Abortion in women with haematological disease

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Disclosures

- I am not a haematologist.
- I do not spell haematology with an “ae”.
- Presentation: aspiration > medical abortion
- I have no relevant financial disclosures

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Objectives

- To review the risks of clotting and bleeding in pregnancy and abortion care.
- To describe several of the common clotting/bleeding disorders an abortion provider might encounter.
- To identify the current clinical evidence regarding abortion care and women with haematologic disorders.
- To discuss a practical approach to abortion care and women with haematologic disorders

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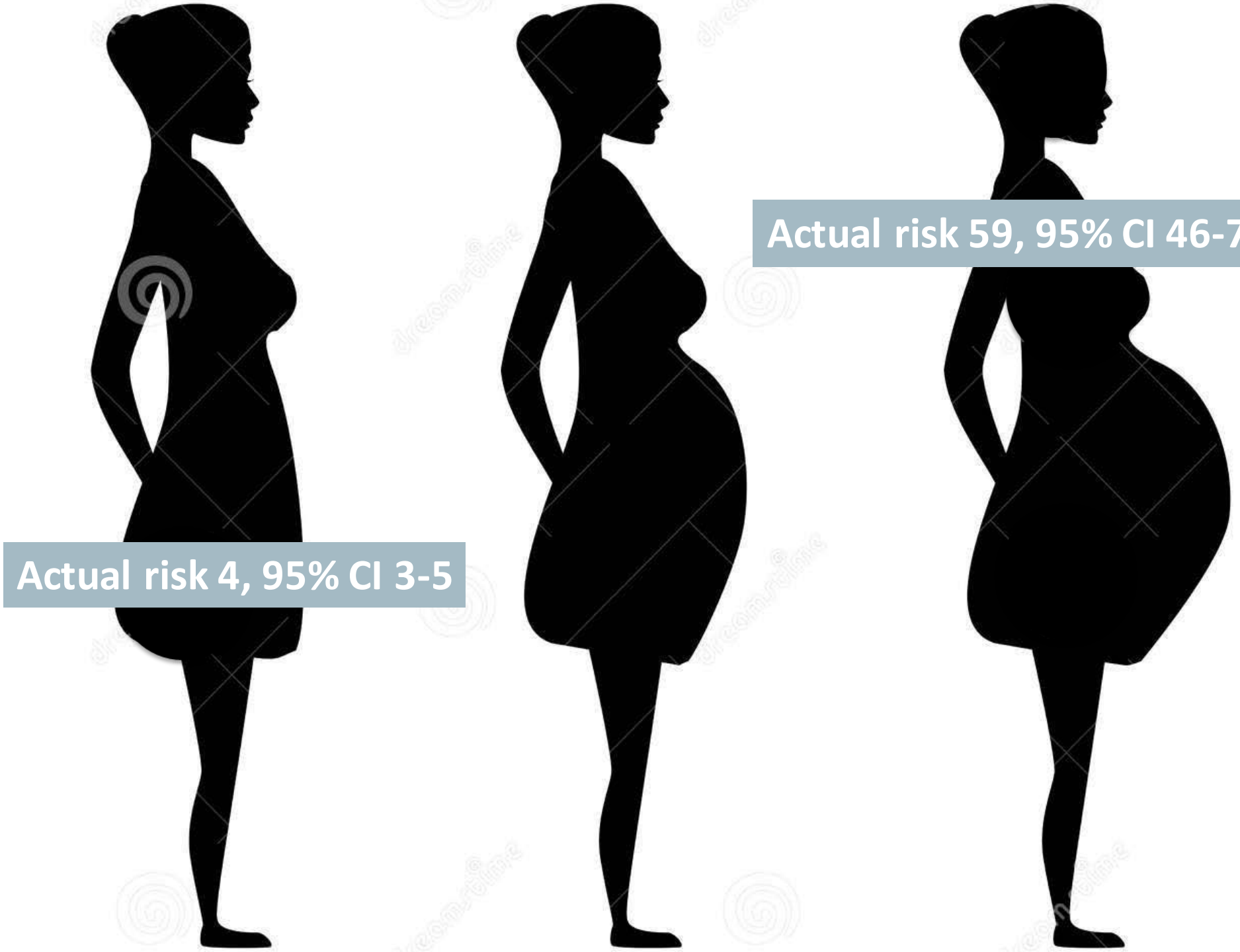

