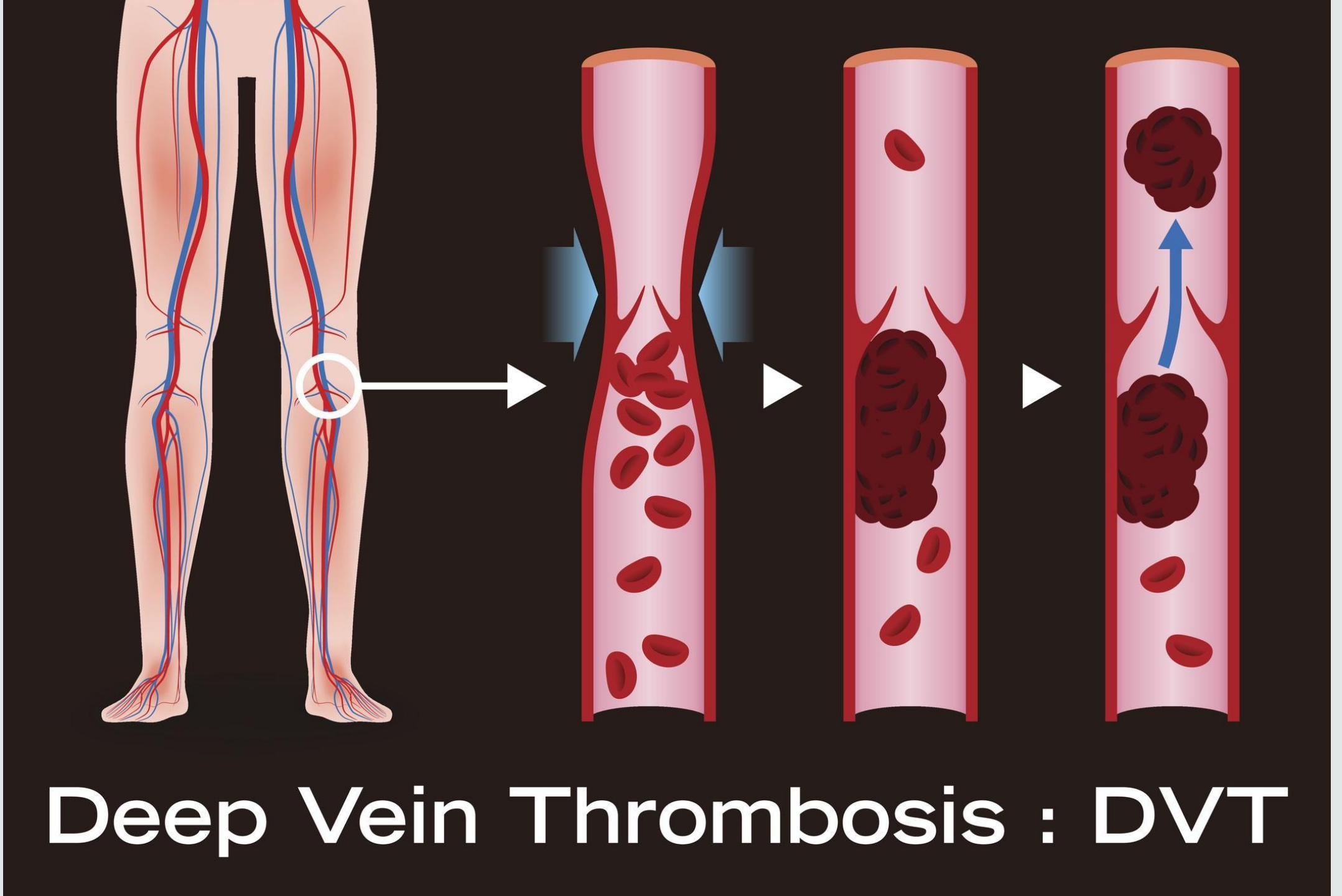
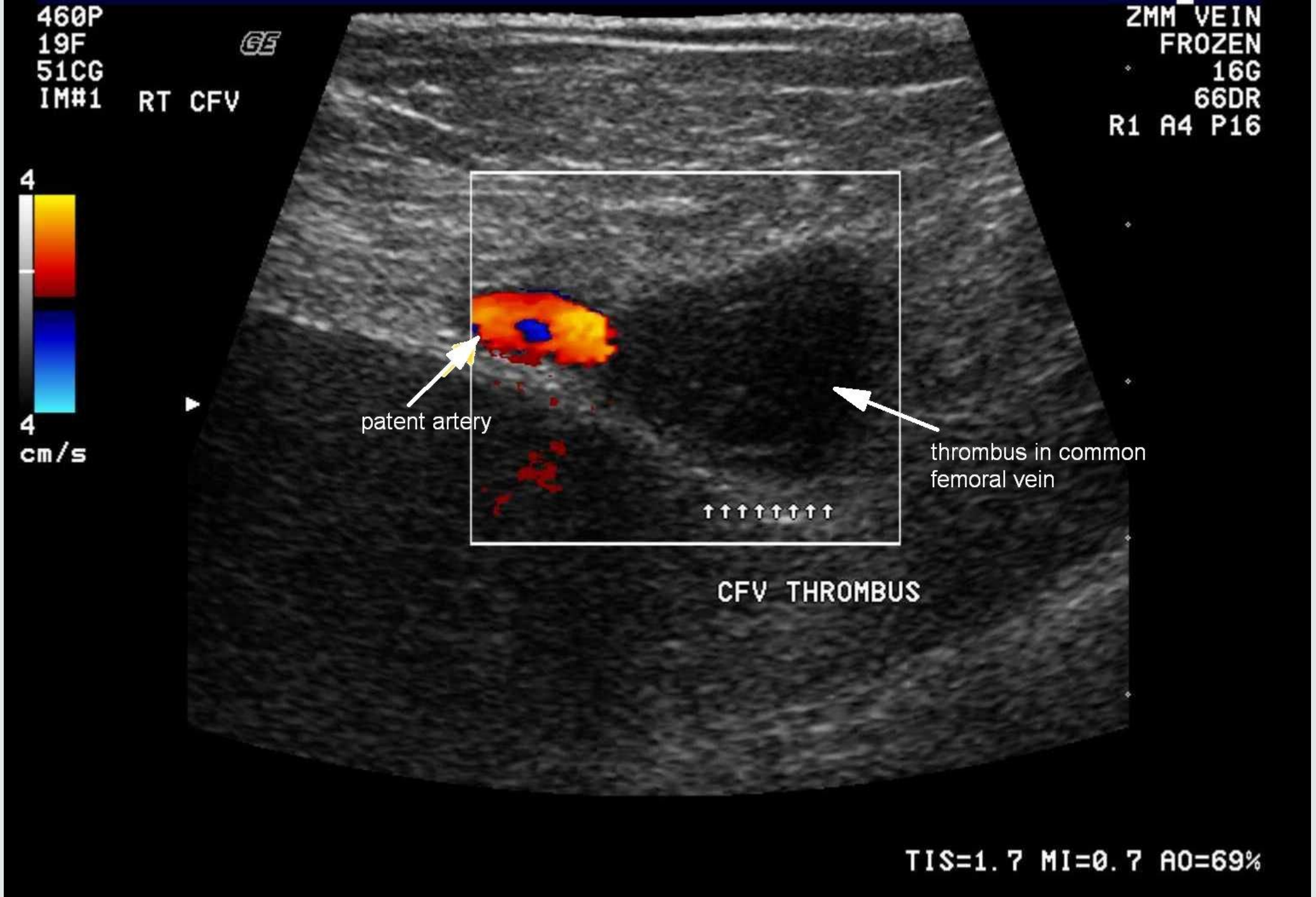
