



vitalocTM

**A robust hemostatic
powder for medium
to severe bleeding
management**

vitalocTM

vitalocTM is a crossed linked gelatin powder hemostat, for controlling medium to severe bleeding during surgical procedures

The gelatin is crosslinked into a stable matrix that mechanically stops the bleeding at the injured site, regardless of the patient's coagulation status.

vitalocTM consists of biodegradable materials that are gradually absorbed over time.

Bio**Change**





Vitaloc™ is the go-to hemostatic powder for reliable bleeding control, even in patients with clotting disorders

Advantages

- **Efficacy:** Out-standing success rate even in highly challenging bleeding scenarios, stops bleeding in various clinical cases, even in cases of severe bleeding.
- **Safety profile:** No side effects or adverse events were reported, indicating an optimal safety profile.
- **Robust hemostat:** successfully stops bleeding across a variety of complex clinical scenarios without any recurring issues or negative side effects.
- **Addresses a Critical Pain Point:** Bleeding during surgery or emergencies is a major concern. vitaloc™ ability to work regardless of coagulation status is a standout clinical advantage.
- **Ease of use:** The 4-step application process is intuitive and effective, which is crucial in high-pressure clinical settings.





A HEMOSTATIC POWDER FOR MEDIUM TO SEVERE BLEEDING MANAGEMENT

Benefits for patients

vitaloc™ can save lives in cases of uncontrolled bleeding and extreme severe bleeding, even in cases of hemophilic animals

Benefits for physicians

A predictable robust hemostat delivers strong financial in clinical value by:

- Reducing procedure time
- Minimizing complications
- Lowering resource utilization
- Improving overall clinical outcome
- Improves logistics efficiency



HOW IT WORKS



CAN SAVE LIFE! IN ONLY 4 SIMPLE STEPS



1 Identify the bleeding source



2 Apply vitaloc™ powder to the bleeding source*



3 Place sterile gauze over the powder and apply pressure for **4 minutes**



4 Remove the gauze



**A NOVEL, SAFE, EASY TO USE,
HIGHLY EFFECTIVE HEMOSTAT**

vitaloc™ use in real life – step by step



Bleeding site



Pour vitaloc powder



Gauze press 4 min.



Remove gauze



No bleeding



CLINICAL VALIDATIONS & REAL LIFE CASES



VITALOC™ DEMONSTRATES SUPERIOR HEMOSTATIC EFFICACY IN HIGHLY CHALLENGING BLEEDING SCENARIOS

vitaloc™ demonstrates superior hemostatic efficacy versus a leading hemostat benchmark product

Total Hemostasis Achievement

88% Rate of Complete Hemostasis

vitaloc™ shows a massive superiority in reaching a zero bleeding rate post-treatment

