Vena cavafilter

När

Var

Hur

Varför

Anders Gottsäter, Kärlkliniken, SUS Malmö

Alla lyckliga familjer liknar varandra,
varje olycklig familj är olycklig på sitt eget vis

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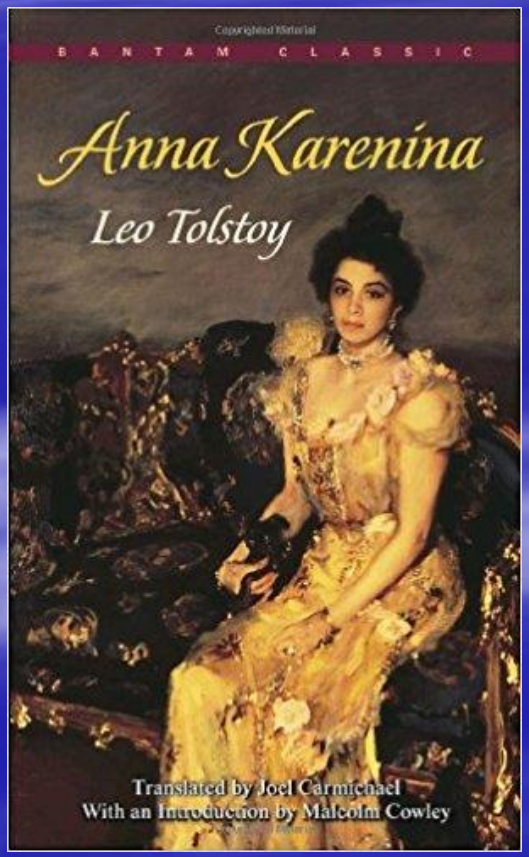
varje olycklig familj är olycklig på sitt eget vis



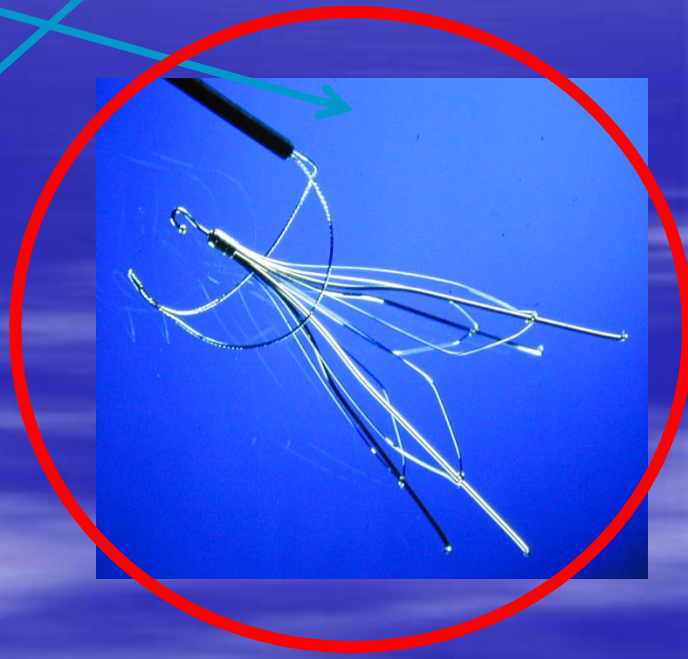
Alla VTE-patienter liknar inte varandra,
varje patient måste behandlas på på sitt eget vis.

”Inofficiell” behandlingsstratifiering vid VTE: standard, forte eller mite ?

”Inofficiell” behandlingsstratifiering vid VTE: standard, forte eller mite ?

Fibrinolysis for Patients with Intermediate-Risk Pulmonary Embolism

”Inofficiell” behandlingsstratifiering vid VTE: standard, forte eller mite ?



Fibrinolysis for Patients with Intermediate-Risk Pulmonary Embolism

Egentligen inte trombosbehandling

Mekaniskt förhindrande
av lungembolisering, stoppa
formade element i ett flöde

Historik ”mekaniskt” förhindrande av lungembolisering

- 1784 vena fem. ligering (Hunter)
- 1893 vena cava inf. ligering (Bottini)

