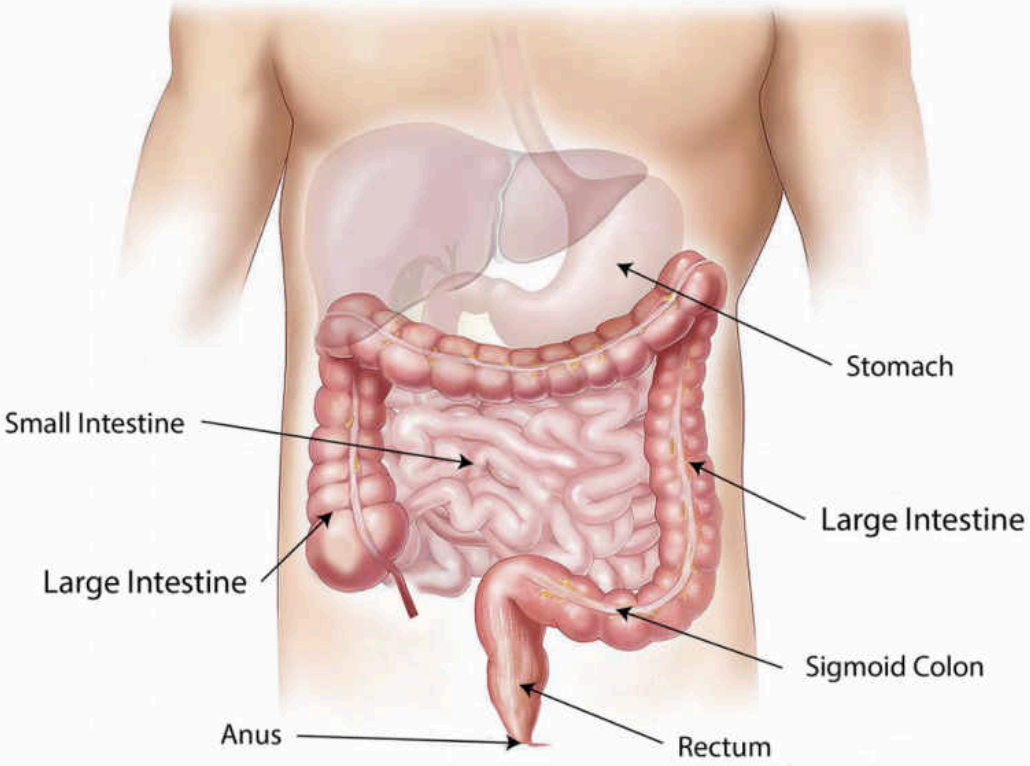
Considere el uso de HaemoCer PLUS en una amplia gama de pacientes quirúrgicos.

- Cirugía de mama
- Cirugía general
- Cirugía ginecológica y obstétrica
- Cirugía urológica
- Cirugía cardiotorácica
- Etc.

Eden et al. (2021); An international multidisciplinary peer-driven consensus on the optimal use of haemostatic powders in surgical practice. Updates in Surgery. https://doi.org/10.1007/s13304-021-01136-x