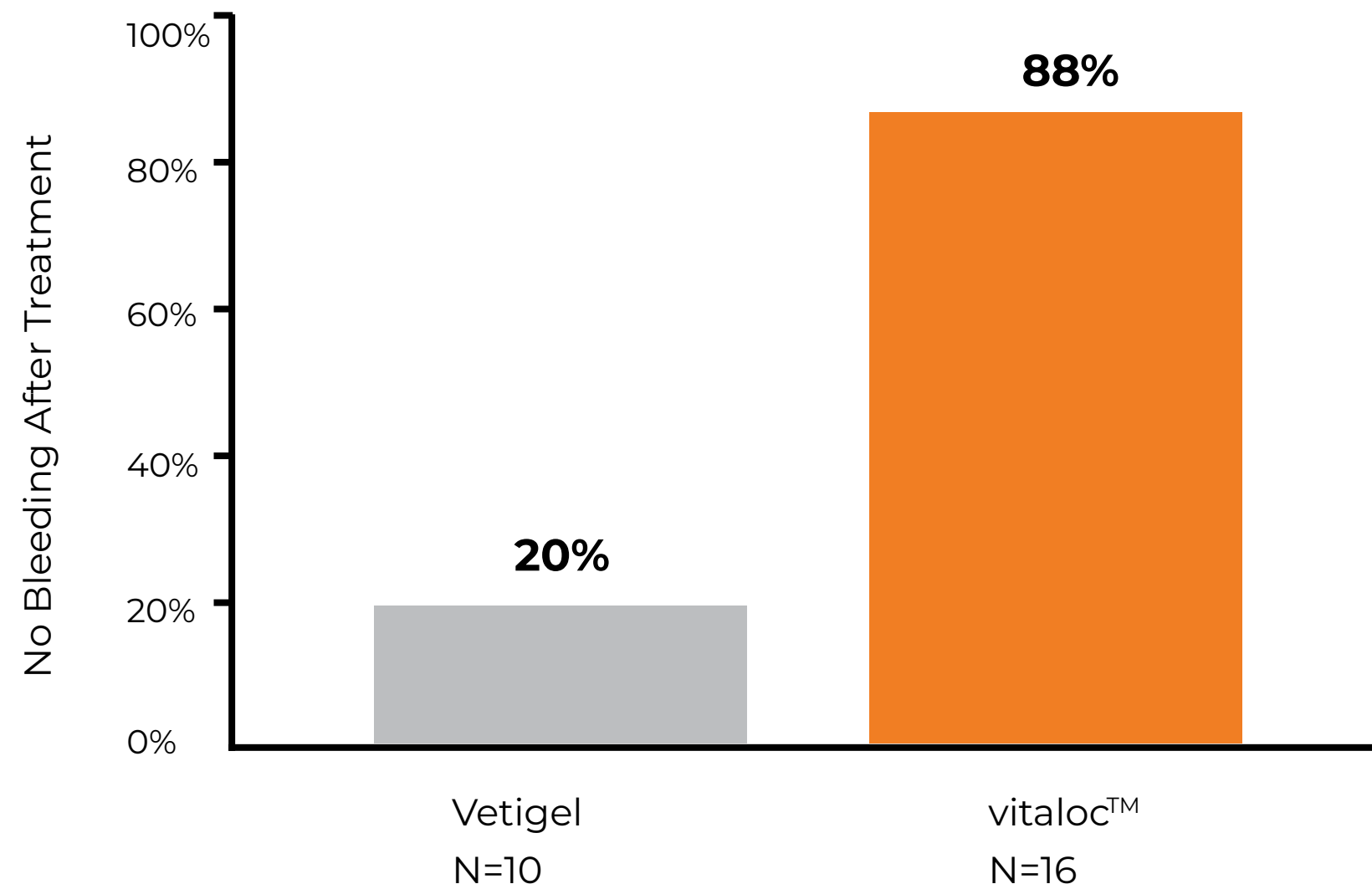
4 times higher Success in Zero Bleeding

vitaloc™ achieves complete bleeding control in 88% of cases, markedly surpassing the competitor's 20% rate.

