New strategy for endovascular treatment of the obstructed common femoral vein

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Disclosure

Speaker name: Nils Kucher

I have the following potential conflicts of interest to report:

- [x] Consulting: Plusmedica, Optimed, BTG
- [ ] Employment in industry
- [ ] Stockholder of a healthcare company
- [ ] Owner of a healthcare company
- [ ] Other(s): Reserach grant: Sanofi, Bayer

- [ ] I do not have any potential conflict of interest

Swiss Venous Stent Registry

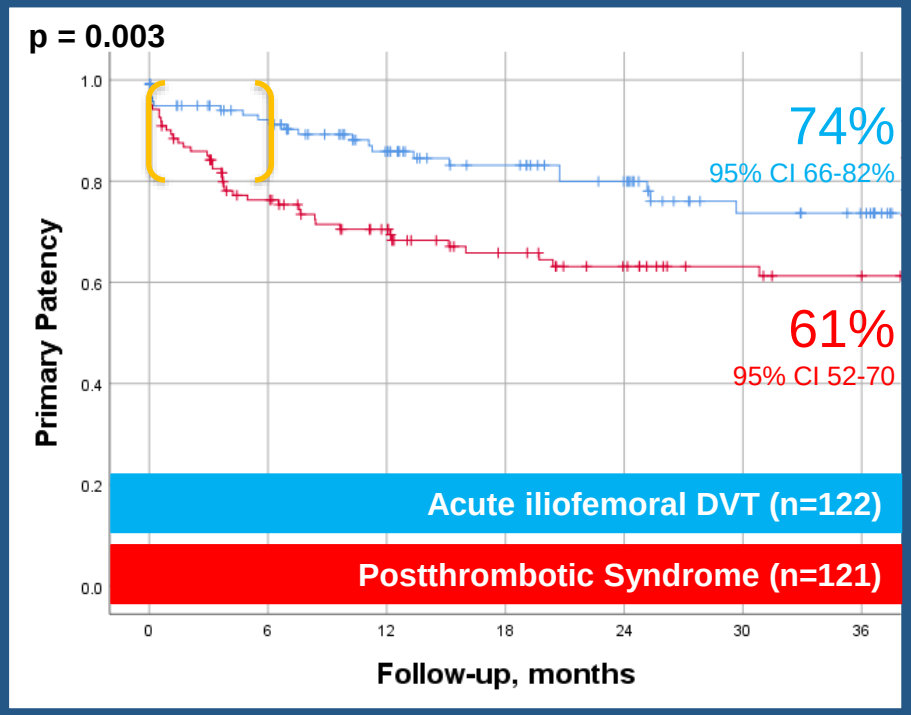
Long term follow up (mean 796 days) of 121 patients treated for postthrombotic syndrome

- 35 (29%) with IVC stents
- 119 (98%) with iliac stents
- **86 (71%) stents below the inguinal ligament**
- 36 (30%) bilateral interventions

