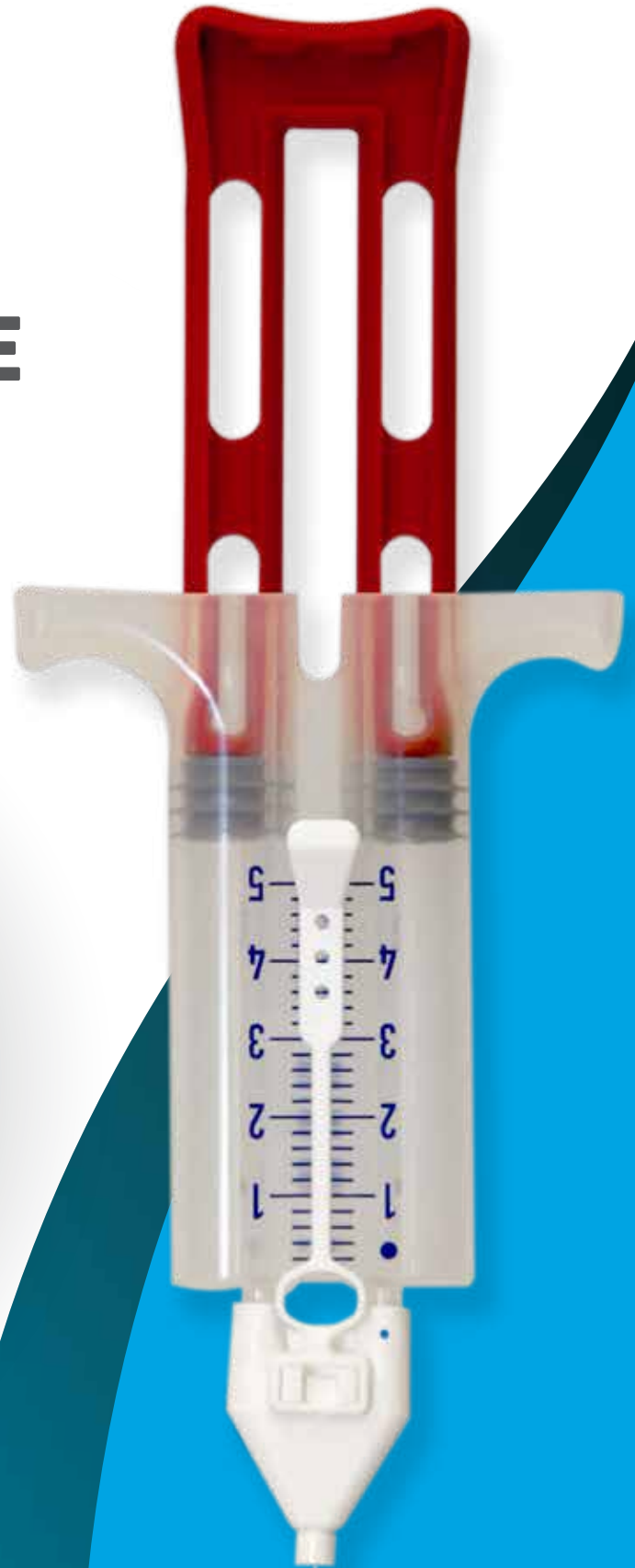




TISSEEL
[Fibrin Sealant]