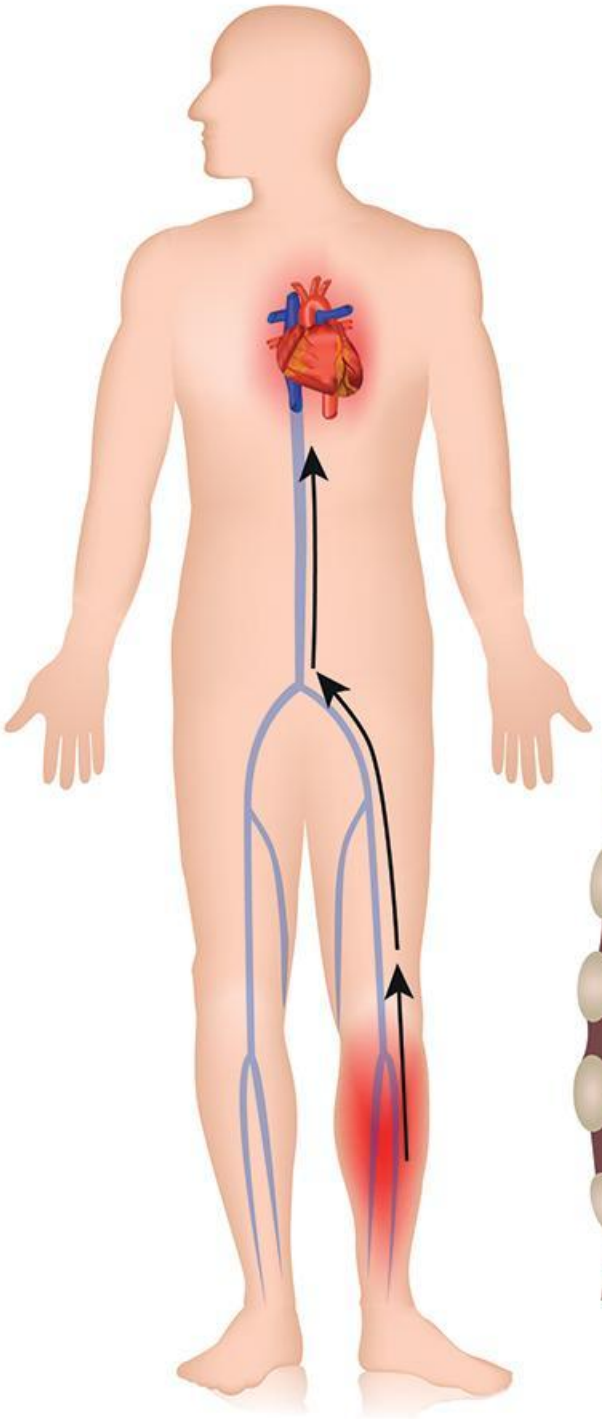
VTE: Chemoprophylaxis for Abdominoplasty; It is not needed past 3 days