Emsfors bruk, 1959

Emsfors bruk, 1959

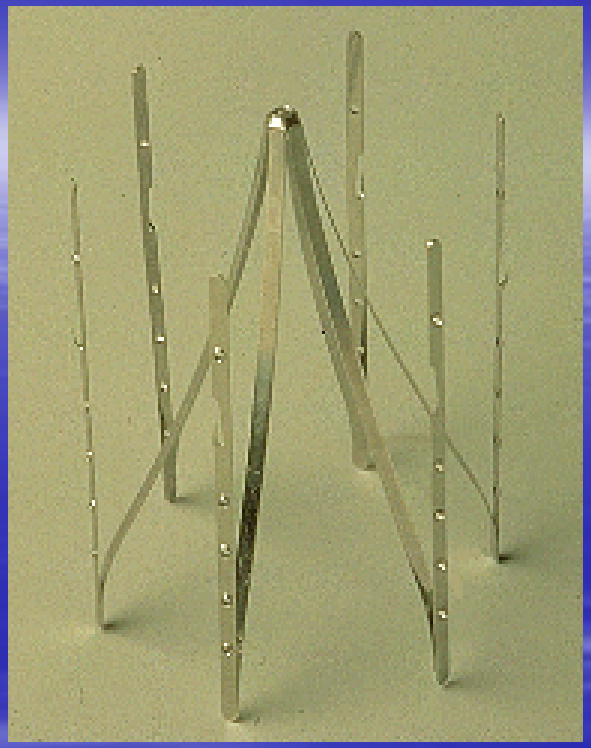
Kitchenlab

Historik ”mekaniskt” förhindrande av lungembolisering

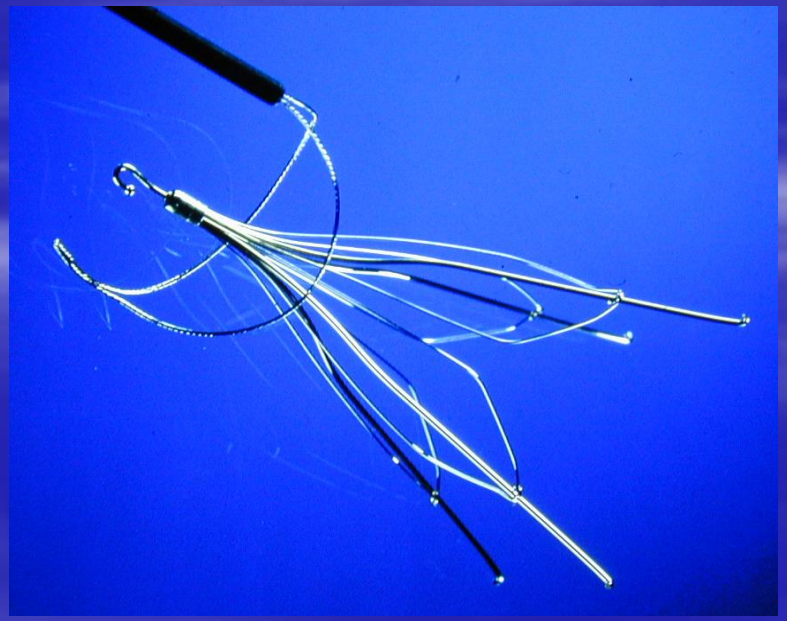
- 1784 vena fem. ligering (Hunter)
- 1893 vena cava inf. ligering (Bottini)

- 1967 vena cava paraplyfilter (Mobin-Uddin)
- 1973 Greenfield filter
- 1990-talet uttagbara filter

Teknik



- Inlägges perkutant över ledare
- Permanenta eller temporära (upp till månader) filter



https://vimeo.com/18934756

Thrombus Embolization Into IVC Filters During Catheter-Directed Thrombolysis for Proximal Deep Venous Thrombosis

Tilo Kölbel, MD, PhD; Alaa Alhadad, MD, PhD; Stefan Acosta, MD, PhD; Mats Lindh, MD; Krasnodar Ivancev, MD, PhD; and Anders Gottsäter, MD, PhD

J ENDOVASC THER
2008;15:605–613

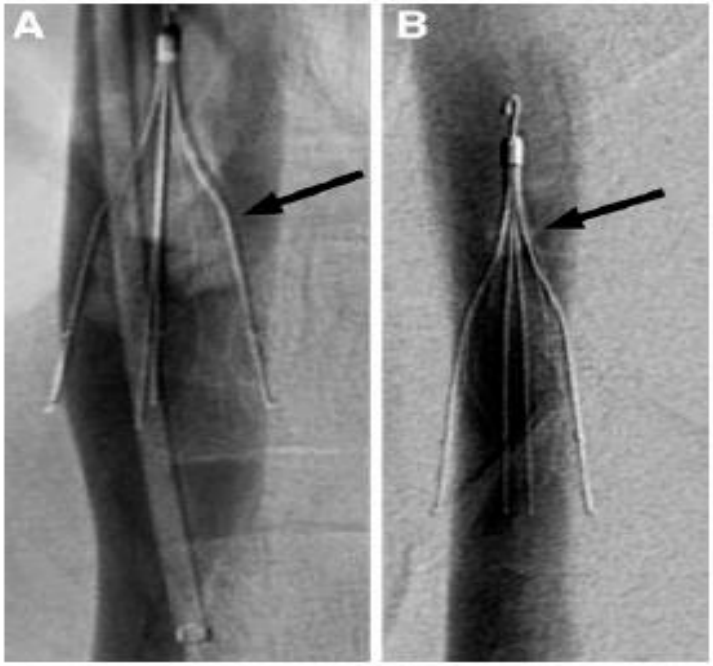


Figure 3 ◆ Cavograms of trapped embolus in a retrievable IVC filter. (**A**) Large embolus >1 cm (arrow); the filling defect extends the cone of the filter proximally as a sign for subsequent thrombus extension. (**B**) Small embolus <1 cm (arrow).

Placering av filter

- Infrarenala vena cava
  - Strax ned om njurvenerna (L3-L4)
- Suprarenal vena cava
  - Vid trombos upp till njurvenerna
- (Vena cava superior vid embolikälla övre extremiteter)

Vetenskaplig evidens

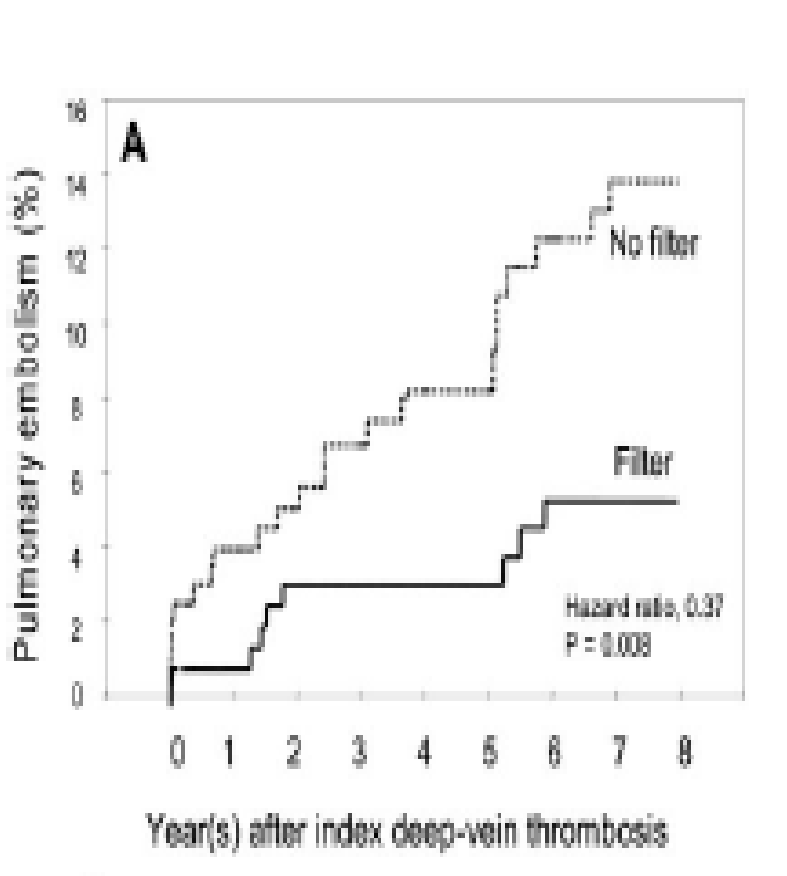
Bara en ”riktig” studie – men på ”fel” indikation