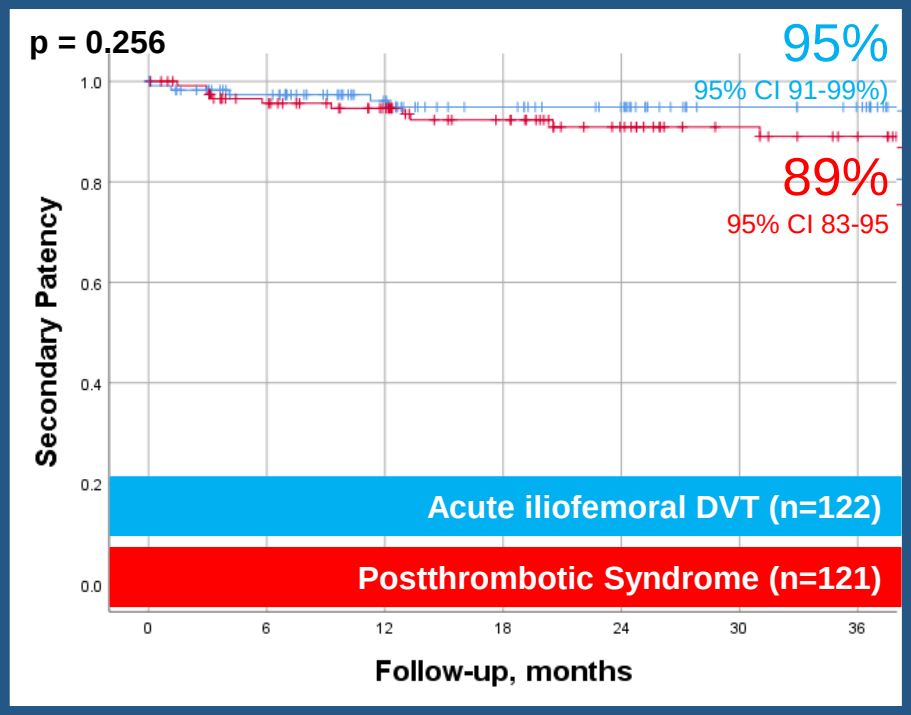
Swiss Venous Stent Registry

Stent patency at 3 years for acute iliofemoral DVT versus PTS

Primary Patency Rate



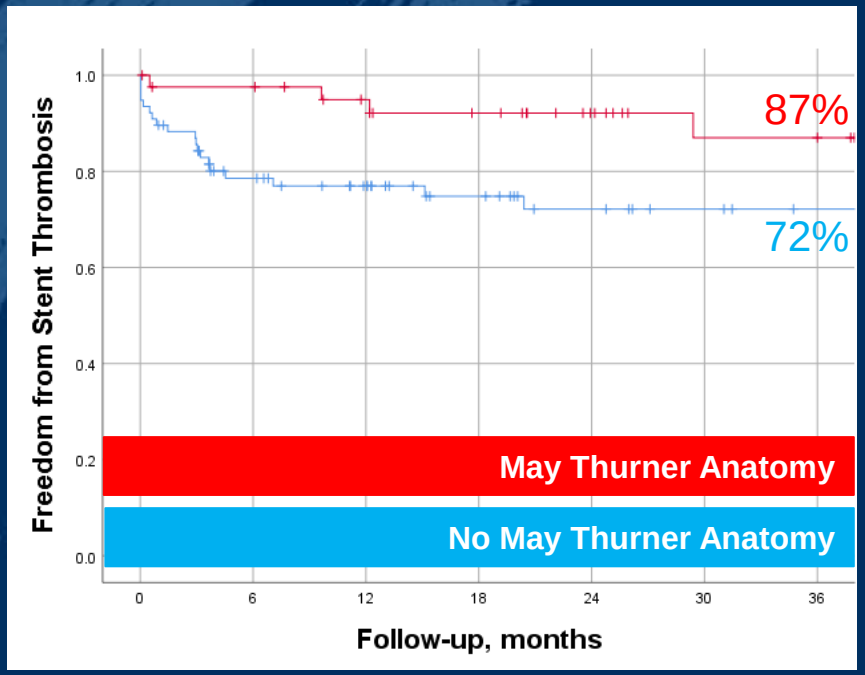
Secondary Patency Rate



Endovascular treatment of PTS

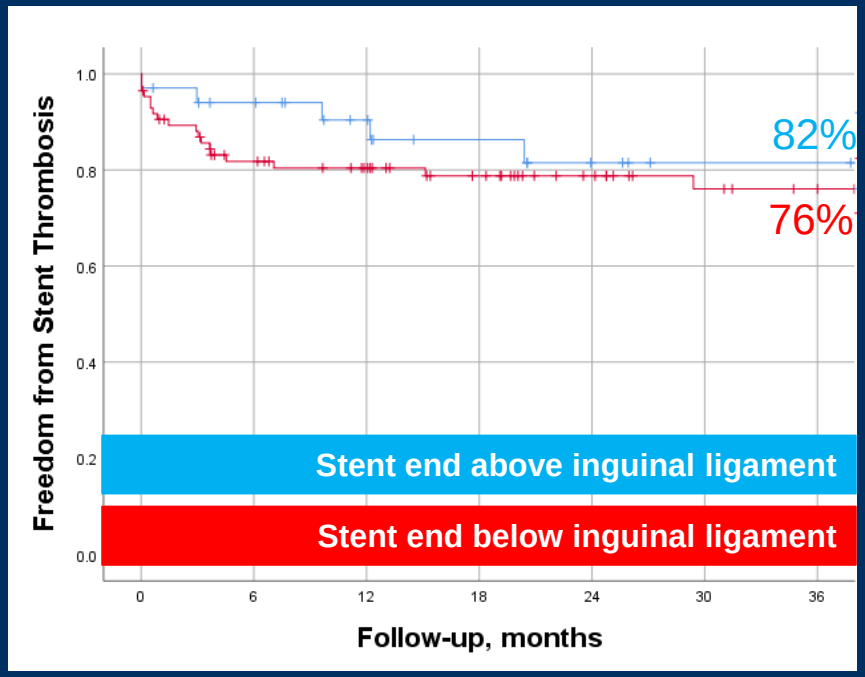
Stent thrombosis

May Thurner Anatomy



Long Rank (Mantel-Cox): p = 0.03

Stent below inguinal ligament



Long Rank (Mantel-Cox): p = 0.77