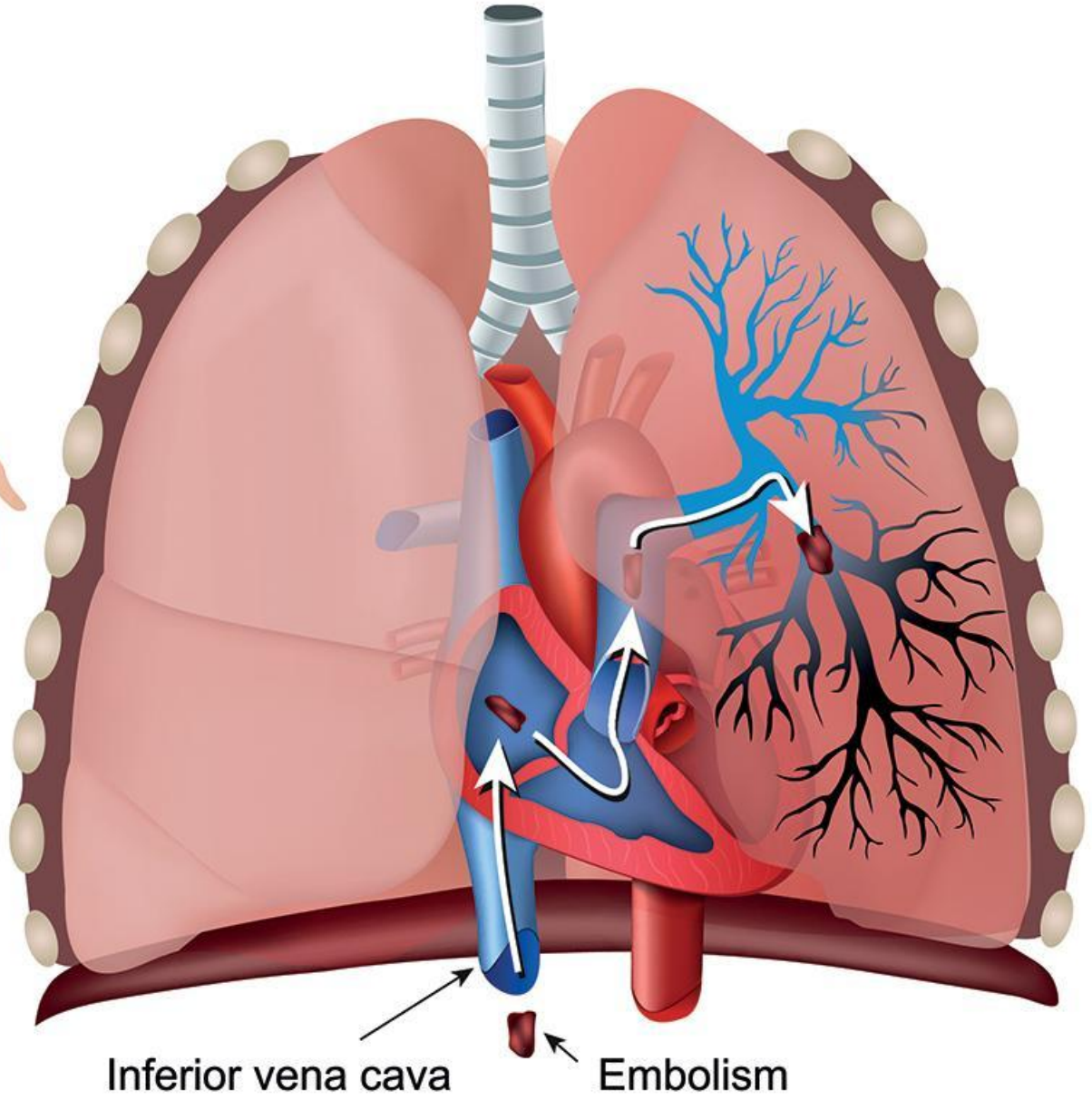
Thomas John Zaydon, Jr. MD. FACS
June 14, 2022 - Orlando