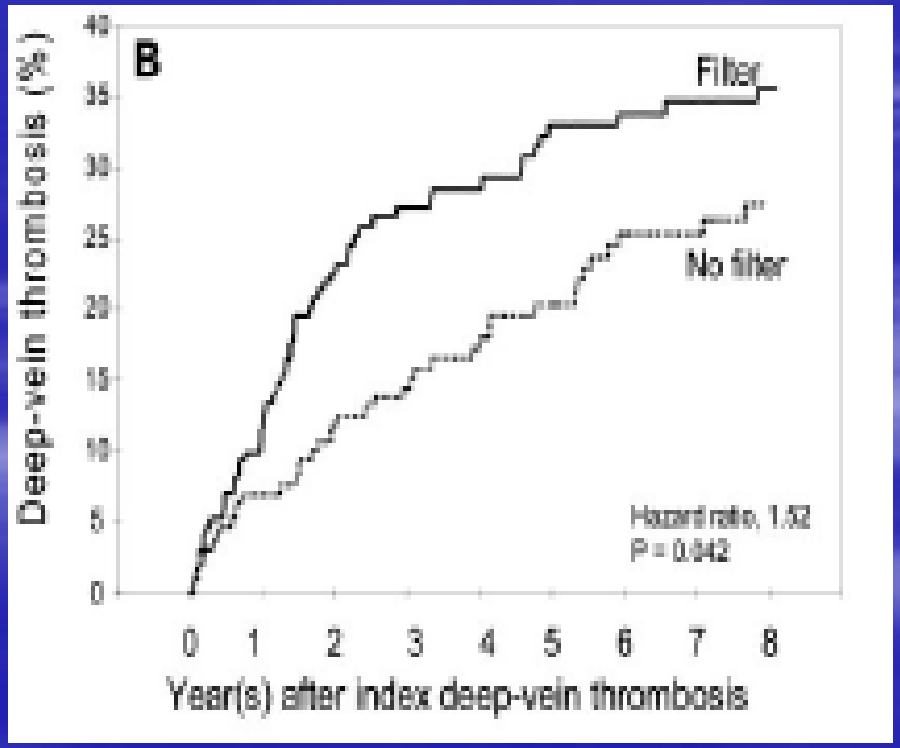
Den enda ”riktiga” studien, 400 pat.
NEJM 1998;338:409-15 och Circulation 2005;112:416-22

Eight-Year Follow-Up of Patients With Permanent Vena Cava Filters in the Prevention of Pulmonary Embolism

The PREPIC (Prévention du Risque d'Embolie Pulmonaire par Interruption Cave) Randomized Study

The PREPIC Study Group*





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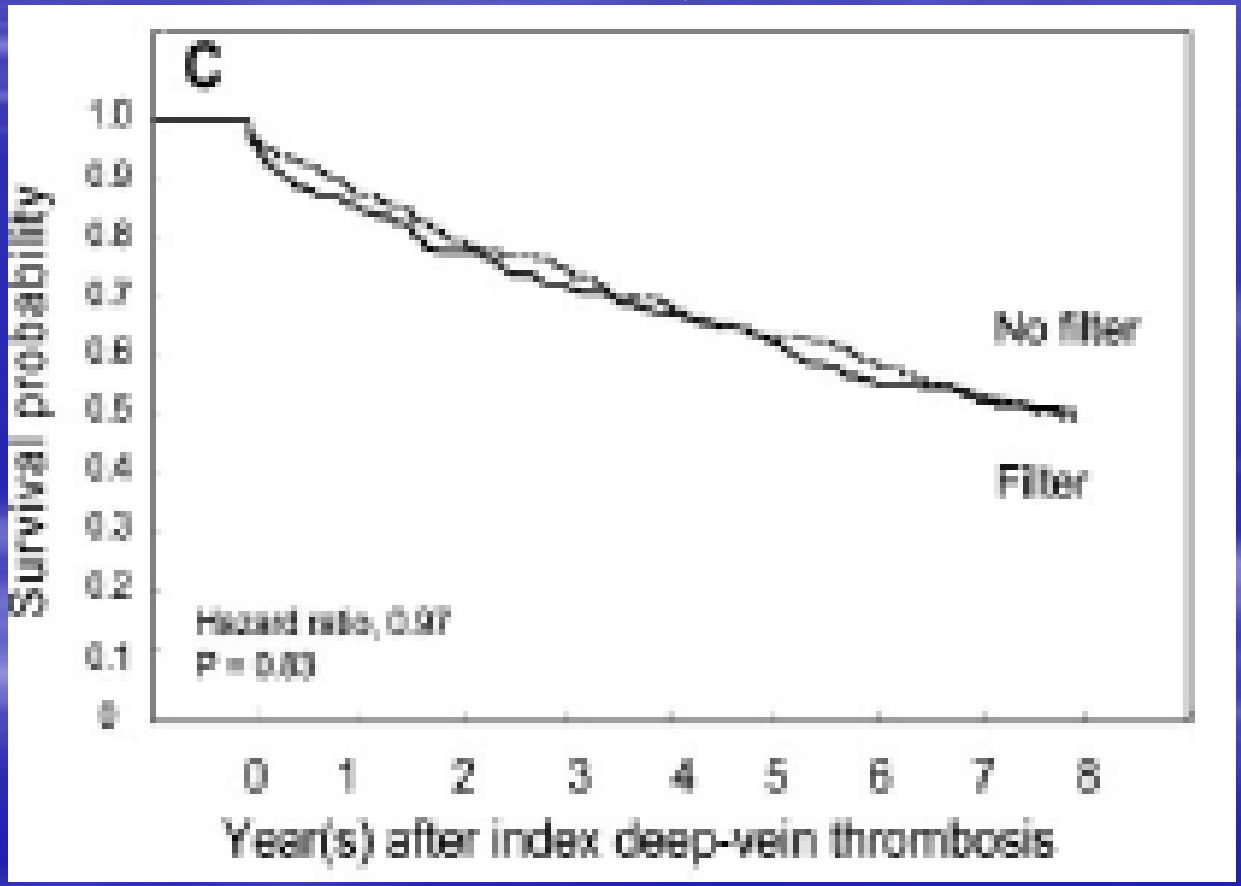


ACCP. Chest 2012;141(2 suppl)

- In patients with acute DVT of the leg, we
- recommend against the use of an inferior vena cava (IVC) filter in addition to anticoagulants (Grade 1B) .

Ska metoden därmed avfärdas ?