THE ADVANTAGE HAEMOSTASIS & SEALING

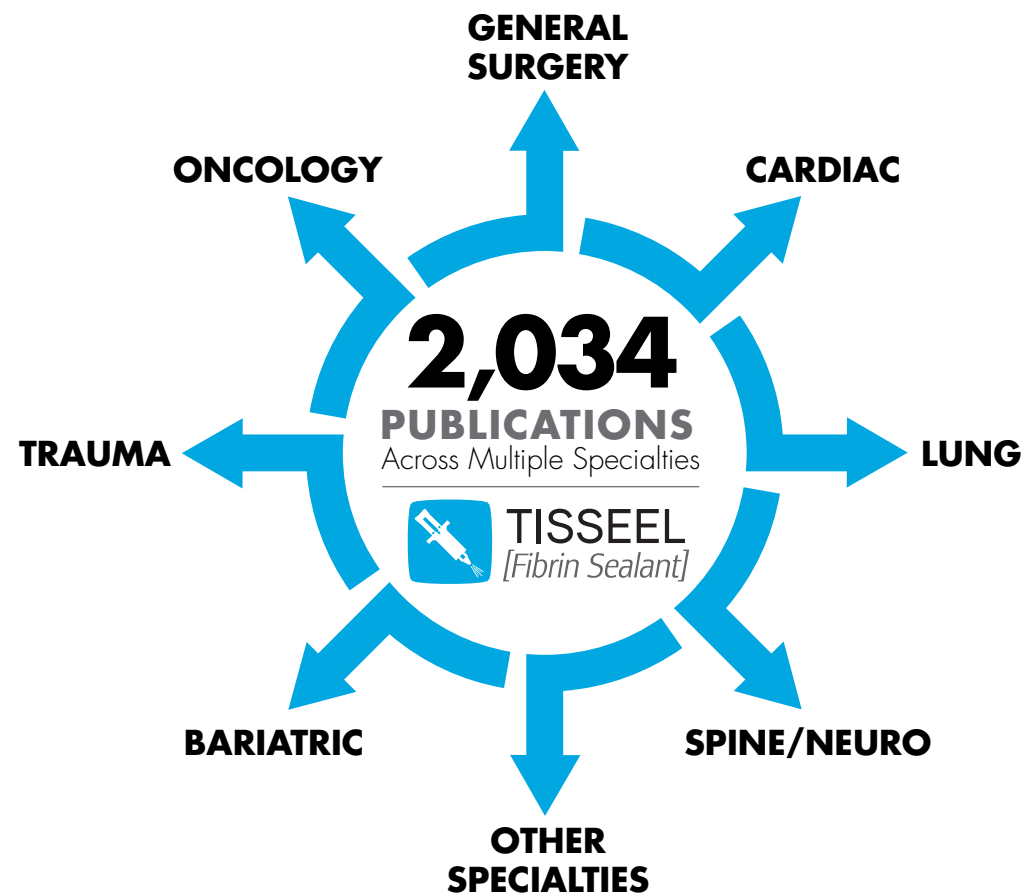


Baxter

THE TISSEEL ADVANTAGE

TISSEEL VH S/D is a two component Fibrin Sealant containing human derived Fibrinogen and Thrombin. The components mix to form a fibrin clot that mimics the **final stage of the coagulation cascade**.^{1,2,3}

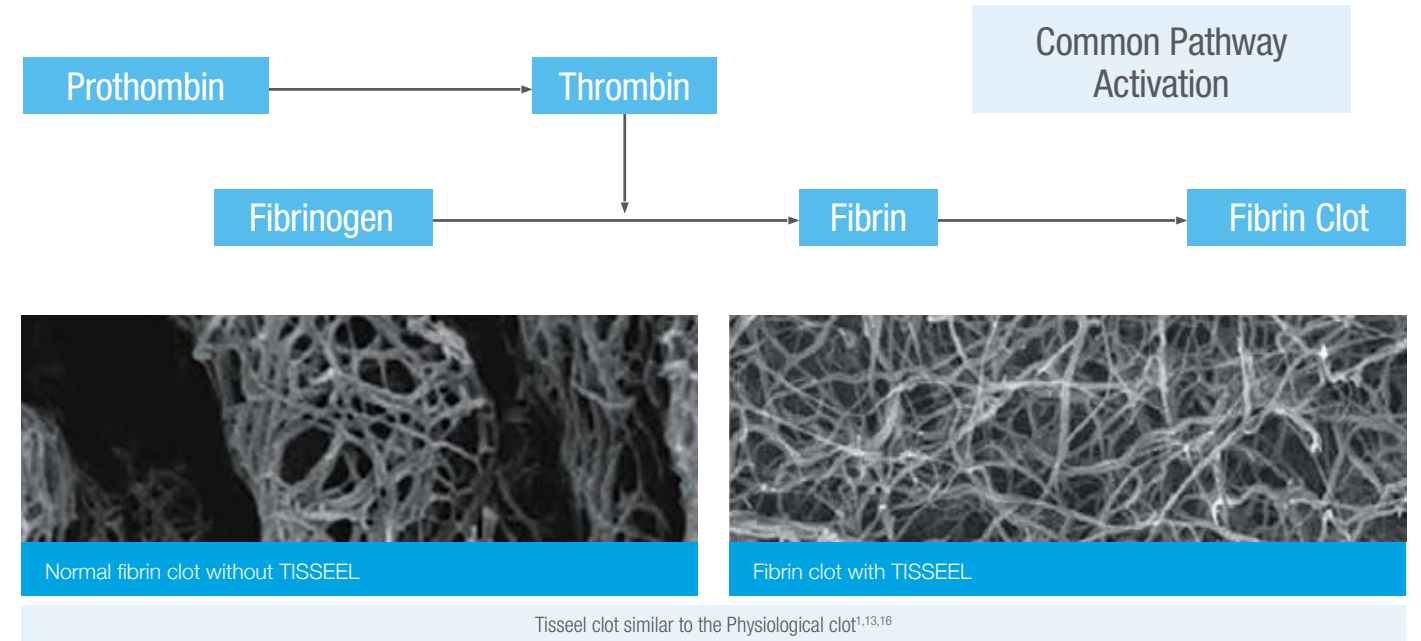
TISSEEL USE HAS BEEN DEMONSTRATED IN OVER **2,000** PUBLICATIONS ACROSS MULTI-SPECIALTIES⁴