Animal model: adult mini-pig

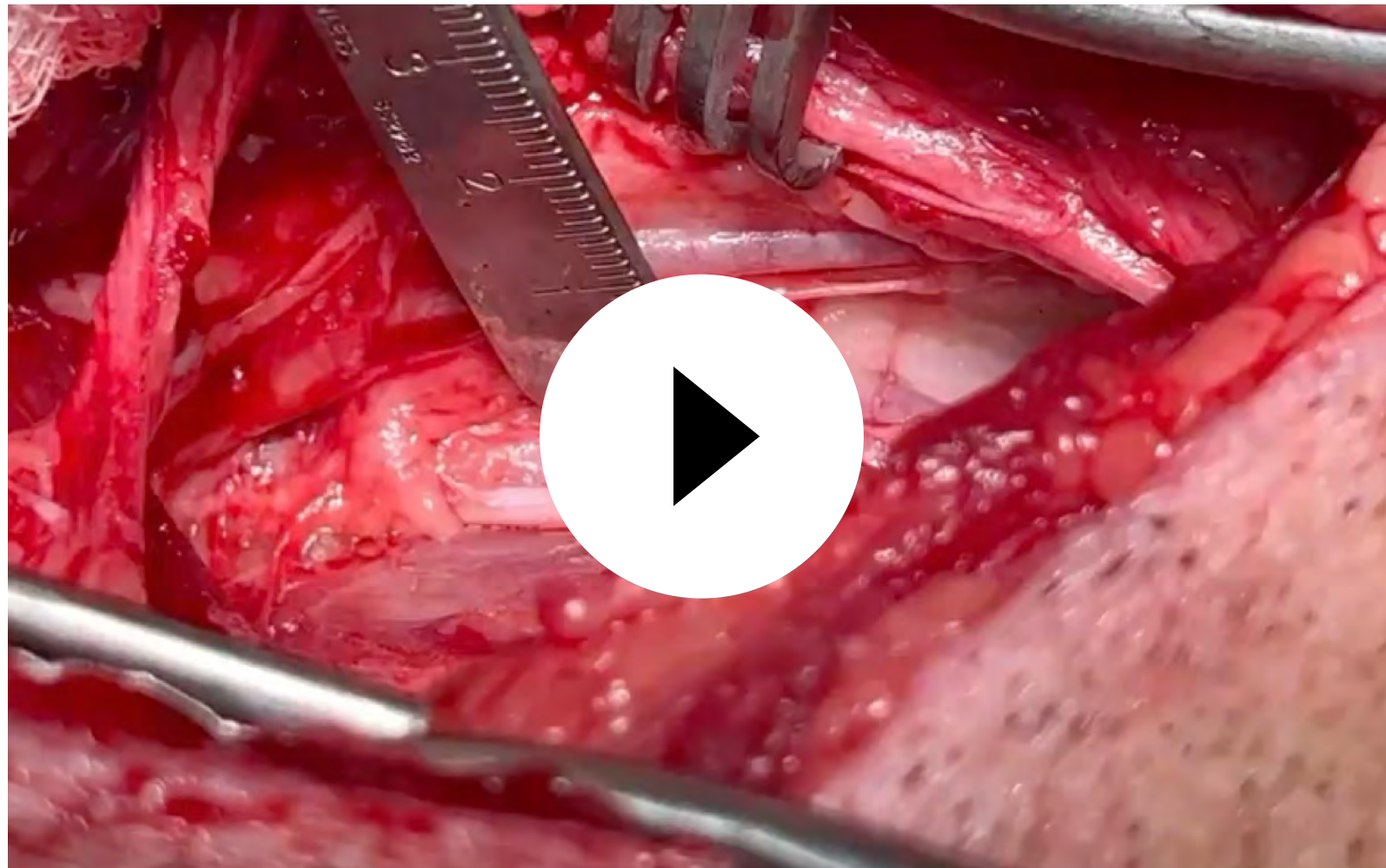
Bleeding model: Carotid Artery - 5mm incision

Bleeding definition: Severe Bleeding (grade 4, maximal)