Location of GI-bleeding

BioCer

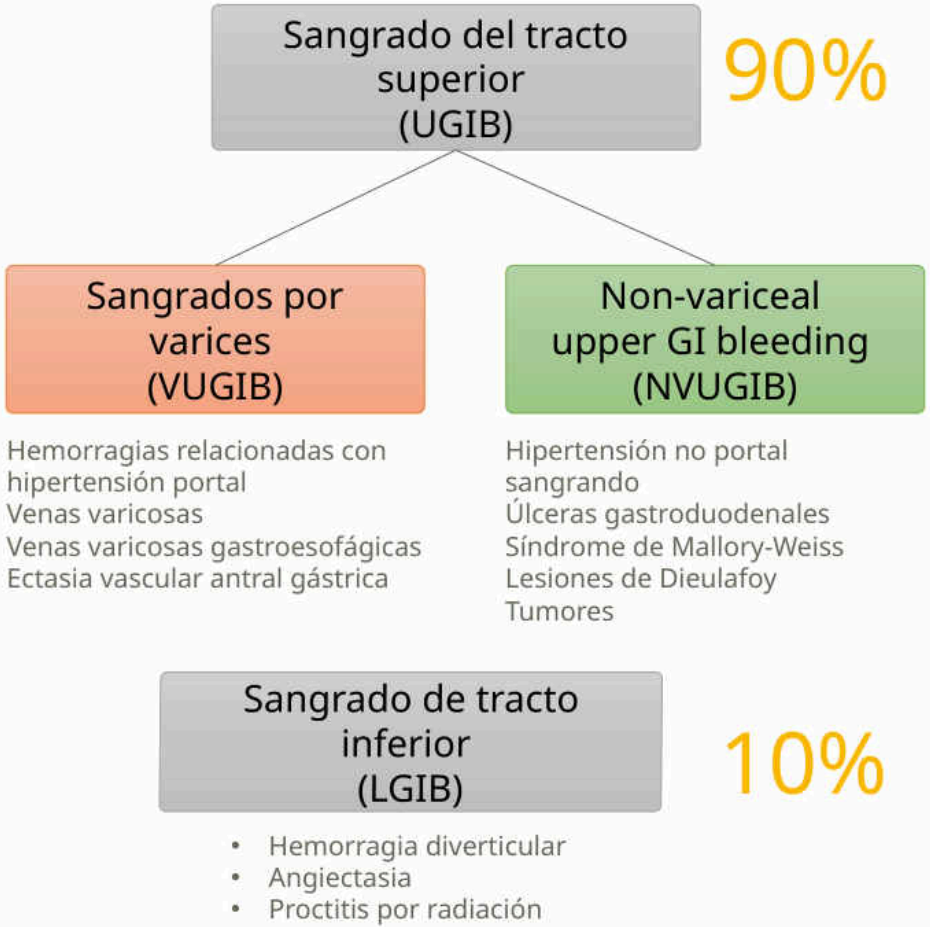


Upper GI	80-90%
Middle GI	5%
Lower GI	10-20%

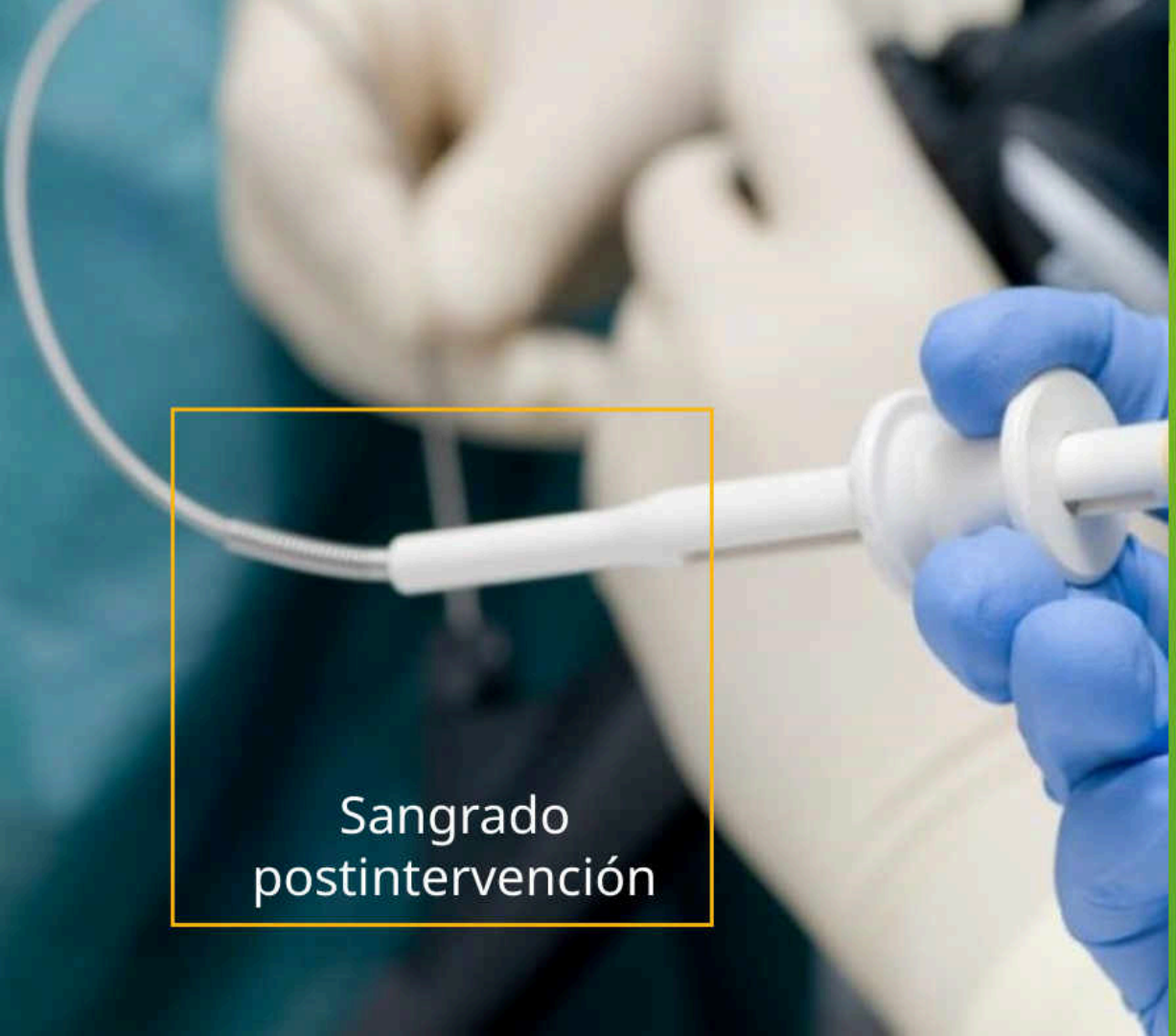
Frequency and localisation of gastrointestinal bleeding (modified according to Block et al. 2005)