Deep Vein Thrombosis : DVT


460P
19F
51CG
IM#1
RT CFV
GE
ZMM VEIN
FROZEN
16G
66DR
R1 A4 P16
4
4
cm/s
patent artery
thrombus in common femoral vein
CFV THROMBUS
TIS=1.7 MI=0.7 AO=69%

Pulmonary Embolism





How long after surgery do you worry about a blood clot?

Dr. Joseph Capri Scores

Joseph A. Caprini, MD, MS, FACS, RVT. Louis W. Biegler Professor of Surgery, NorthShore University HeathSystem, Clinical Professor of Surgery, University of Chicago Pritzker School of Medicine, Chicago, IL 60637, Email: j-caprini2@aol.com, Website: venousdisease.com

Venous Thromboembolism Risk Factor Assessment

Patient's details

Name: _____ Age: _____

Sex: _____ Weight: _____

Height: _____

CHOOSE ALL THAT APPLY

A1: Each Risk Factor Represents 1 Point

- ❍ Age 40-59 years
- ❍ Minor surgery planned
- ❍ History of prior major surgery
- ❍ Varicose veins
- ❍ History of inflammatory bowel disease
- ❍ Swollen legs (current)
- ❍ Obesity (BMI > 30)
- ❍ Acute myocardial infarction (<l month)
- ❍ Congestive heart failure (< 1 month)
- ❍ Sepsis (< 1 month)
- ❍ Serious lung disease incl. pneumonia (< 1 month)
- ❍ Abnormal pulmonary function (Chronic obstructive pulmonary disease)
- ❍ Medical patient currently at bed rest
- ❍ Leg plaster cast or brace
- ❍ Central venous access
- ❍ Blood transfusion (< 1 month)
- ❍ Other risk factor/s_____
  _____

A2: For Women Only (Each Represents 1 Point)

- ❍ Oral contraceptives or hormone replacement therapy
- ❍ Pregnancy or postpartum (<1 month)
- ❍ History of unexplained stillborn infant, recurrent spontaneous abortion (≥ 3), premature birth with toxemia of pregnancy or growth restricted infant

B: Each Risk Factor Represents 2 Points

- ❍ Age 60-74 years
- ❍ Major surgery (> 60 minutes)*
- ❍ Arthroscopic surgery (> 60 minutes)*
- ❍ Laparoscopic surgery (> 60 minutes)*
- ❍ Previous malignancy
- ❍ Morbid obesity (BMI > 40)

C: Each Risk Factor Represents 3 Points

- ❍ Age 75 years or more
- ❍ Major surgery lasting 2-3 hours*
- ❍ BMI > 50 (venous stasis syndrome)
- ❍ History of SVT, DVT/PE
- ❍ **Family history of DVT/PE**
- ❍ Present cancer or chemotherapy
- ❍ Positive Factor V Leiden
- ❍ Positive Prothrombin 20210A
- ❍ Elevated serum homocysteine
- ❍ Positive Lupus anticoagulant
- ❍ Elevated anticardiolipin antibodies
- ❍ Heparin-induced thrombocytopenia (HIT)
- ❍ Other thrombophilia- Type_____