COMPARATIVE STUDIES



vitaloc™ vs control



vitaloc™ vs Vetigel

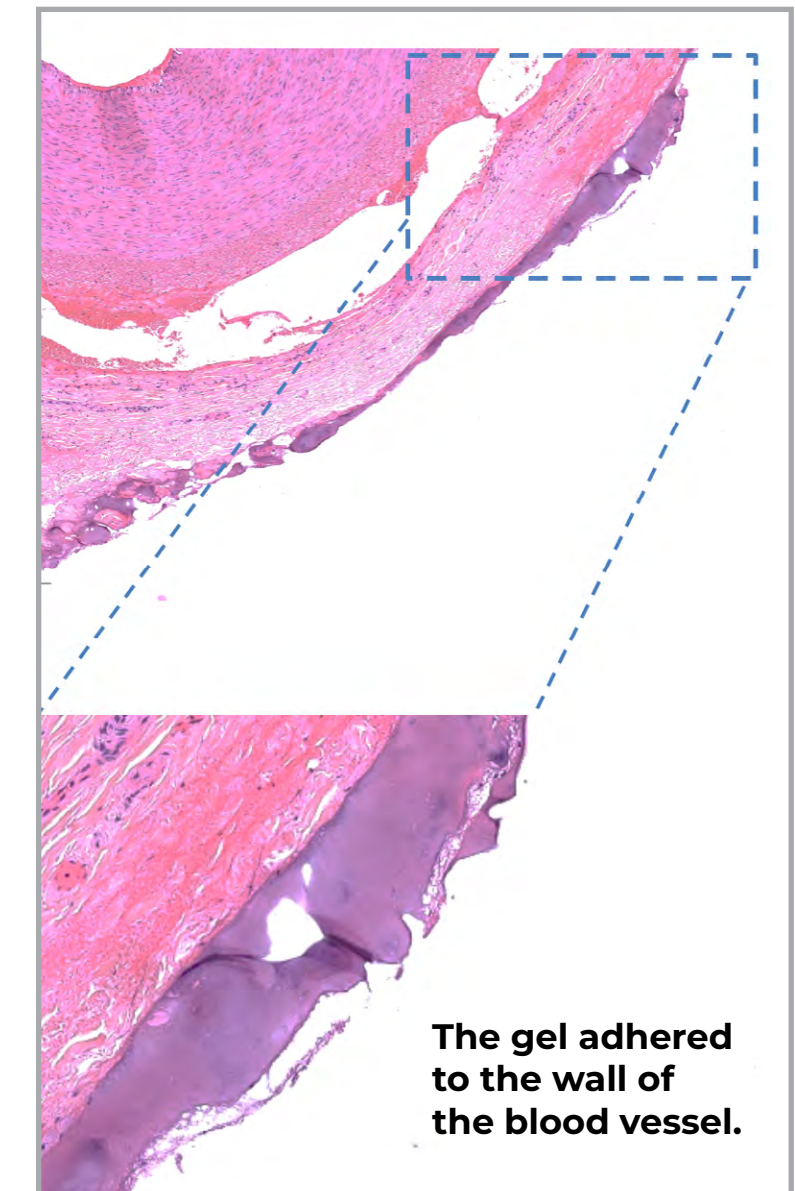