.....

Föreslagna indikationer

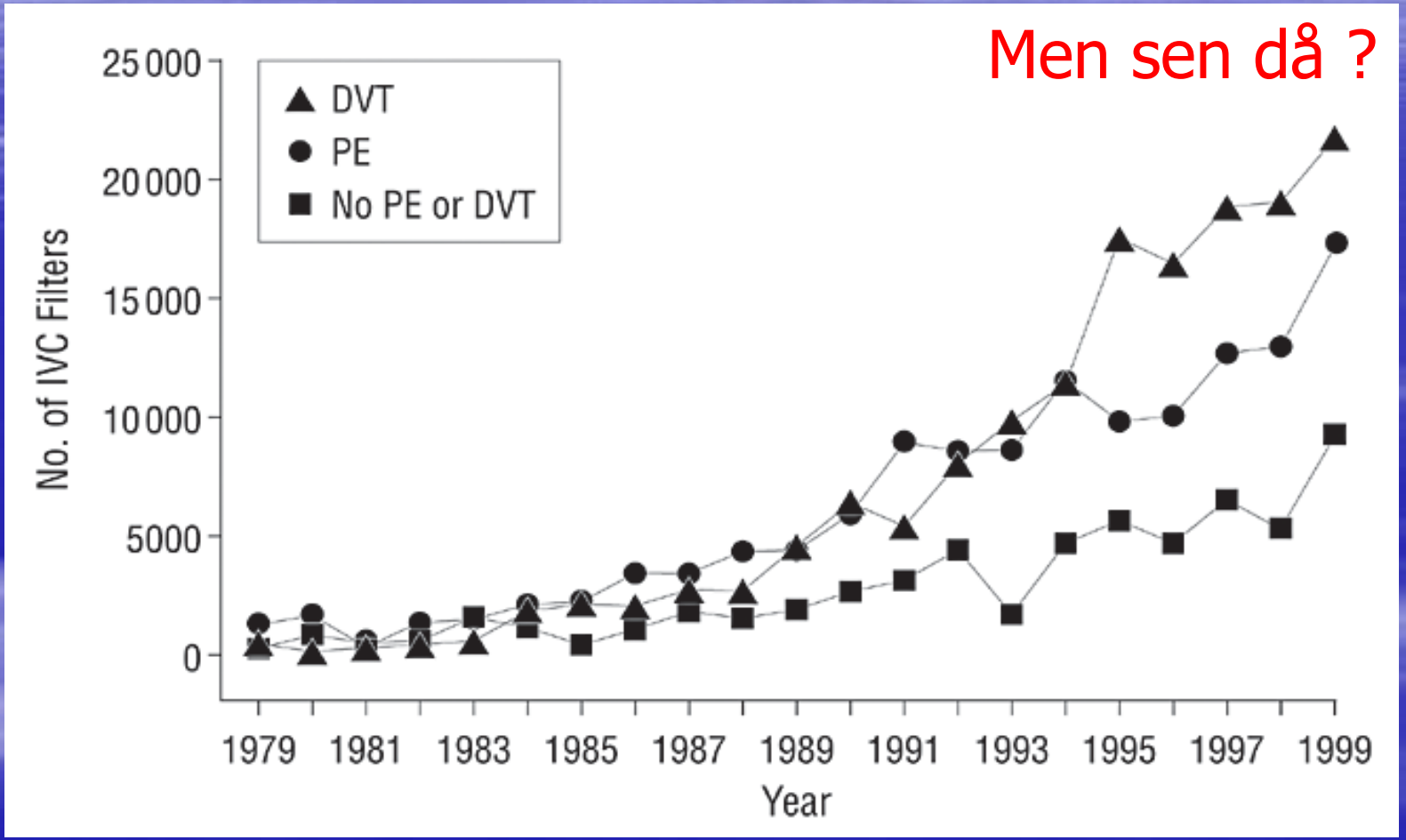
Läkarkåren är innovativ, och alla VTE-patienter liknar inte varandra

Föreslagna indikationer

Läkarkåren är innovativ, och alla VTE-patienter liknar inte varandra……

Dessutom finns på vissa håll pengar att tjäna

Stein et al, Arch Intern Med 2004;164:1541-5



Inferior Vena Cava Filters: Guidelines, Best Practice, and Expanding Indications

Elliot DeYoung, MD[1] Jeet Minocha, MD[1] Semin Intervent Radiol 2016;33:65–70

Patients with documented VTE and classic indications
Contraindication to anticoagulation
Complication of anticoagulation necessitating cessation
Failure of anticoagulation
Propagation/progression of DVT during therapeutic anticoagulation

Inferior Vena Cava Filters: Guidelines, Best Practice, and Expanding Indications

Elliot DeYoung, MD[1] Jeet Minocha, MD[1] Semin Intervent Radiol 2016;33:65–70

Patients with documented VTE and expanded indications
Iliocaval or large free-floating proximal DVT
Inability to achieve/maintain adequate anticoagulation
Massive PE with residual DVT in a patient at risk for further PE
Chronic venous thromboembolism treated with thromboendarterectomy
Thrombolysis of iliocaval DVT
VTE with limited cardiopulmonary reserve
Recurrent PE with IVC filter in place (filter failure)
Poor compliance with anticoagulation
High risk of complication of anticoagulation (e.g., high fall risk)

Inferior Vena Cava Filters: Guidelines, Best Practice, and Expanding Indications

Elliot DeYoung, MD[1] Jeet Minocha, MD[1] Semin Intervent Radiol 2016;33:65–70

Patients without VTE
Trauma patient with high risk of VTE
Surgical procedure in a patient at high risk for VTE
Medical condition with high risk of VTE