D: Each Risk Factor Represents 5 Points

- ❍ Elective major lower extremity arthroplasty
- ❍ Hip, pelvis or leg fracture (< 1 month)
- ❍ Stroke (< 1 month)
- ❍ Multiple trauma (< 1 month)
- ❍ Acute spinal cord injury (paralysis)(< 1month)
- ❍ Major surgery lasting over 3 hours*

TOTAL RISK FACTOR SCORE:

*Select only one from the surgery category

Please see following page for prophylaxis suggestions and safety considerations

VTE risk and suggested prophylaxis for surgical patients

Total Risk Factor Score	Incidence of DVT	30-day Proven DVT Incidence*	Risk Level	Prophylaxis Regimen
0-1	<10%	0%	Low Risk	No specific measures; early ambulation
2	10-20%	0.7%	Moderate Risk	IPC, LDUH (5000U BID), or LWMH (<3400 U)
3-4	20-40%	0.97%	High Risk	IPC, LDUH (5000U TID), or LMWH (>3400U) or FXa I
5 or more	40-80% 1-5% mortality	1.94%	Highest Risk	Pharmacological: LDUH, LMWH (>3400 U), Warfarin, or FXa I alone or in combination with IPC

*30-day post-discharge clinically evident imaging proven DVT
IPC - Intermittent Pneumatic Compression; LDUH - Low Dose Unfractionated Heparin LMWH - Low Molecular Weight Heparin FXa I - Factor X Inhibitor

Prophylaxis Safety Considerations: Check box if answer is 'YES'

Anticoagulants: Factors Associated with Increased Bleeding

- ❍ Is patient experiencing any active bleeding?
- ❍ Does patient have (or has had history of) heparin-induced thrombocytopenia?
- ❍ Is patient's platelet count <100,000/mm3?
- ❍ Is patient taking oral anticoagulants, platelet inhibitors (e.g., NSAIDS, Clopidogrel, Salicylates)?
- ❍ Is patient's creatinine clearance abnormal? If yes, please indicate value _____

If any of the above boxes are checked, the patient may not be a candidate for anticoagulant therapy and you should consider alternative prophylactic measures such as IPC or FP.

Intermittent Pneumatic Compression (IPC)

- ❍ Does patient have severe peripheral arterial disease?
- ❍ Does patient have congestive heart failure?
- ❍ Does patient have an acute superficial/deep vein thrombosis?

If any of the above boxes are checked, then patient may not be a candidate for intermittent compression therapy and you should consider alternative prophylactic measures. (IVC filter?)

Based on: V. Bahl, H. Hu, P. K. Henke, T. W. Wakefield, D. A. Campbell J, Caprini JA. Ann Surg 2009:DOI: 10.1097/SLA.0b013e3181b7fca6; Zakai NA, Wright J, Cushman M. J Thromb Haem 2004;2:2156-61; Seruya M, Venturi ML, Iorio ML. J Plastic & Reconstructive Surgery 2008;122:1701-8; Hatef D, Kenkel J, Nguyen M. Plastic & Reconstructive Surgery 2008;122:269-79; McLafferty RB, Lohr JM, Caprini JA, et al. J Vasc Surg 2007;45:142-8; McLafferty RB, Passman MA, Caprini JA, et al. J Vasc Surg 2008;48: 394-9; Nicolaides AN et al: INT Angiol 2006; 25:101-161.; Arcelus JI, Caprini JA, Traverso CI. Semin Thromb Hemost 1991;17(4):322-5.; Borow M, Goldson HJ. Am J Surg 1981;141(2):245-51.; Caprini JA, Arcelus I, Traverso CI, et al. Semin Thromb Hemost 1991;17(suppl 3):304-12.; Caprini JA, Arcelus JI et al: Scope 2001; 8: 228-240.; Caprini JA, Arcelus JI, Reyna JJ. Seminars in Hematology, April 2001;38(2)Suppl 5:12-19.; Caprini, JA. Dis Mon 2005;51:70-78.; Oger E: Thromb Haem, 2000; 657-660.; Turpie AG, Bauer KA, Eriksson BI, et al. Arch Intern Med 2002; 162(16):1833-40.; Ringley et al: American Surgeon 2002; 68(3): 286-9.; Morris et al. Arch Surg 2002. 137(11):1269-73.; Sugarman HJ et al, Ann Surg: 2001:234 (1) 41-46. , Nguyen, NT, Hinojosa, MW, Fayad, C, et al. Ann Surg 2007;246(6):1021-1027.