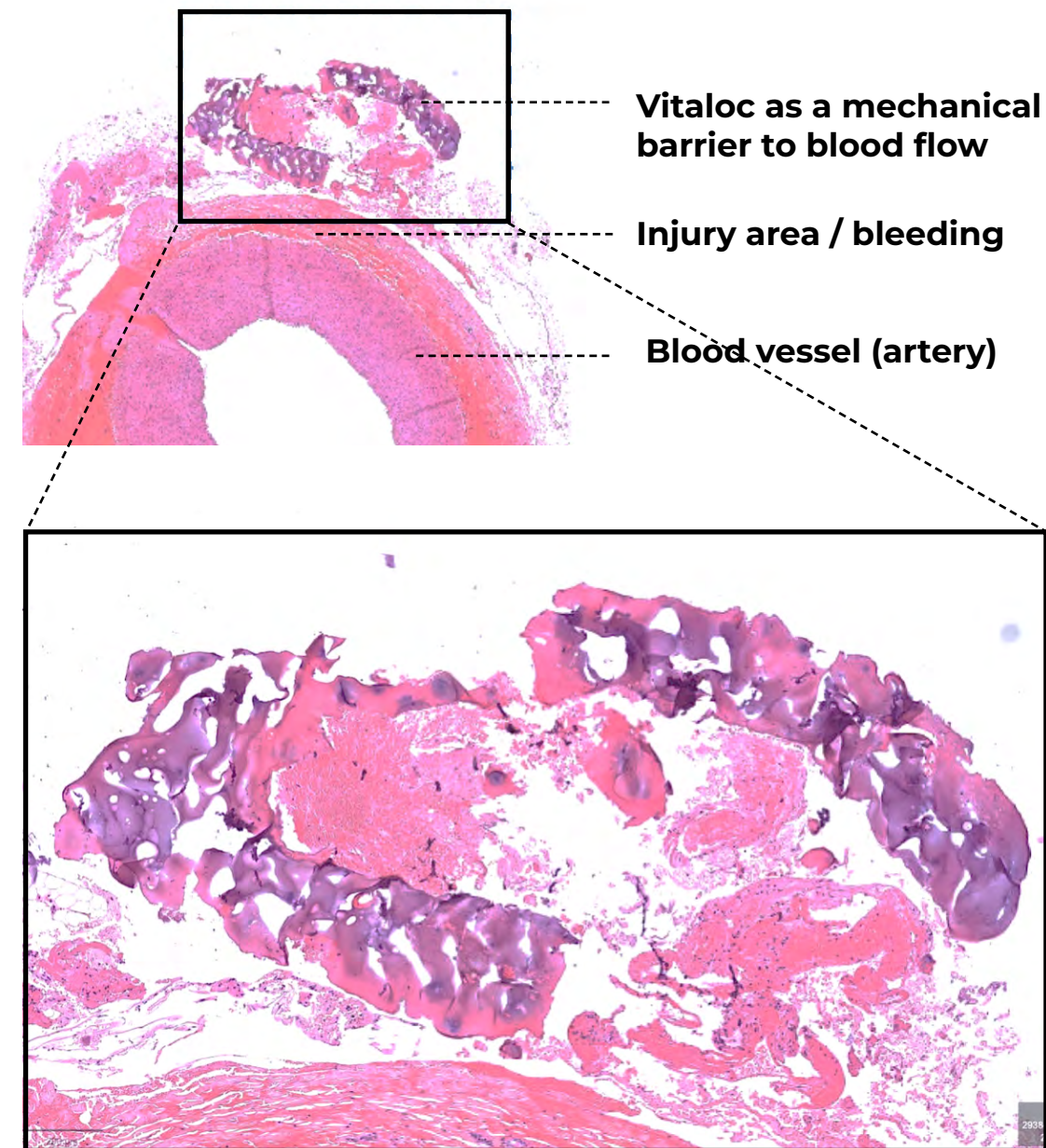
vitalocTM was applied onto a 5 mm carotid incision to achieve hemostasis.