MECHANISM OF ACTION

TISSEEL Clot is Similar to Physiological Clot^{1,13,16}

Upon mixing Sealer Protein (human) and Thrombin (human), soluble fibrinogen is transformed into fibrin, that polymerises into a net-like matrix and firmly adheres to exposed collagen¹³. This **achieves haemostasis** and or **gluing of tissue**.

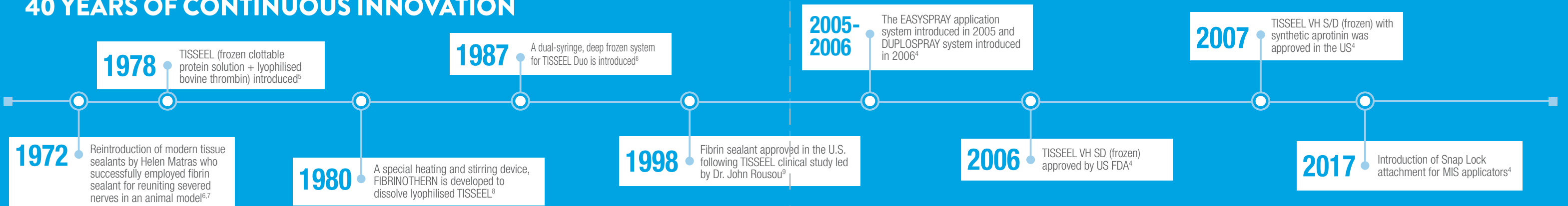


UNIQUE COMBINATION OF COMPONENTS

TISSEEL contains Aprotinin, a synthetic **clot stabiliser** and the **highest concentration** of Fibrinogen commercially available

	TISSEEL ¹⁰	EVICEL ¹¹
FIBRINOGEN	67–106 mg/mL	55–85 mg/mL
THROMBIN	400–625 IU/mL	800–1200 IU/mL
APROTININ	2250–3750 KIU/mL	—