Rekommenderade indikationer

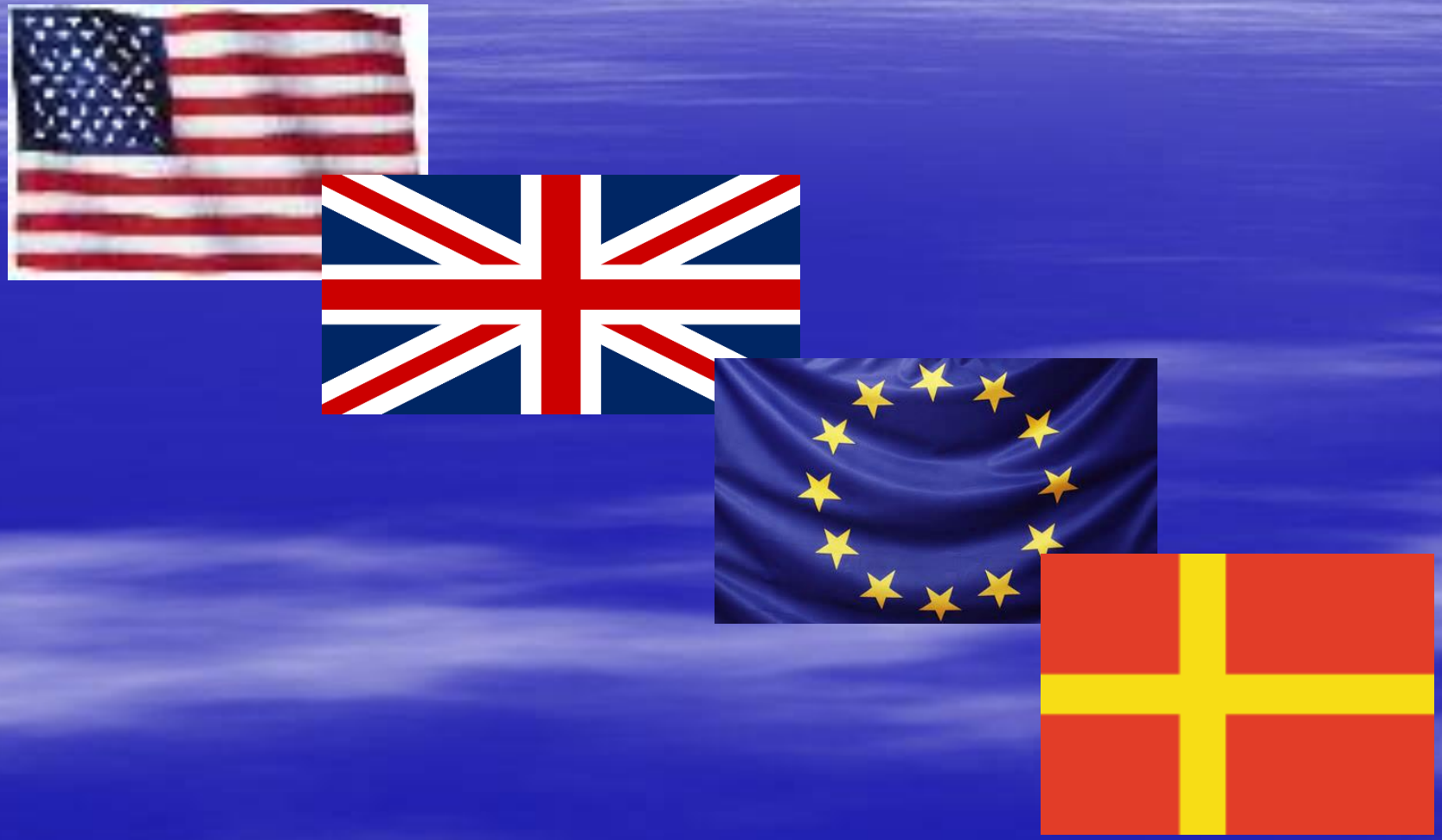


Table 3 American College of Chest Physicians guidelines

1. Vena caval filters for the initial treatment of DVT: for patients with acute proximal DVT, if anticoagulant therapy is not possible because of the risk of bleeding, placement of an IVC filter is recommended (grade 1C)
2. In children weighing >10 kg with lower-extremity DVT and a contraindication to anticoagulation, placement of a temporary IVC filter is suggested (grade 2C)
3. Vena caval filters for the initial treatment of PE: in patients with acute PE, if anticoagulant therapy is not possible because of risk of bleeding, placement of an IVC filter is recommended (grade 1C)
4. For patients with CTPH undergoing pulmonary thromboendarterectomy, placement of a permanent vena caval filter before or at the time of the procedure is suggested (grade 2C)

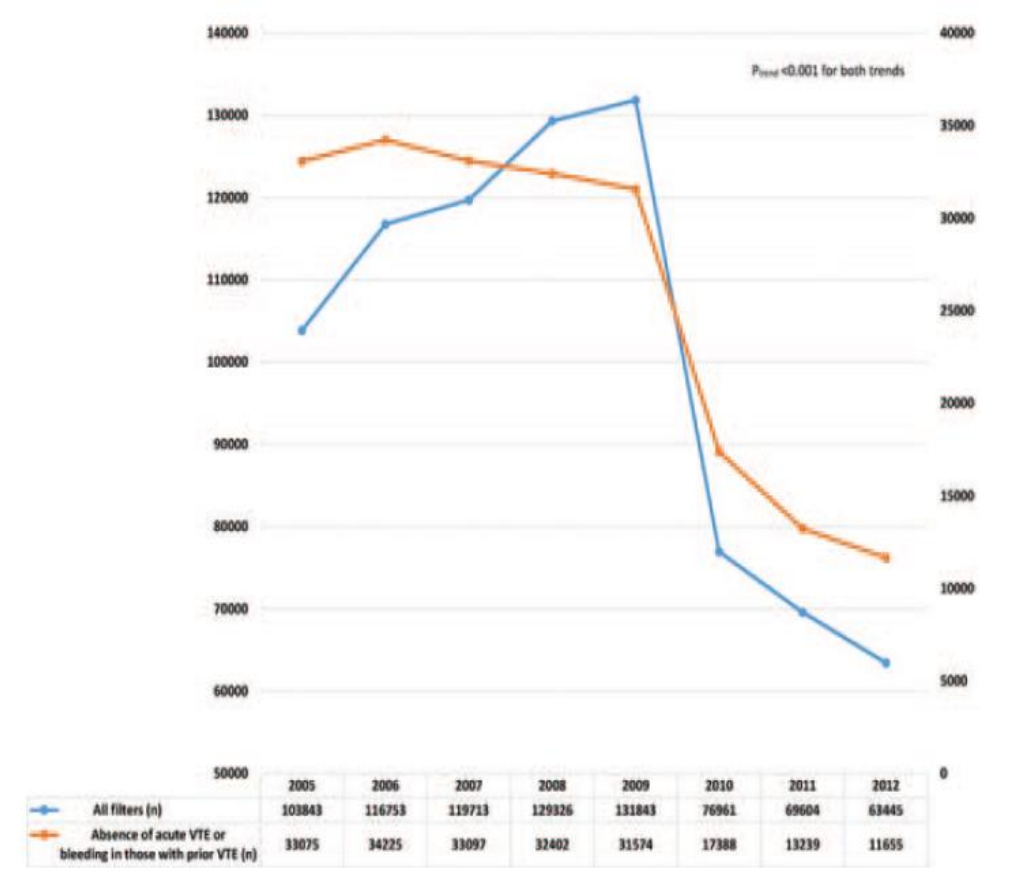
Observational Study

Medicine®

OPEN

IVC filters—Trends in placement and indications, a study of 2 populations

Mahek Shah, MD[a,*], Talal Alnabelsi, MD[b], Shantanu Patil, MD[b], Shilpa Reddy, MD[c], Brijesh Patel, DO[a],