Virkus, et al. Thromb Haemost 2011

Abortion-related blood loss

- **Median blood loss**
  - First trimester medical abortion ~35-90ml
  - First trimester aspiration abortion ~50ml
  - Second trimester dilation & evacuation ~116mL

- **Bleeding complications**
  - First trimester aspiration
    - Hemorrhage not requiring transfusion: ≤4.7%
    - Hemorrhage requiring transfusion: ≤0.1%
  - Second trimester dilation & evacuation <1%

Source: White et al. systematic review. Contraception 2015; Chan et al Contraception 1993; Micks et al Contraception 2015; SFP Guidelines 2012 epub

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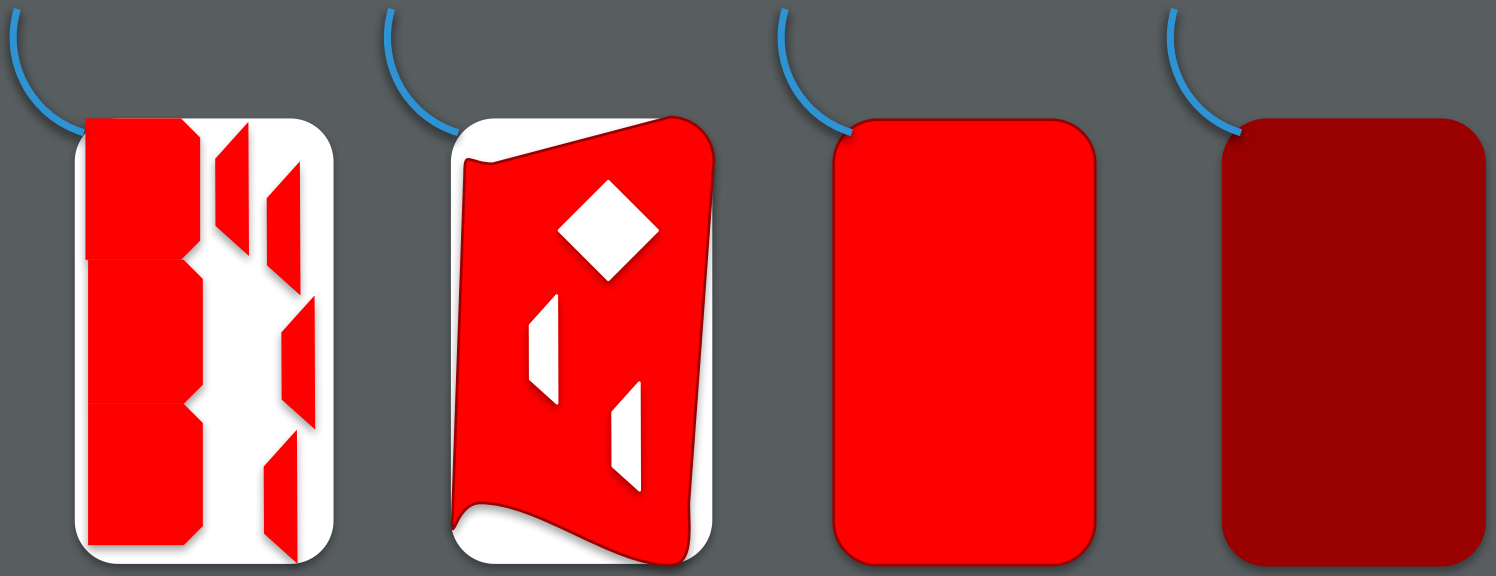
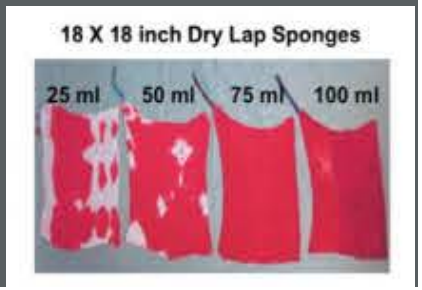
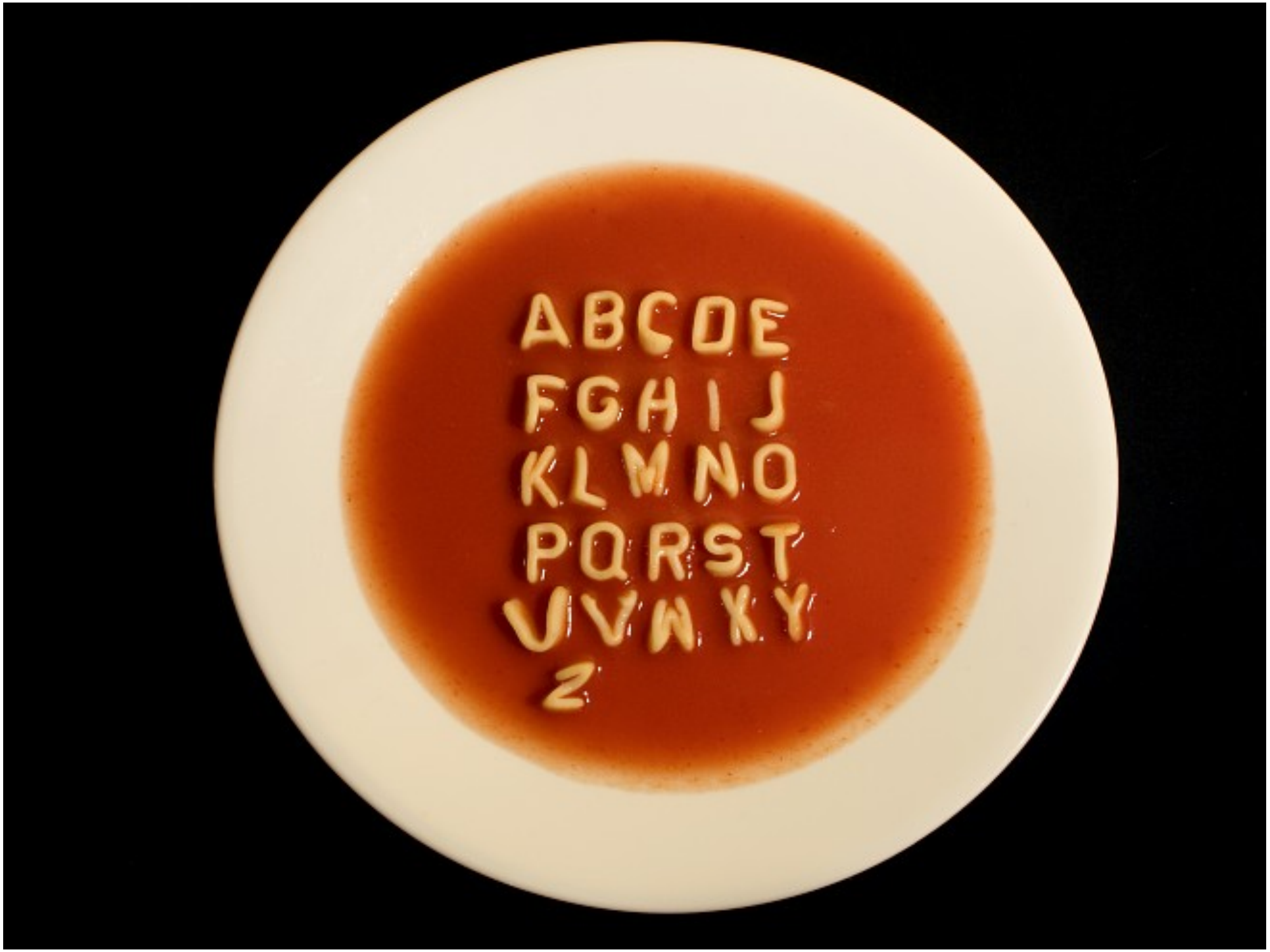
Estimates of blood loss