40 YEARS OF CONTINUOUS INNOVATION



TISSEEL HAS MORE FIBRINOGEN

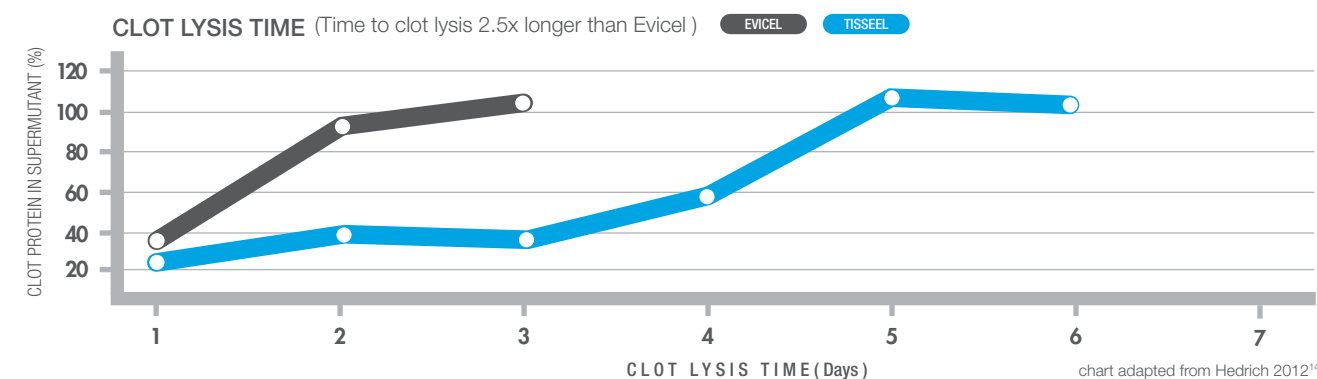
Natural Fibrin Power

TISSEEL contains **30x the fibrinogen concentration** of fibrinogen in human plasma – 67 to 106 mg/mL vs. 2 to 5 mg/mL.^{2,10} Fibrinogen is responsible for the fibrin clot strength which enables sealing and adherence of tissue.

5X THE STRENGTH OF A NORMAL CLOT

Provides Greater Tensile Strength¹²

TISSEEL's **clot strength, stability** and increased time to clot degradation are key factors that support **wound healing**.¹³ TISSEEL contains aprotinin, the most effective exogenous clot stabiliser known.



LONGER TIME TO RESORPTION^{10**}

TISSEEL forms a clot that remains in the body for 10-14 days

Clot stability is important because early detachment of clot from tissue can lead to haemorrhage, loss of adhesion and sealing.

TISSEEL IS EXPECTED TO BE FULLY RESORBED IN 10-14 DAYS

1 DAY	2 DAYS	3 DAYS	4 DAYS	5 DAYS	6 DAYS	7 DAYS	8 DAYS	9 DAYS	10 DAYS	11 DAYS	12 DAYS	13 DAYS	14 DAYS
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PATIENT PROFILES

TISSEEL is especially helpful in complex patients

- Effective in **poor tissue characteristics** (such as friable tissue)¹⁵
- Effective in **heparinised patients** and patients medicated with anti-platelet drugs¹

BROAD COVERAGE FOR OPEN & MIS

DUPLOSPRAY MIS REGULATOR / EASYSPRAY REGULATOR

The DUPLOSPRAY MIS & EASYSPRAY REGULATOR SYSTEM deliver TISSEEL **easily, safely*** and with a **uniform spray**, enabling maximum product utilisation and **broad area coverage**.



DUPLOSPRAY MIS SYSTEM – LAPAROSCOPIC & ROBOTIC SURGERY

- 4 rigid applicators available for precise delivery of TISSEEL in MIS
- System supports “Stop & Start” use during surgery
- For use with CO₂ gas only



EASYSPRAY REGULATOR SYSTEM – OPEN SURGERY

- EASYSPRAY system provides 12.5x more surface coverage than dripped TISSEEL¹⁰
- System supports “Stop & Start” use during surgery
- Compatible with Nitrogen, CO₂ and medical air

5X MORE SPRAY COVERAGE^{10,11}

Maximum Coverage Using Spray

TISSEEL provides up to five times more spray coverage than Evicel, maximising your ability to control bleeding across broad surfaces.

TOTAL VOLUME	TISSEEL	EVICEL
2 mL	100 cm ²	20 cm ²
4 mL	200 cm ²	40 cm ²
10 mL	500 cm ²	100 cm ²

*CAUTION: Any application of pressurised gas may be associated with a potential risk of air or gas embolism, tissue rupture or gas entrapment with compression, which may be life-threatening. Be sure to take appropriate measures to address these risks by observing the recommended minimum spraying distance and the maximum pressure provided in the appropriate spray set instructions for use and or the SmPC

WIDE RANGE OF APPLICATORS

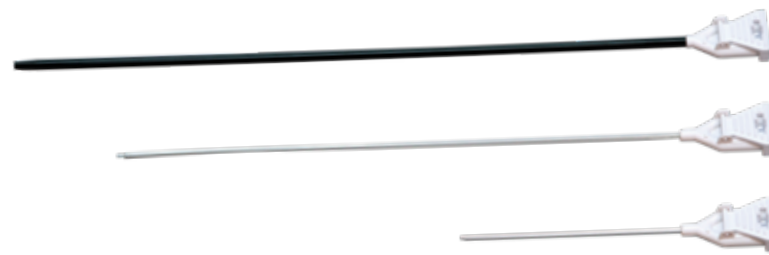
Widest range of Spray and Drip applicators of any fibrin sealant