Once vitalocTM powder meets the blood, the gelatin is crosslinked into a stable matrix that mechanically stops the bleeding at the injured site.

3 hours later the pig was euthanized and the arteries fixated for pathological analysis.

Conclusions (initial):

- Great adhesion to vessel wall
- Immediate bleeding control
- No adverse events
- No vitalocTM remnants found inside the artery





KEY OPINION LEADERS TESTIMONIALS REAL LIFE USE

"I wouldn't go into surgery without it!"

"In surgeries with high risk of bleeding,
I feel more comfortable with Vitaloc™
by my side."

"Vitaloc™ has demonstrated to be very
effective in bleeding control, more than
many other hemostatic products
I have used"

"From my experience, Vitaloc™ is very
easy and safe to use"

**DVMs Yael Bar Giora & Yoav Bar-Am,
Hebrew University Veterinary Hospital**





REAL LIFE EVIDENCE OF VITALOC™ SAFETY & EFFICACY IN 25 CASE STUDIES

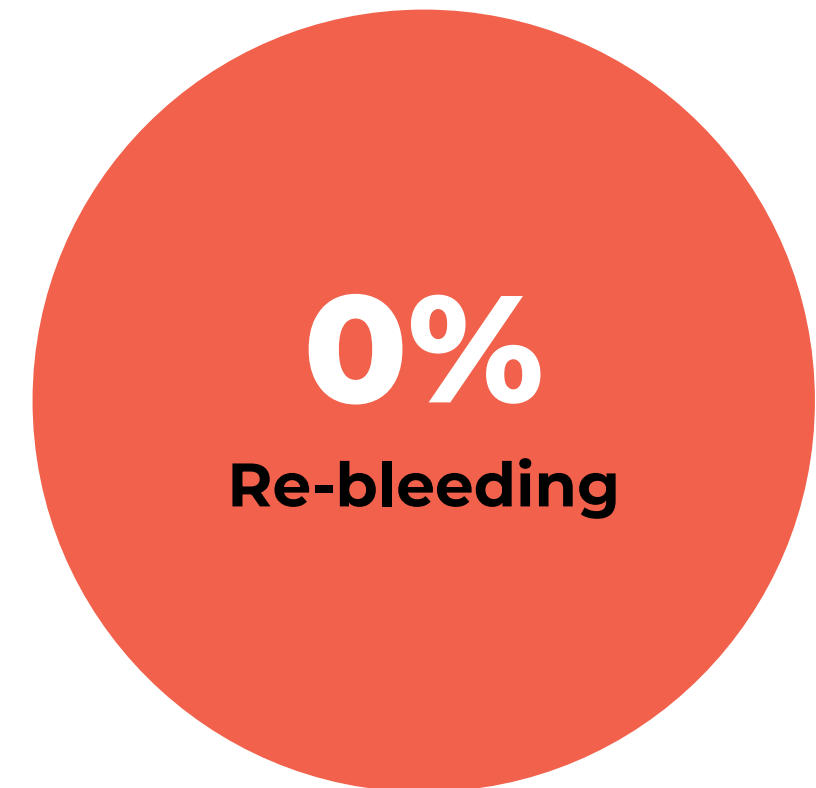
Reported by leading veterinarians around the world



**In 25/25 cases, rapid cessation
of bleeding achieved.**



**Zero side effects
Zero adverse events**



In 25/25 cases



VETERINARY CLINICAL CASE STUDIES OVERVIEW: GLOBAL EFFICACY & VERSATILITY

GLOBAL REACH AND PROFESSIONAL ADOPTION

13 expert practitioners & institutions

6 COUNTRIES REPRESENTED



DIVERSE CLINICAL ENVIRONMENTS

Success in university settings, specialized dental clinics and general veterinary hospitals

PATIENT FROM DIVERSITY SPECIES



12+UNIQUE SPECIES AND BREEDS

Broad weight spectrum **2 kg - 25 kg**
Broad age spectrum **2 y/o - 10 y/o**

HIGH-RISK CASE SUCCESS

Effective treatment of severely coagulopathic dogs and patients with borderline thrombocytopenia

SURGICAL PROCEDURES AND APPLICATIONS

20+ complex procedures

Adrenalectomy	Zygomatic arch removal
Major artery POC	Maxillectomy surgery
Dialysis catheter bleeding	Horn removal
Tumor/Mass removal	

100% EASE OF USE

100% hemostatic success	Bleeding stopped in every case including severe and persistent bleeding
Zero adverse events	No systemic side effects, local infections, abscesses, or tissue irregularities
Rapid tissue healing	Excellent healing and no re-bleeding within the 60-hour critical window

VASCULAR HEMOSTASIS BREAKDOWN

Bleeding severity	Moderate to severe
Anatomical complexity	High
Vessel type	Veins arteries
Outcome	100% success (bleeding stopped)
Re-bleeding	Zero
Side Effects	Zero