18x18" lap sponges



25ml 50ml 75ml 100ml




ABCDE
FGHIJ
KLMNO
PQRST
UVWXY
Z

Heterozygous MTHFR

NORMAL

Homocysteine study collab JAMA 2002; Rosenberg et al Am J Hum Genet 2002; Gohil Thromb Haemost 2009

ELSEVIER

Contraception

Contraception 83 (2011) 431–435

Original research article

Blood loss at the time of first-trimester surgical abortion in anticoagulated women

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Abstract

Background: The objective of this study was to compare blood loss resulting from surgical termination of pregnancy up to 12 weeks of gestation between women receiving anticoagulation therapy and healthy controls.

Study design: Women using heparin, low-molecular-weight heparin or warfarin requesting surgical abortion were enrolled and prospectively matched with nonanticoagulated controls. The primary outcome was procedural blood loss. Additional outcomes included postprocedure blood loss (prior to discharge and 7 days following the procedure using standardized feminine hygiene products) and hemoglobin change (preoperative vs. Postoperative Day 1).

Results: Four anticoagulated subjects and six control subjects were included in the analysis. The median blood loss at the time of the procedure was 70 mL (range 6–187) for the anticoagulated group and 22.5 mL (range 10–100) for the control group (p=.33). The median blood loss in the postoperative period prior to discharge was 10.5 mL (range 1–11) for the anticoagulated group and 5.5 mL (range 2–35.4) for the control group (p=.82). There were no differences in use of hygiene products or mean hemoglobin change between groups. No interventions for bleeding were necessary at the time of the procedure.

BLOOD LOSS AT THE TIME OF SURGICAL ABORTION UP TO 14 WEEKS IN ANTICOAGULATED WOMEN: A REGISTRY CASE SERIES

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University of Hawai'i John A. Burns School of Medicine, Honolulu, HI, USA

Tschann M, Jensen J, Bednarek P, Texeira R, Edelman A

Objectives: To describe estimated blood loss (EBL) with surgical abortion before 14 weeks' gestation in therapeutically and prophylactically anticoagulated women.
Methods: Clinicians involved in a private professional listserv (Family Planning Fellowship) were invited to report cases of women who were anticoagulated and undergoing surgical abortion up to 14 weeks' gestation via a secure online interface. No changes in the care of patients were stipulated and no patient identifiers were collected. Clinicians were contacted 30 days postprocedure to capture postoperative complications.
Results: Fifty-two cases were reported between February 2011 and October 2013. Anticoagulant therapy included low molecular weight heparin (57.7% of women), heparin (11.5%) and warfarin (30.8%). Providers reported continuation of therapeutic anticoagulation during the procedure in 48.1% of women, subtherapeutic anticoagulation in 19.2% of women and reversal prior to the procedure in 32.7% of women. EBL was less than 50 mL for 27/35 patients who continued the anticoagulant (therapeutic and subtherapeutic) and for 15/17 of those who reversed it