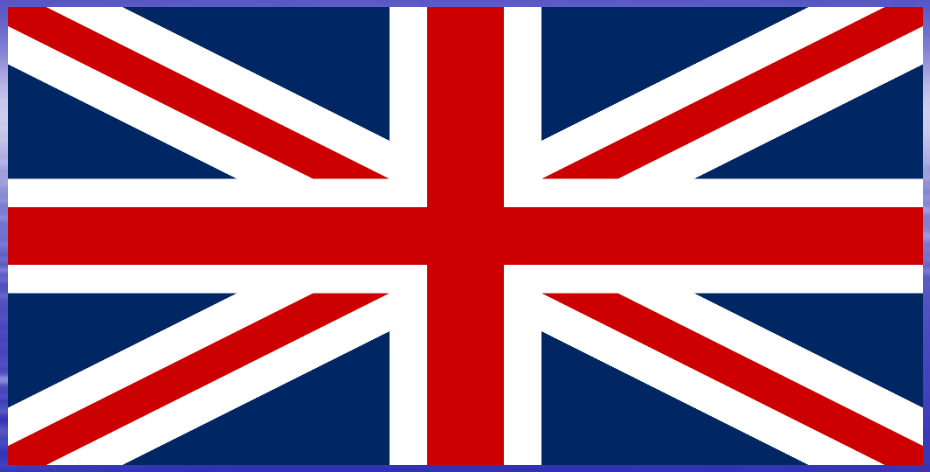


Table 5 Summary of British Committee for standards in hematology IVC filter guidelines[34]

IVC filter Indicated
For patients with VTE and contraindication to anticoagulation
Consider IVC filter placement
In select patients with PE despite anticoagulation
In pregnant patient with VTE and contraindications to anticoagulation (including estimated delivery within 2 wk)
Preoperatively (retrievable) for patients with recent VTE (1 mo) and need to stop anticoagulation therapy for surgery
IVC filters not recommended for
Unselected patients with VTE who can receive anticoagulation
Free-floating thrombus
Thrombolysis

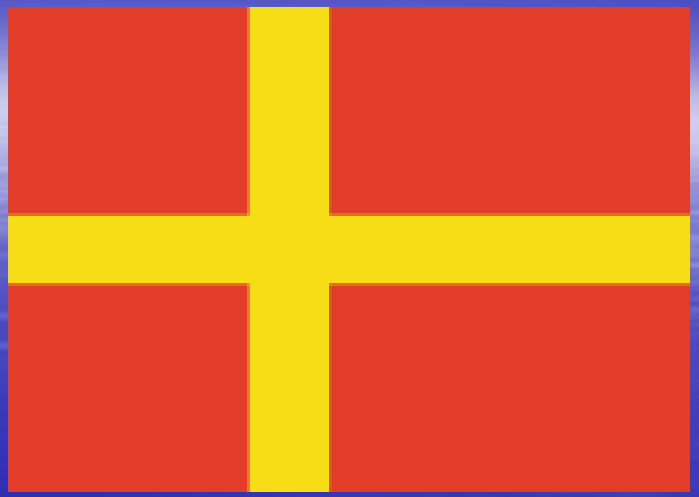


Table 6 European Society of Cardiology Guidelines on venous filters

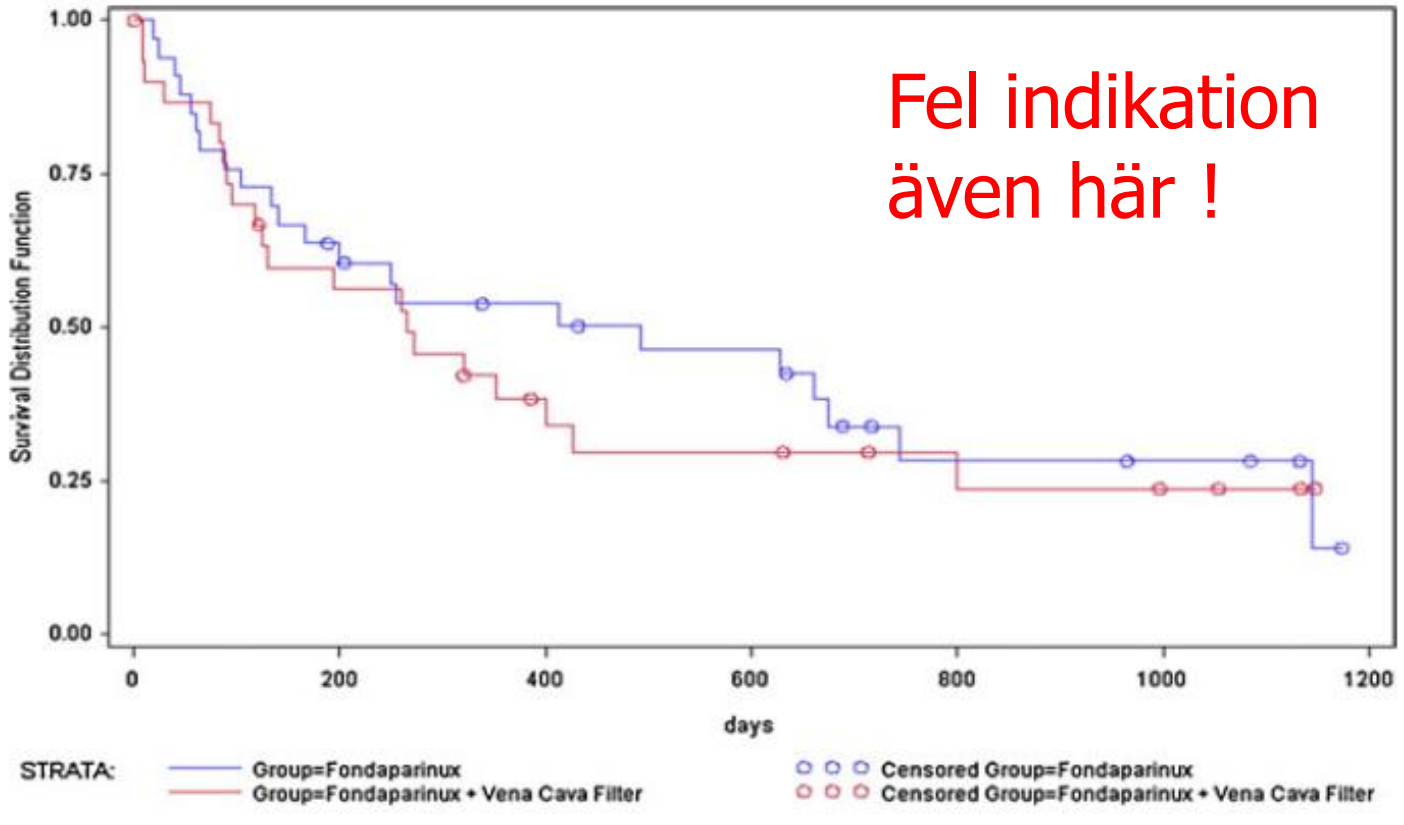
Indicated for
Documented VTE and contraindication to anticoagulation
Recurrent PE despite anticoagulation
Not recommended for
Prophylactic placement
Free-floating thrombus
Prior to systemic thrombolysis, surgical embolectomy, or pulmonary thromboendarterectomy