BioCer

Tipos y lugares de GI Sangrados



BioCer



Sangrado postintervención

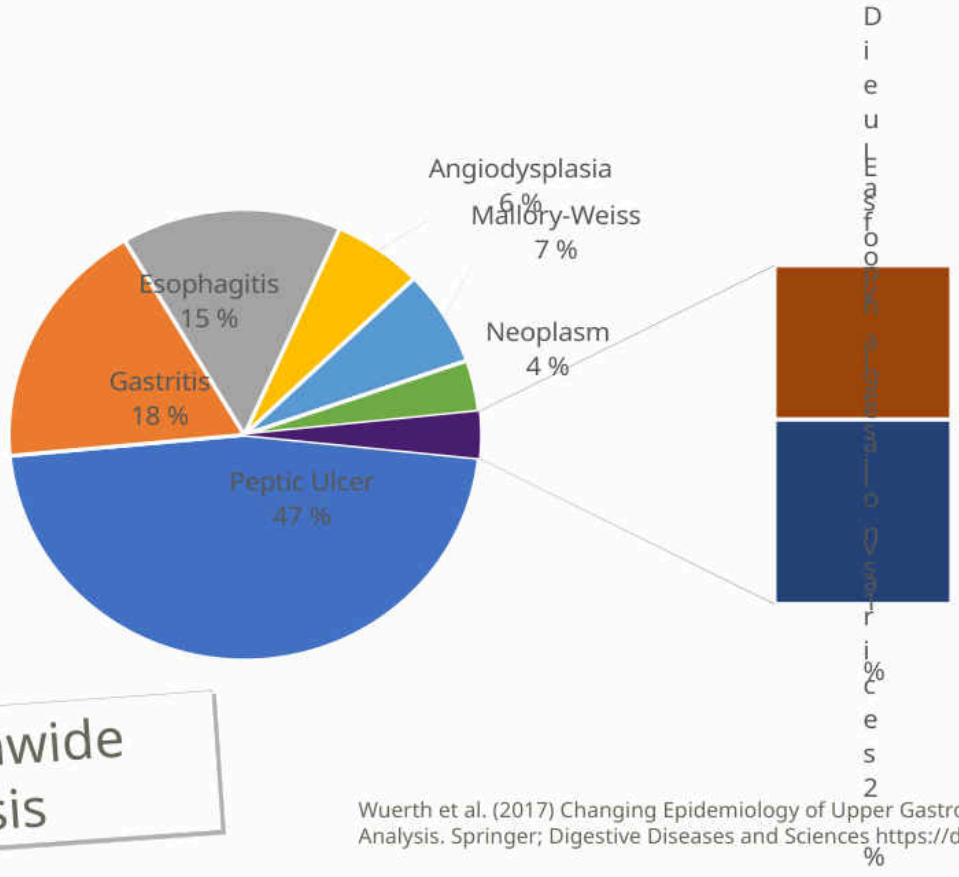
Intervenciones:

- Polipectomía
- Disección endoscópica de la submucosa (ESD)
- Resección endoscópica de la mucosa (EMR)
- Biopsia

Etiology of GI Bleeding - USA

BioCer

n = 2,432,088



US nationwide analysis

Wuerth et al. (2017) Changing Epidemiology of Upper Gastrointestinal Hemorrhage in the Last Decade: A Nationwide Analysis. Springer; Digestive Diseases and Sciences https://doi.org/10.1007/s10620-017-4882-6

Bleeding severity of non-variceal ulcers

BioCer

AWMF online
Portal der wissenschaftlichen Medizin

Recomendación 50:

El sangrado por úlceras debe clasificarse según la clasificación de Forrest. Esta clasificación también puede utilizarse, en una versión modificada, para otras hemorragias no varicosas. Permite diferenciar entre úlceras con alto y bajo riesgo de sangrado persistente o recurrente.

Recomendación firme, consenso generalizado.

ESGE European Society of Gastrointestinal Endoscopy
Working together in endoscopy to achieve optimal patient care

La ESGE recomienda utilizar la clasificación de Forrest (F) en todos los pacientes con hemorragia por úlcera péptica para diferenciar los estigmas endoscópicos de bajo y alto riesgo.

Recomendación firme, evidencia de alta calidad.

Guidelines refer to Forrest classification

ESGE Recommendations

BioCer

Stage	Characteristics	
Forrest Ia	Spurting hemorrhage	Intervention necessary
Forrest Ib	Oozing hemorrhage	
Forrest IIa	Visible vessel	
Forrest IIb	Adherent clot	Remove clot, then re-assess
Forrest IIc	Hematin on ulcer base	No intervention necessary
Forrest III	Clean ulcer base	

HaemoCer Plus GI bleeding algorithm

BioCer



NVUGIB

LGIB

POST INT

Forrest classification	1st-line	adjuvant
Ia	X	✓
Ib	✓	✓
IIa	✓	✓

Hemorragia primaria
Úlceras pépticas
Síndrome de Mallory-Weiss
Tumores
Esofagitis hemorrágica
Post-intervención
Polipectomía
ESD
EMR
Biopsia