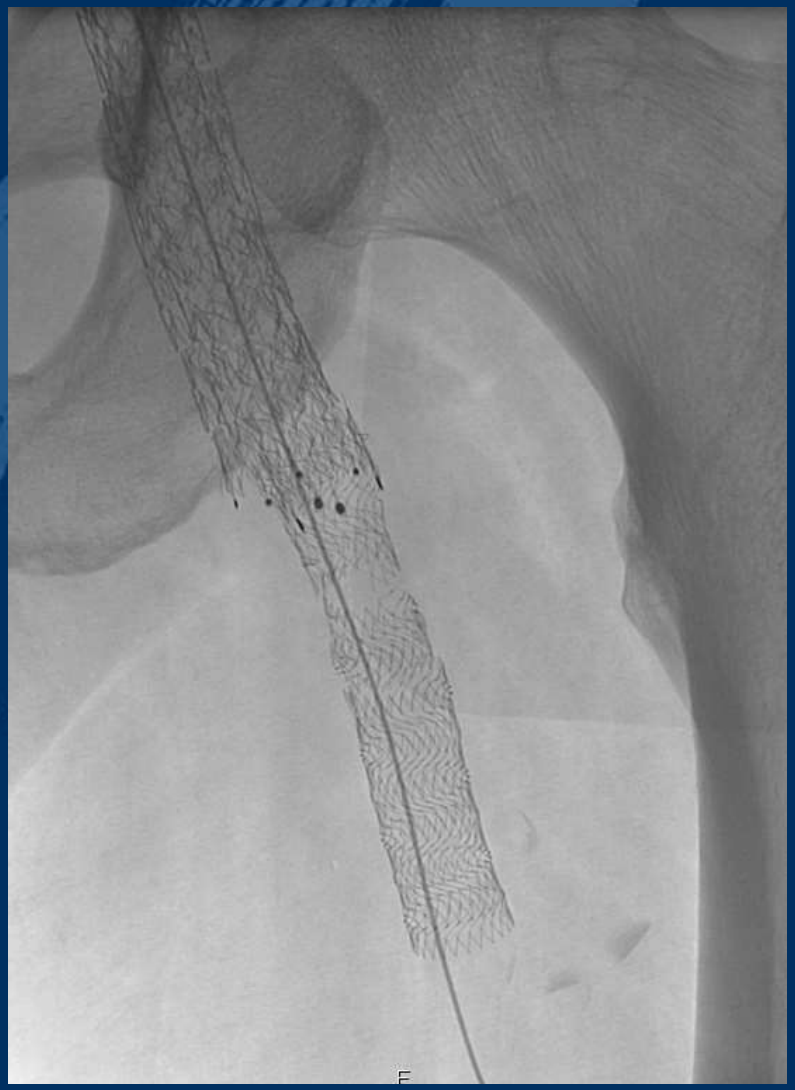
PERMANENT STENT MALFUNCTION

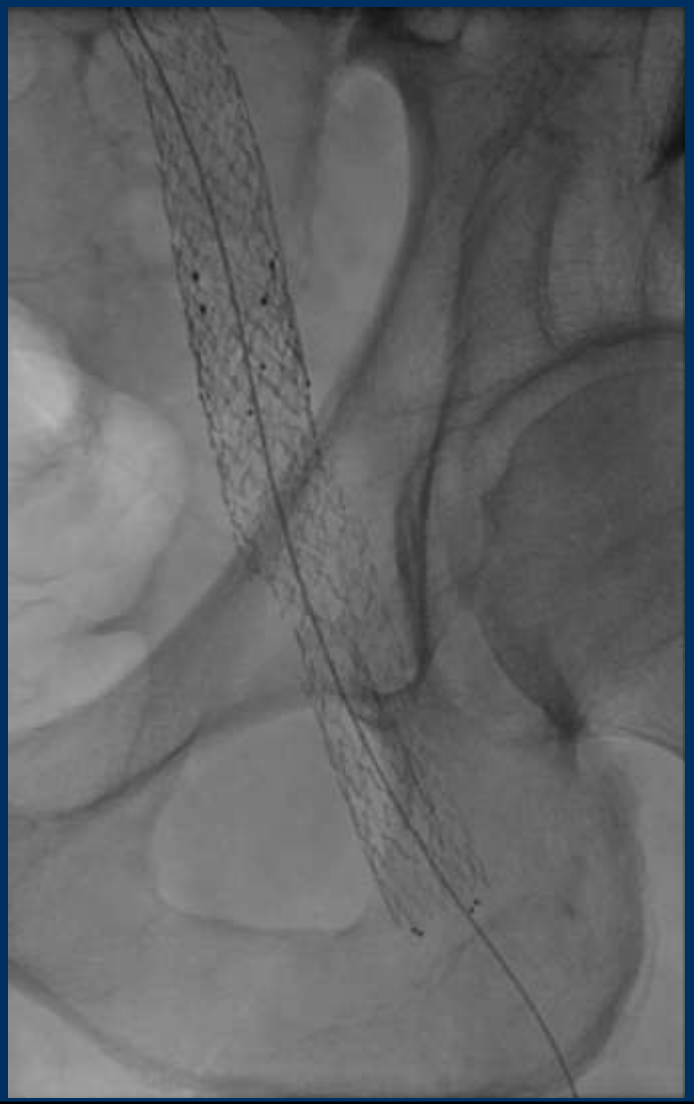
- 5/10 patients with stents below CVF

Issues with treatment of common femoral vein occlusions

- Often combined with postthrombotic leg inflow veins (FV, DFV)
- No dedicated CFV stent available
- Laser cut nitinol stents or woven steel alloy stents in CFV may be associated with stent malfunction, stent restenosis, stent thrombosis, stent fractures, groin discomfort
- Few and debatable results for endophlebectomy of common femoral vein

Stent fractures at and below inguinal ligament





Ideal stent for common femoral vein occlusions

- Highly flexible throughout stent length
- High radial and restistive force in areas where needed (e.g. the ligament area)
- No stent fractures
- No groing pain or discomfort
- Patency and freedom from PTS