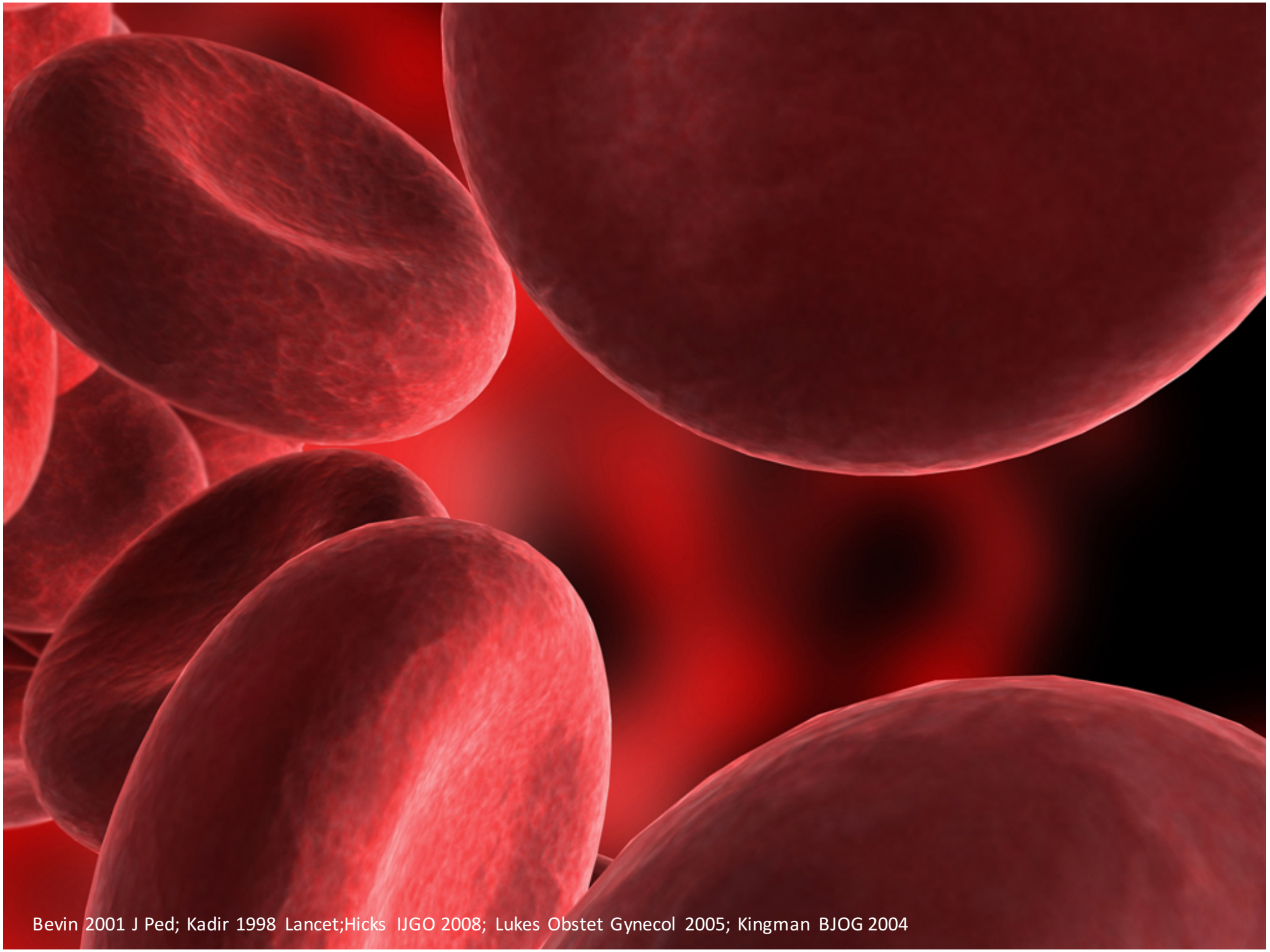
Perioperative management: anticoagulation & minor procedures

- May not need to stop anticoagulation
  - Assess bleeding risk
- If stopping anticoagulation
  - Assess risk of clotting – if high, bridging with heparin
    - VTE, stroke, TIA in last 3 months
    - Previous VTE while on therapeutic anticoagulation
    - Mechanical heart valve
  - Need sufficient time to reverse effects or reversal agent

Perioperative management of anticoagulation (British Society for Haematology)