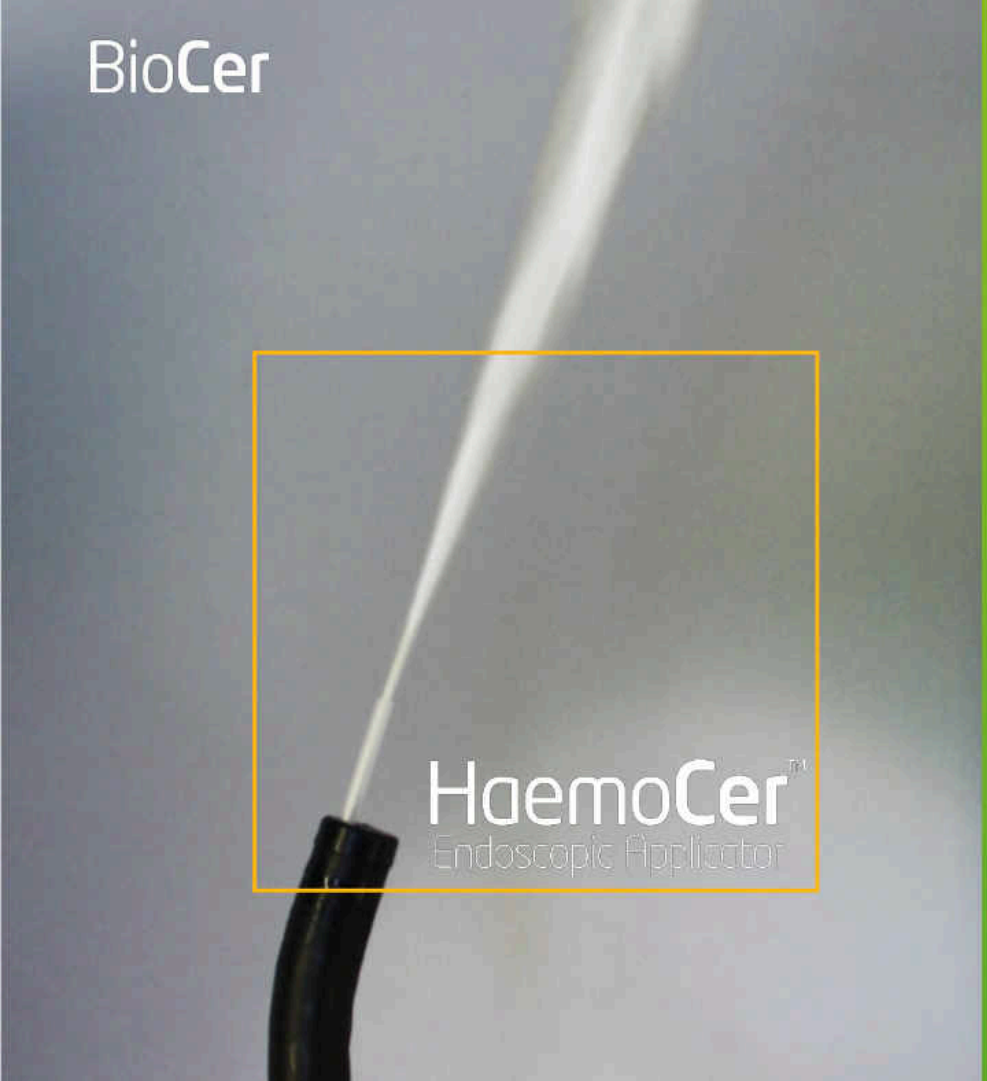
UGIB	Upper GI Bleeding
VUGIB	Variceal upper GI bleeding
NVUGIB	Non-variceal upper GI bleeding
LGIB	Lower GI Bleeding

Summary bleeding algorythm

BioCer

Bleeding cohort	Primary bleeding	Post-interventional bleeding
Bleeding Severity	Forrest (Ia), Ib, IIa	
Indications	Peptic ulcers MV syndrome Haemorrhagic oesophagitis Tumours	EMR ESD Polypectomy Biopsy

BioCer



Se considera el uso de un hemostático en caso de

- Sangrado venoso
- Sangrado difuso
- Sangrado de área extensa
- Sangrado de difícil acceso
- Terapia adyuvante