DUPLOCATH

Double lumen flexible catheters

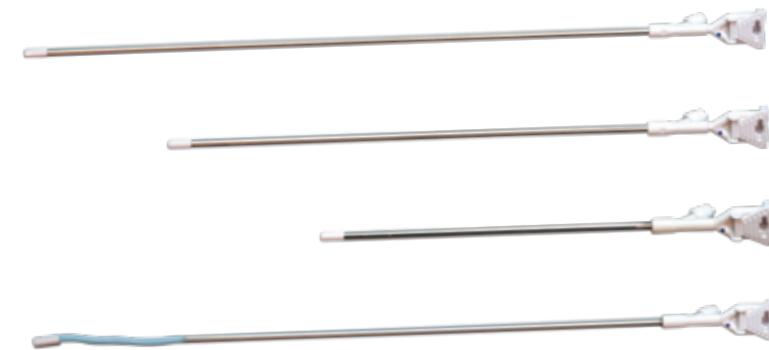
DUPLOCATH 25
 DUPLOCATH 180
 DUPLOCATH 35 MIS
 with MIS adaptor 5 mm



DUPLOTIP

Dual Lumen Applicators

DUPLOTIP 20G x 104 mm
 DUPLOTIP 20G x 264 mm
 DUPLOTIP 5 mm x 318 mm



DUPLOSPRAY

DuploSpray Endoscopic Applicators

DUPLOSPRAY MIS Applicator 40 cm
 DUPLOSPRAY MIS Applicator 30 cm
 DUPLOSPRAY MIS Applicator 20 cm
 360° Spray set Endoscopic Applicator
 with Tether

TISSEEL [Fibrin Sealant] Ordering Information

DESCRIPTION	QTY	CODES
TISSEEL [Fibrin Sealant] 2mL	1 EA	0000000
TISSEEL [Fibrin Sealant] 4mL	1 EA	0000000
TISSEEL [Fibrin Sealant] 10mL	1 EA	0000000

DESCRIPTION	QTY	CODES
EASYSpray	1 EA	0000000
EASYSpray SET	10/PK	0000000

DESCRIPTION	QTY	CODES
DUPLOSPRAY MIS REGULATOR	1 EA	0000000
DUPLOTIP APPLICATOR 5mm X 32CM	10/PK	0000000
DUPLOTIP APPLICATOR 20G X 26CM	10/PK	0000000
DUPLOTIP APPLICATOR 20G X 10CM	10/PK	0000000
DUPLOSPRAY MIS APPLICATOR 20CM	5/PK	0000000
DUPLOSPRAY MIS APPLICATOR 30CM	5/PK	0000000
DUPLOSPRAY MIS APPLICATOR 40CM	5/PK	0000000
SPRAY SET 360 ENDOSCOPIC APPLICATOR	5/PK	0000000

TISSEEL [Fibrin Sealant] Indications

Supportive treatment where standard surgical techniques appear insufficient

- For improvement of haemostasis
- As a tissue glue to improve wound healing or to support sutures
- For tissue sealing, to improve adhesion of the separated tissue

The efficacy in fully heparinised patients has been proven.

The use of TISSEEL is restricted to experienced surgeons who have been trained in the use of TISSEEL.

For epislesional use only.

Contraindications:

- TISSEEL alone is not indicated for the treatment of massive or brisk arterial or venous bleeding
- TISSEEL is not indicated to replace skin sutures intended to close surgical wounds
- TISSEEL must never be applied intravascularly. Intravascular application may result in life-threatening thromboembolic events
- TISSEEL must not be applied in case of hypersensitivity to the active substances or to any of the excipients

Special warnings and precautions for use.

- Do not apply intravascularly
- Life-threatening thromboembolic complications may occur if the preparation is unintentionally applied intravascularly
- Caution must be used when applying fibrin sealant using pressurised gas
- Any application of pressurised gas is associated with a potential risk of air or gas embolism, tissue rupture, or gas entrapment with compression, which may be life-threatening
- Apply TISSEEL as a thin layer. Excessive clot thickness may negatively interfere with the product's efficacy and the wound healing process
- Life-threatening/fatal air or gas embolism has occurred with the use

of spray devices employing a pressure regulator to administer fibrin sealants. This event appears to be related to the use of the spray device at higher than recommended pressures and/or in close proximity to the tissue surface. The risk appears to be higher when fibrin sealants are sprayed with air, as compared to CO₂ and therefore cannot be excluded with TISSEEL when sprayed in open wound surgery

- When applying TISSEEL using a spray device, be sure to use a pressure within the pressure range recommended by the spray device manufacturer
- TISSEEL spray application should only be used if it is possible to accurately judge the spray distance as recommended by the manufacturer. Do not spray closer than the recommended distances
- When spraying TISSEEL, changes in blood pressure, pulse, oxygen saturation and end tidal CO₂ should be monitored because of the possibility of occurrence of air or gas embolism

Reporting of suspected adverse reactions.