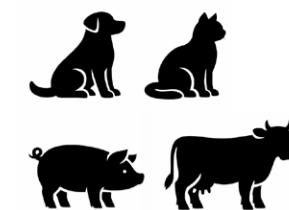


CLINICAL PERFORMANCE & SAFETY OVERVIEW: 100% SUCCESS RATE IN HEMOSTASIS

VITALOC™ SURGICAL APPLICATION REGISTRY & OUTCOMES

Category	Procedures documented	Patient population	Clinical outcome
MAXILLOFACIAL / ORAL	Oral tumor removal Zygomatic arch removal TMJ dissection Mandibulectomy Oronasal fistula repair Dental extractions		Hemophilia Management: Successfully achieved hemostasis in a hemophilic dog with bleeding gingiva.
INTERNAL / SOFT TISSUE	Adrenalectomy Perianal mass removal Tumor removal (leg/Internal) Mass removals		Effective in 'Blind' & Invasive Procedures: Success even when bleeding source was deep or non-existent line of sight.
SPECIALIZED / EMERGENCY	Horn removal Major artery POC Dialysis catheter bleeding Biopsies First aid for bleeding teeth		High-Pressure Arterial Control: Proven effective in major arterial control; proven effective in major artery trials with high-pressure flow. Success in Severely Coagulopathic Patients: Worked beautifully on dogs with low platelet counts bleeding from dialysis catheters.

VERSATILITY ACROSS SPECIES & COMPLEXITY



DIVERSE PATIENT POPULATION

Successfully used on feline, porcine, and various canine breeds (Shih-Tzu to Golden Retriever) ranging from <2kg to >25kg and ages <2 to >10 years.

100%

100% SUCCESS RATE

Bleeding arrested in every documented case, from minor dental to major arterial.

0%

0% RE-BLEEDING RATE:

Monitoring confirmed no re-bleeding in 60-hour post-operative window.

ZERO REPORTED ADVERSE EVENTS

No systemic symptoms (appetite loss/allergic) or local complications (abscesses/infections).



VITALOC™ DELIVERS AN OPTIMAL SOLUTION ACROSS A WIDE RANGE OF CLINICAL SCENARIOS

Species	Patient/Vessel	Procedure	Bleeding severity	Re-bleeding	Safety	Efficacy
 Pig	Major Artery	POC high pressure blood flow	● ● ● ● ●	No	✓	✓
 Dog	Internal Surgery	Adrenalectomy (highly vascular)	● ● ● ● ●	No	✓	✓
 Dog	Dialysis Catheter	Severe coagulopathy hemorrhage	● ● ● ● ●	No	✓	✓
 Dog	General Surgery	Perianal mass (hepatoid gland adenoma)	● ● ● ● ●	No	✓	✓
 Dog	Leg Vein	Deep tumor removal (10x2 cm)	● ● ● ● ●	No	✓	✓
 Cat	Ear vessels	Tumor removal (Cautery alternative)	● ● ● ● ●	No	✓	✓
 Cow	Horn	Horn removal	● ● ● ● ●	No	✓	✓



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Species		Patient/Vessel	Procedure	Bleeding severity	Re-bleeding	Safety	Efficacy
	Dog	Mandible Vein	Total mandibulectomy (Dog 1)	● ● ● ● ●	No	✓	✓
	Dog	Gingiva	Bleeding hemophilic dog	● ● ● ● ●	No	✓	✓
	Dog	Zygomatic Arch	Zygomaticectomy (thrombocytopenia)	● ● ● ● ●	No	✓	✓
	Cat	Maxillofacial	TMJ dissection	● ● ● ● ●	No	✓	✓
	Dog	Maxilla	First-aid bleeding tooth	● ● ● ● ●	No	✓	✓
	Dog	Left Mandible	Oronasal fistula repair	● ● ● ● ●	No	✓	✓



**ABSOLUTE CLINICAL RELIABILITY REGARDLESS OF
ANATOMICAL COMPLEXITY OR PATIENT DEFICIENCIES**

Unmatched Efficacy

100% success rate across
25 selected cases, achieving
hemostasis in veins,
major arteries, and highly
vascularized tissue

Universal Application

Seamlessly adapts to minor
dental extractions, deep internal
resections, and critical major
arterial punctures.

Absolute Safety

Zero reported adverse
events, zero instances
of 60-hour re-bleeding,
and fully sustained,
positive tissue healing.



IN HOUSE MANUFACTURING FACILITIES



UNCOMPROMISING MANUFACTURING STANDARDS

- Manufactured entirely within **a Class 7 Clean Room** environment
- **Terminally sterilized** to ensure absolute zero risk of introduced pathogens
- **Fully compliant** with ISO 13485 Quality Management Systems



BioChange

**We let nature
do it's magic**



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