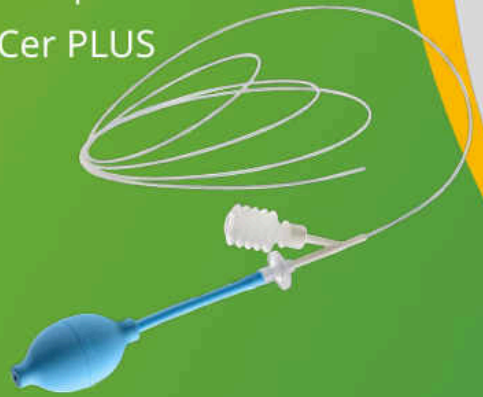
BioCer

Características y beneficios

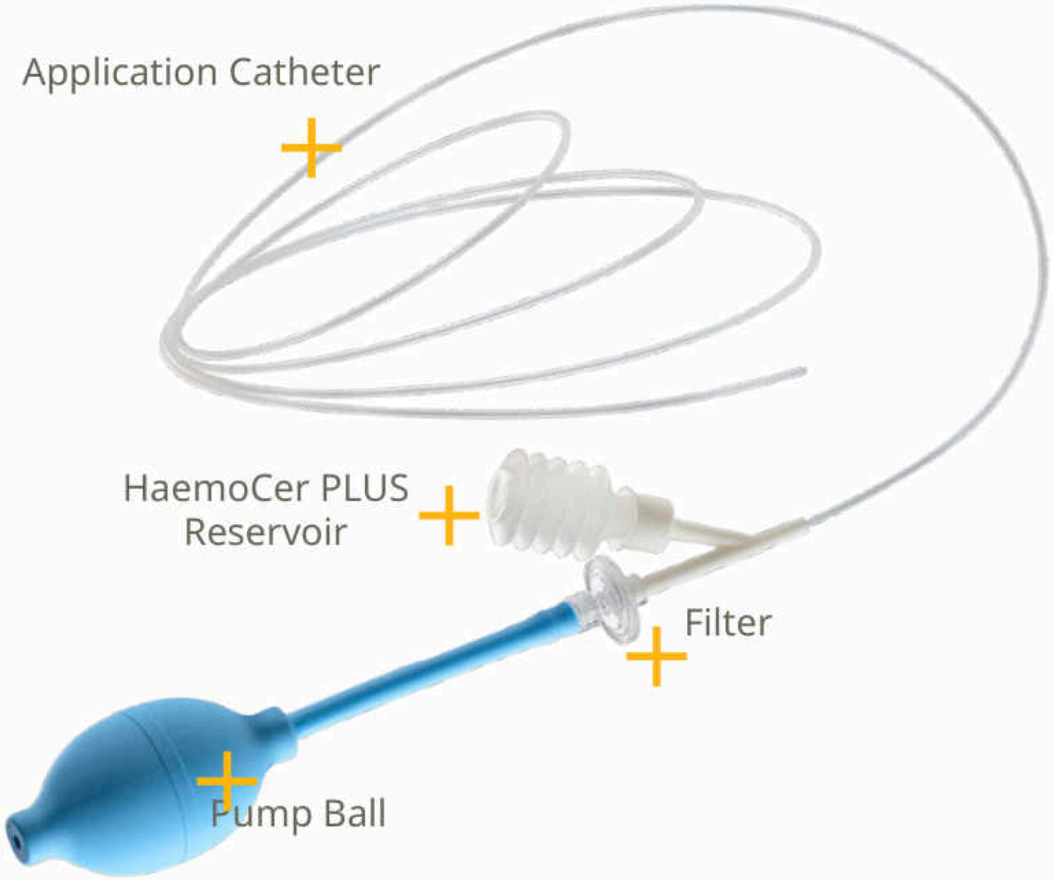
Endoscopic SET

Content Set

- 1 Aplicador endoscopico
- 3g polvo HaemoCer PLUS







BioCer

Endoscopic Set

3 Components

1. Application Catheter with Filter
   transports HaemoCer PLUS through the instrument channel
2. Pump Ball
   generates the air flow
3. HaemoCer PLUS
   well-established topical hemostat

BioCer



Manual air-flow generation for powder transport

- Permite una dosificación de aire fluido
  - Alto flujo de aire máximo para una eliminación suficiente del líquido antes de la aplicación del polvo.
  - Bajo flujo de aire para una aplicación precisa del polvo y una visión clara de la cámara.
- Sistema autónomo
  No requiere componentes adicionales de energía
- Silencioso
  Durante la aplicación
- Siempre funciona
  Incluso en situaciones de emergencia