Support Care Cancer (2012) 20:2865–2872
DOI 10.1007/s00520-012-1413-z

ORIGINAL ARTICLE

Investigating the benefit of adding a vena cava filter to anticoagulation with fondaparinux sodium in patients with cancer and venous thromboembolism in a prospective randomized clinical trial

Myra F. Barginear · Richard J. Gralla · Thomas P. Bradley · Syed S. Ali · Iuliana Shapira ·



Fel indikation även här !

Journal of Thrombosis and Haemostasis, 11: 1760–1765 DOI: 10.1111/jth.12338

RECOMMENDATIONS AND GUIDELINES

Management of challenging cases of patients with cancer-associated thrombosis including recurrent thrombosis and bleeding: guidance from the SSC of the ISTH

M. CARRIER,* A. A. KHORANA,† J. I. ZWICKER,‡ S. NOBLE,§ A. Y. Y. LEE¶ and ON BEHALF OF THE SUBCOMMITTEE ON HAEMOSTASIS AND MALIGNANCY FOR THE SSC OF THE ISTH

We recommend against IVC filter insertion in the absence of contraindications to anticoagulation.

We suggest IVC filter insertion in cancer patients with contraindications to anticoagulation and a high risk of potentially fatal PE (tex TPK <50 och ej möjligt med transfusion)

We recommend resuming anticoagulation with LMWH and removing the retrievable filter in cancer patients when the contraindication has resolved.

Effektivitet

Recidiverande LE 2-3%, men siffran beror av……..

Uppföljningstid ?

Bakgrundsmaterial ?

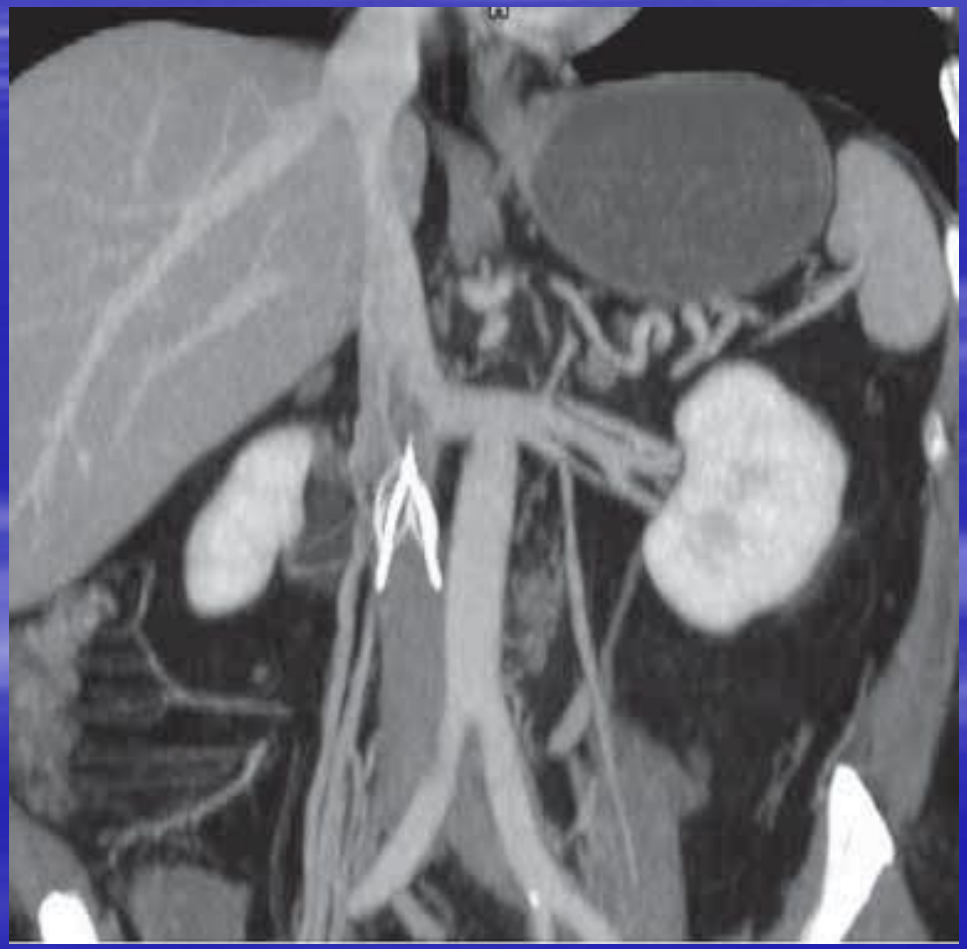
Register ?