Anticoagulation – if stopping

Agent	Stop	Considerations
Warfarin	5 days before	-INR $\geq$ 1.5 hold surgery or give Vit K -Restart 12-24 hours after -Takes 5-10 days for INR >2
Low molecular weight heparin	-24 hours before if daily dosing -12 hours before if BID dosing	-Restart within 24 hours (low risk procedure)
Unfractionated heparin	-evening before procedure	-Restart within 24 hours (low risk procedure)


Bevin 2001 J Ped; Kadir 1998 Lancet;Hicks IJGO 2008; Lukes Obstet Gynecol 2005; Kingman BJOG 2004

VWB type	VWF levels	%VWB patients affected	Symptoms
Type 1 Auto dominant	Low VWF levels	~70%	Mild to moderate
Type 2 Auto dominant (4 subtypes)	Normal VWF levels but VWF does not work correctly (qualitative abnormalities)	~25-35%	Usually moderate symptoms with occasional severe symptoms
Type 3 Auto recessive	Little or no VWF	Rare, less than 5%	Usually the most severe symptoms

Desmopressin (DDAVP)

- **Works in Type 1 and most Type 2**
- **Dosing for minor procedures in adults:**
  - Intranasal 300mcg (patient weight > 50kg, each puff =150mcg)
  - Onset 30-60 minutes
  - Duration of effect 6-12 hours
  - Repeat dosing may be considered
- **Side effects:**
  - Tachyphylaxis
  - Facial flushing
  - Headache
  - Nausea
  - Tingling
- **Avoid concomitant use of NSAIDs**

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https://www.nhlbi.nih.gov/health-pro/guidelines/current/von-willebrand-guidelines/full-report/4-management-of-vwd

Other considerations

- Abortion technology
  - Medical versus aspiration/D&E
  - Sharp curettage is considered obsolete by WHO

- Be prepared to manage bleeding
  - Uterotonics
  - Vasopressin
  - Tamponade
  - ?location of care

2013 Safe Abortion Guidelines WHO

Contraception

	Combined methods Estrogen + progestin	Progestin only Pill/implant/injection	Cu-IUD	LNG-IUD
History of DVT/PE	4	2	1	2
Acute DVT/PE	4	3	1	3
DVT/PE on anticoagulation	4	2	1	2
Known thrombotic mutations	4	2	1	2