BioCer

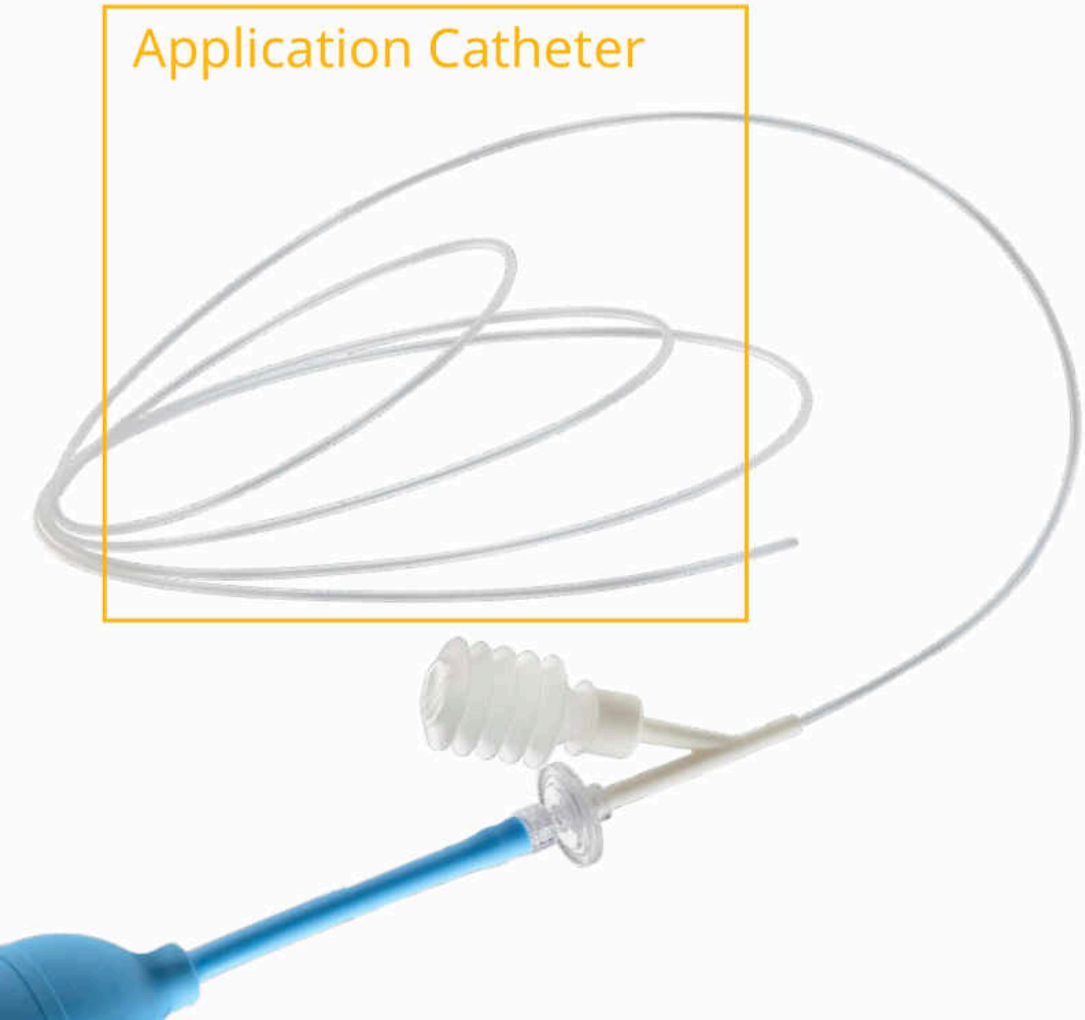


Y-Tipo conector con filtro

- Conexiones tipo rosca
  - Conexión roscada Luer-Lock a la bola de la bomba.
  - Conexión roscada patentada al depósito de HaemoCer.
- Solido, de una sola pieza

  Con filtro HEPA
- Filtración aire del ambiente
  Protege la zona de sangrado de la contaminación por microorganismos externos
- Conexión solida del catéter de aplicación
  Impide la desconexión accidental