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via your national reporting system.

For Posology, method of administration, incompatibilities, interactions and undesirable effects, please refer to the full SPC.

Medicinal products are subject to medical subscription.

In some countries TISSEEL [Fibrin Sealant] is licensed under the trademark TISSUCOL Fibrin Sealant.

Rx Only: For safe and proper use of the DUPLOSPRAY device, please refer to the full Instructions for Use.

This abbreviated summary of product characteristics (SPC) is intended for international use. Please note that it may differ from the licensed SPC in the country where you are practising. Therefore, please always consult your country-specific SPC or package leaflet.

References

1. TISSEEL VH S/D Fibrin Sealant [Summary of Product Characteristics]. Vienna, Austria: Baxter International Inc. 2007.
2. Kamath S, Lip GYH. Fibrinogen: Biochemistry, Epidemiology and Determinants. *Q J Med*, 1993; 96:711-72.
3. Oz MC, et al. Floseal Matrix: New Generation Topical Hemostatic Sealant. *J Card Surg*, 2003; 18:486-493
4. Baxter Data on File, 2017
5. Jackson MR. Fibrin Sealant as a Hemostatic Agent in Vascular Surgery. *Perspect Vasc Surg Endovasc Ther*. 2000;13:85-94
6. Matras H, Dinges HP, Lassmann H et al. Zur Nahtlosen Interfasikularen Nerventransplantation im Tierexperiment. *Wien Med Wochenschr*. 1972;122:517-23
7. Sierra DH. Fibrin Sealant Adhesive Systems: A Review of their Chemistry, Material Properties and Clinical Applications. *J Biomater Appl*, 1993; 7:309-353.
8. Redl H. History of Tissue Adhesives. In: Saltz R, Toriumi D, editors. *Tissue Glues in Cosmetic Surgery*. St Louis: Quality Medical Publishing; 2004.
9. Lowe J, Luber J, Levitsky J et al. Evaluation of the Topical Hemostatic Efficacy and Safety of TISSEEL VH S/D Fibrin Sealant Compared with Currently Licensed TISSEEL VH in Patients Undergoing Cardiac Surgery: A Phase 3, Randomized, Double-Blind Clinical Study. *J Cardiovasc Surg*. 2007;48:323-331.
10. TISSEEL Fibrin Sealant Frozen Solution and Lyophilized Powder [Prescribing Information]. Westlake Village, CA. Baxter Healthcare Corporation. Revised 11 Nov 2014.
11. EVICEL [Prescribing Information]. Belgium, Omrix Biopharmaceuticals. 3/2013
12. Redl H, Schlag G. Properties of Different Tissue Sealants with Special Emphasis on Fibrinogen-Based Preparations. In: Schlag G, Redl H editors. *Fibrin Sealants in Operative Medicine*. Berlin, Heidelberg: Springer; 1986:1:27-38.
13. Seelich T.J. Tissucol: Biochemistry & Methods of Application. *J. Head & Neck Pathol*. 1982; 3:65-70
14. Hedrich HC, Simunek M, Reisinger S. Fibrin Chain-Cross Linking, Fibrinolysis, and In Vivo Sealing Efficacy of Differently Structure Fibrin Sealants. *J Biomed Mater res B Appl Biomater*. 2012; 1-6.
15. Rousou, et al. Randomized Clinical Trial of Fibrin Sealant in Patients Undergoing R esternotomy or Reoperation after Cardiac Operations. A Multicenter Study: *J Thoracic Cardiovascular Surg*.1989;97:194-203.
16. Baxter Healthcare Corporation. How TISSEEL works. http://www.tisseel.com/us/tisseel_performance_how_tisseel_works.html. Accessed March 1, 2018