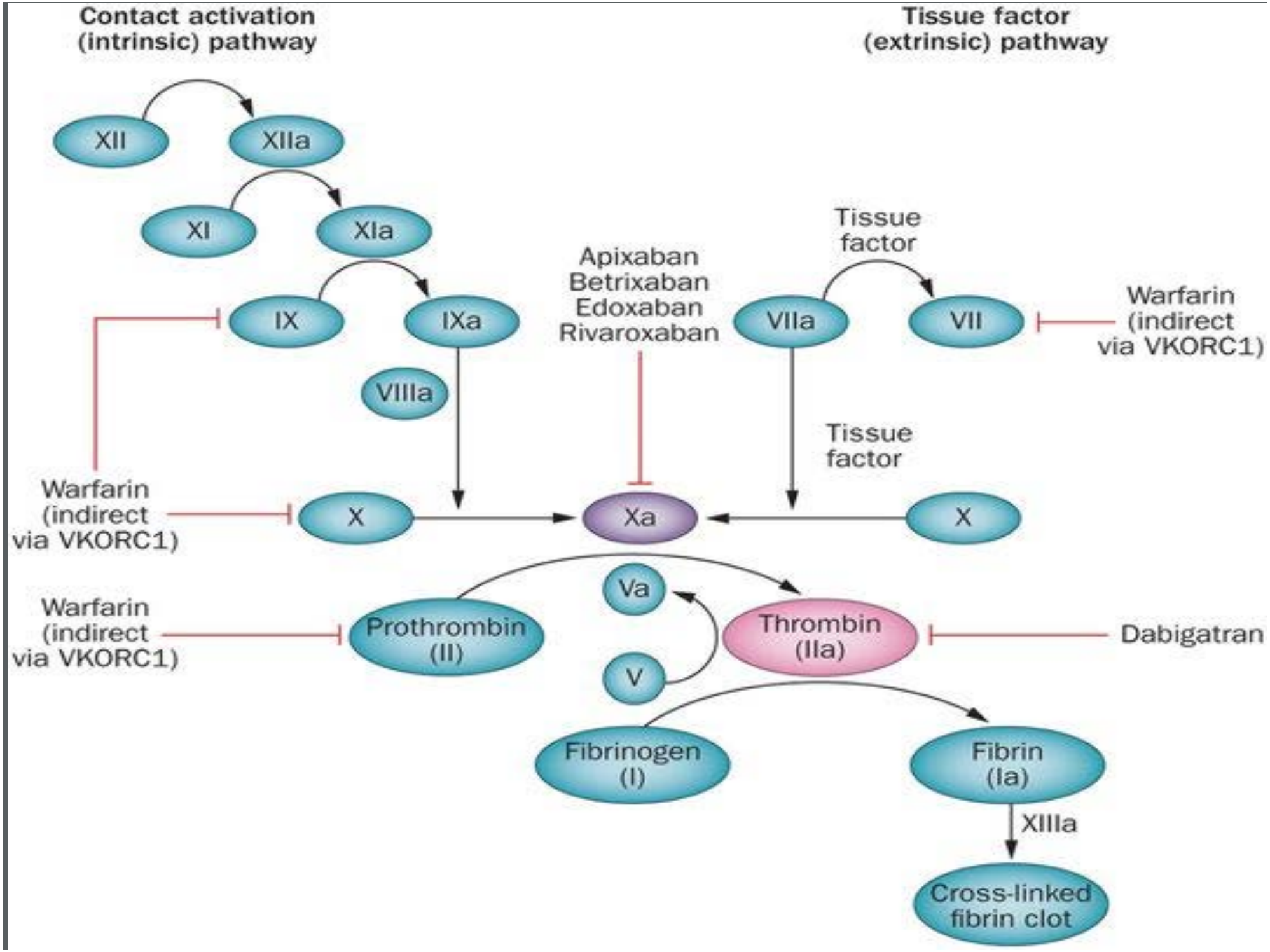
Summary

- Risk of bleeding in abortion procedures is rare
- Anticoagulants likely can be continued for 1st trimester aspiration abortion procedures
  - Too little information is known about 2nd trimester but unless at high risk for clots, no need to bridge if anticoagulant stopped


Thank you!
Questions?: edelmana@ohsu.edu

Evidence-based resources

- The National Heart, Lung, and Blood Institute (health professionals section)
- National Hemophilia Foundation for all bleeding disorders
- Society of Family Planning
  - First trimester abortion in women with medical conditions
  - Management of post-abortion hemorrhage
- Royal College of OB/GYN
  - British society for Haematology Guideline peri-operative management of anticoagulation and anti-platelet therapy
- National Guideline Clearinghouse ("Trustworthy guidelines")
- The WHO Medical Eligibility Criteria
  - http://whqlibdoc.who.int/publications/2010/9789241563888_eng.pdf


Contact activation
(intrinsic) pathway
Tissue factor
(extrinsic) pathway
XII
XIIa
XI
XIa
IX
IXa
VIIIa
Apixaban
Betrixaban
Edoxaban
Rivaroxaban
Tissue
factor
VIIa
VII
Warfarin
(indirect
via VKORC1)
Warfarin
(indirect
via VKORC1)
X
Xa
Tissue
factor
X
Warfarin
(indirect
via VKORC1)
Prothrombin
(II)
Va
V
Thrombin
(IIa)
Dabigatran
Fibrinogen
(I)
Fibrin
(Ia)
XIIIa
Cross-linked
fibrin clot

“Acquired” Thrombophilias

- Smoking
- Age>40
- Immobility
- Obesity
- Diabetes
- Hypertension
- Hyperlipidemia
- Renal insufficiency
- Migraine with aura
- Sickle Cell Disease
- Systemic Lupus Erythematosus