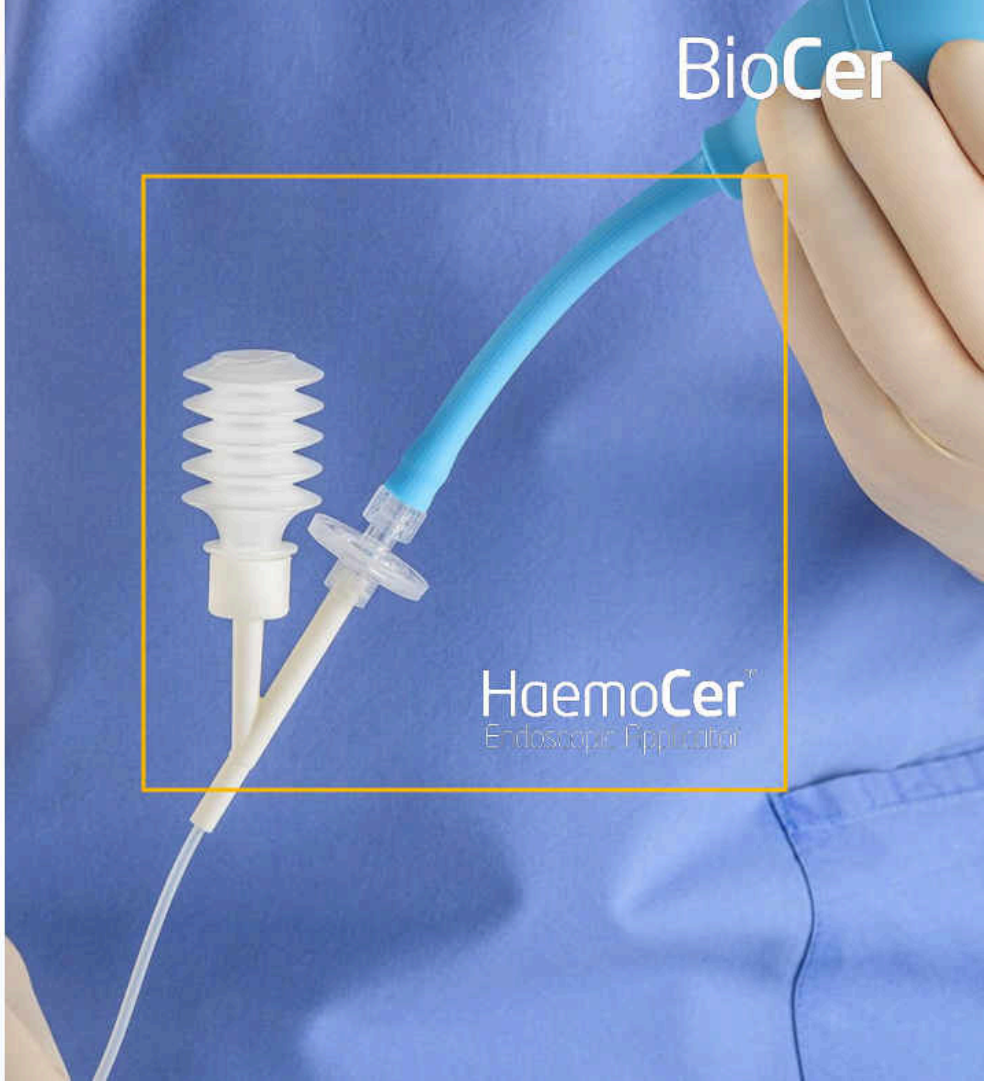
BioCer



Compatible with standard endoscopes

- Compatible con diámetros de O.D 2.5 mm
  adecuado para canales iguales o superiores a 2.8 mm
- Longitud de 2400 mm
  Utilizable para gastro o colono.

- 100% origen vegetal.
  Libre de virus de transmisión o patógenos alérgenos
- Ampliamente utilizado en disciplinas quirúrgicas
  como cirugía visceral, cardíaca, ginecologíca etc.



BioCer

Https://www.youtube.com/watch?v=K-Oc0-CQ0b4

Como se usa



como usar

Preparation and application

BioCer



Connect the pump ball to the Luer Lock connection at the filter end of the applicator.



Use the cap to close the attachment on the Y-Piece.



While the applicator is being inserted, the pump ball should also be used occasionally.



Once the applicator is positioned, keep pumping the pump ball 8-10 times quickly and firmly.



Remove the cap and bring the applicator in an upright position, so that the opening of the bellows bottle faces upwards when it is screwed on.



Turn the applicator by 180° and begin administering the powder by pumping the pump ball several times.

Overview SKU

BioCer

Applicator sets

Item number	Description	Contents/PU
HFS323	HaemoCer PLUS Endoscopic Set 3g	1 Standard Applicator HaemoCer PLUS 3g 1 Endoscopic Applicator