Komplikationer

- Deponering
  - Snedställt filter
- Felplacering
- Filtermigration
- Cavaperforation

- Den viktigaste komplikationen:

Kölbel T, Holst J. Vena cavafilter. I: Gottsäter A, Svensson PJ. Venös tromboembolism. Studentlitteratur 2010



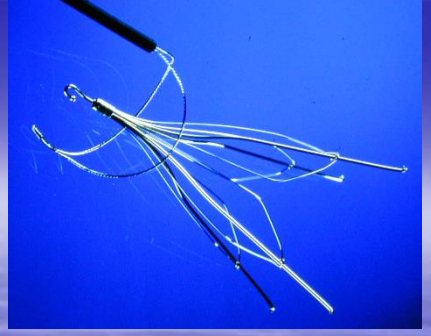
Alhadad et al, LT 2002;45:4462-8

- 63 patienter fick permanent vena cavafilter
- Vena cavatrombos hos 14 (22%) och lungemboli hos 5 (8%) under 33(1-120) månader
- Komplikationssiffror jämförbara med internationell litteratur

ACCP. Chest 2012;141(2 suppl)

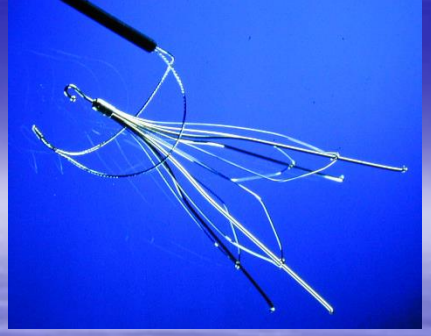
- In patients with acute proximal DVT of the leg and contraindication to anticoagulation, we recommend the use of an IVC filter (Grade 1B) .

Sammanfattning



VTE och kontraindikation mot antikoagulantia
Recidiverande LE trots adekvat medicinsk behandling

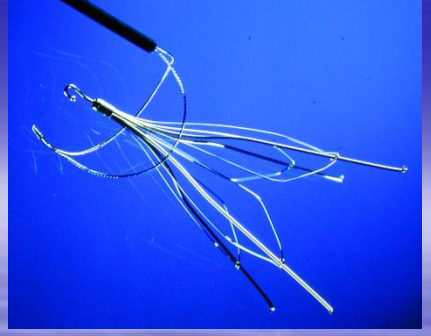
Sammanfattning



VTE och kontraindikation mot antikoagulantia
Recidiverande LE trots adekvat medicinsk behandling

Alltid ställningstagande: temporärt eller permanent

Sammanfattning

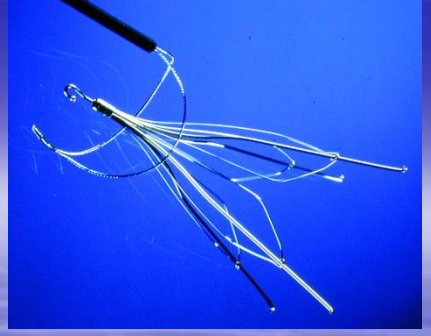


VTE och kontraindikation mot antikoagulantia
Recidiverande LE trots adekvat medicinsk behandling

Alltid ställningstagande: temporärt eller permanent

Interventionalisten kan lägga in filtret, men
VTE-läkaren har ansvaret för indikation och uppföljning

Vena cavafilter



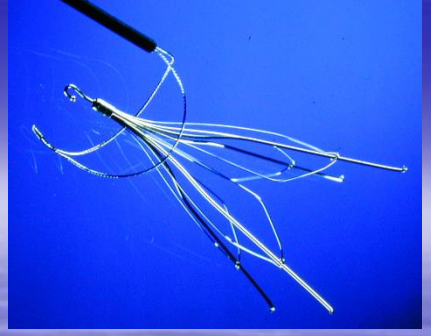
När

Var

Hur

Varför

Vena cavafilter



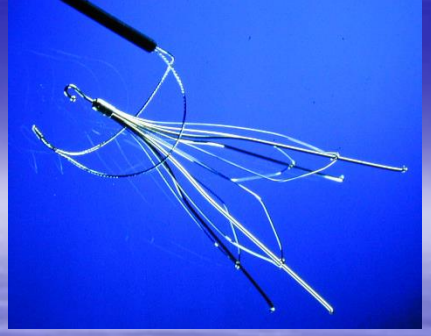
När - vid VTE som inte kan antikoaguleras

Var

Hur

Varför

Vena cavafilter



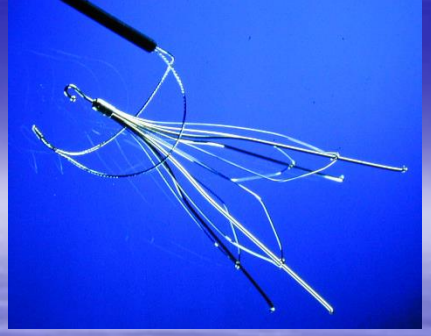
När - vid VTE som inte kan antikoaguleras

Var- i infrarenala vena cava

Hur

Varför

Vena cavafilter



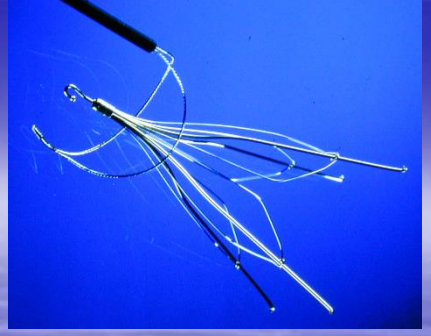
När - vid VTE som inte kan antikoaguleras

Var- i infrarenala vena cava

Hur – endovaskulärt

Varför

Vena cavafilter



När - vid VTE som inte kan antikoaguleras

Var- i infrarenala vena cava

Hur – endovaskulärt

Varför – för att minska risken för lungemboli

Ett fall, man född 1984

- DVT 1,5 år tidigare
- Akt med:0
- Buksmärtor upptill hö, temp 38,3, hostat blod

Basal pneumoni, dag 2

- Fortsatt ökad andn.frekv 30/min , stegrande LPK , CRP
  - Ny spiral DTLA :Bilat LE , progress av pneum. infiltrat, måttligt med pleuravätska
  - UKG :måttl förhöjt tryck i lungkretsloppet

Överflyttas till kärl avd

- Hemoptysen är över
- Insatt på T Waran
- Huvudvärk, illmående

- DT- skalle visar subduralhematom