Prescribed medication and dosage

☐ Selective factor Xa inhibitor.....

☐ LMWH.....

☐ UFH.....

Physician's signature.....

Revised November 5, 2009. This Document Is For Educational Purposes Only And The Opinions Expressed Are Solely Those Of The Author.

American Society of Plastic Surgeons

Evidence-based Practices for Thromboembolism Prevention: A report from the ASPS Venous Thromboembolism Task Force Approved by ASPS Executive Committee: July 2011

Bruce A Mast

Maximizing chemoprophylaxis against venous thromboembolism in abdominoplasty patients with the use of preoperative heparin administration

Ann Plastic Surgery. 2014

Patients undergoing one of the following major procedures when performed under general anesthesia lasting more than 60 minutes

- *Body contouring*
- *Abdominoplasty*
- *Breast reconstruction*
- *Lower extremity procedures*
- *Head/neck cancer procedures*

Grade B

ASPS Level of Evidence Rating Scales

Should strongly consider the option to use extended LMWH postoperative prophylaxis

Grade B

Reconsidering the Role of Routine Anticoagulation for Venous Thromboembolism Prevention in Plastic Surgery

Annals of Plastic Surgery
Wolters Kluwer Health
Eric Swanson, MD

Plastic & Reconstructive Surgery : Eric Swanson, MD

Caprini Scores and Risk Stratification in Plastic Surgery: Time to Reconsider Our Strategy

Anticoagulation seems to make sense

Several of the VTEs were diagnosed at time points well beyond the 1-week period of anticoagulation

American Association of Plastic Surgeons Consensus Panel 2016

"We do not recommend adding routine chemoprophylaxis for venous thromboembolism prophylaxis in non-risk stratified patients undergoing…body contouring."

Deep venous thrombosis that develop after plastic surgery take 5 weeks to resolve

Investigators have reported VTEs despite anticoagulation

Hematomas are not inconsequential

Patient surveys show that 93% of patients prefer ultrasound surveillance to anticoagulation

Eliquis®
(apixaban) tablets 5mg 2.5mg

FACTS
MYTHS

VTE can be minimalized but not eliminated

Prevention is a Dominant Initial Strategy for VTE Risk Mitigation

Deep Venous Thrombosis Prophylaxis

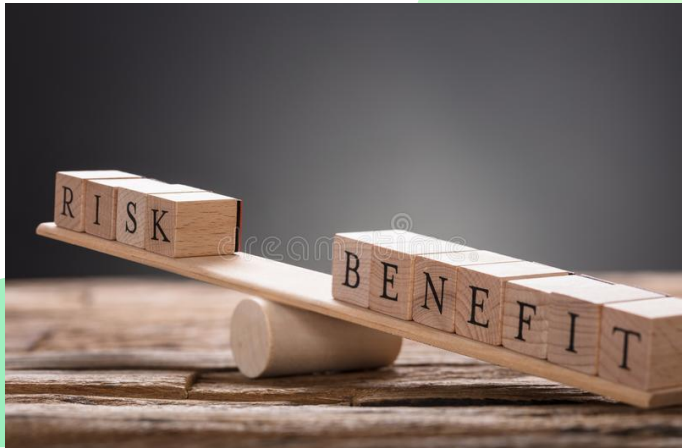
By Casey T. Kraft, MD – Jeffrey Janis, MD

No, to all Inclusive Recommendations For Medication, Dosage, Length of Prophylaxis.

Chemoprophylaxis and Risk of Bleeding after Abdominoplasty

Aesthetic Surgery Journal

By Eric Swanson, MD



Deep Venous Thrombosis Prophylaxis

Casey T. Kraft, MD, Jeffrey E. Janis, MD*

- Mechanical and chemical prophylaxis are at the discretion of the surgeon for each individual patient.

- The 2005 Caprini Thrombosis Risk Factor Assessment Form can be useful for risk stratification.

Evidence-Based Recipes for Venous Thromboembolism Prophylaxis: A Practical Safety Guide

Plastic & Reconstructive Surgery: Journal of the American Society of Plastic Surgeons

Christopher Pannucci, MD. MS

Just The Facts

- Please call or e-mail me with any questions, thank you for attending today's meeting.

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ASPS Member Surgeon

Thank You!

SESPRS
Southeastern Society of Plastic and Reconstructive Surgeons