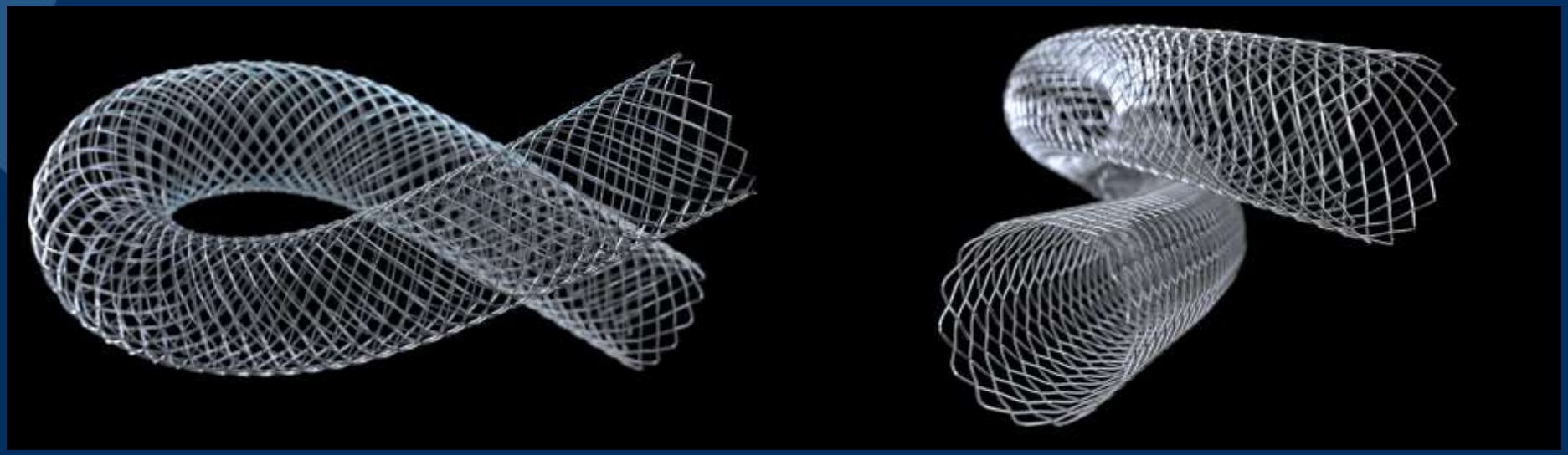
Blueflow Venous Stent for common femoral vein (plusmedica)

First braided venous nitinol stent

- Push-Pull Delivery-System for „packing“ the stent during deployment (increase in radial force)
- Re-sheathable for allowing better deployment precision

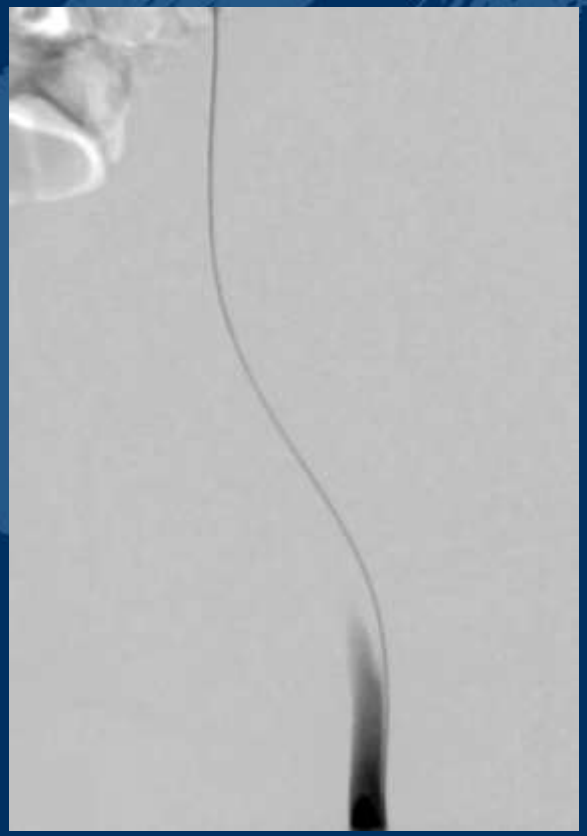
Blueflow Venous Stent for common femoral vein (plusmedica)

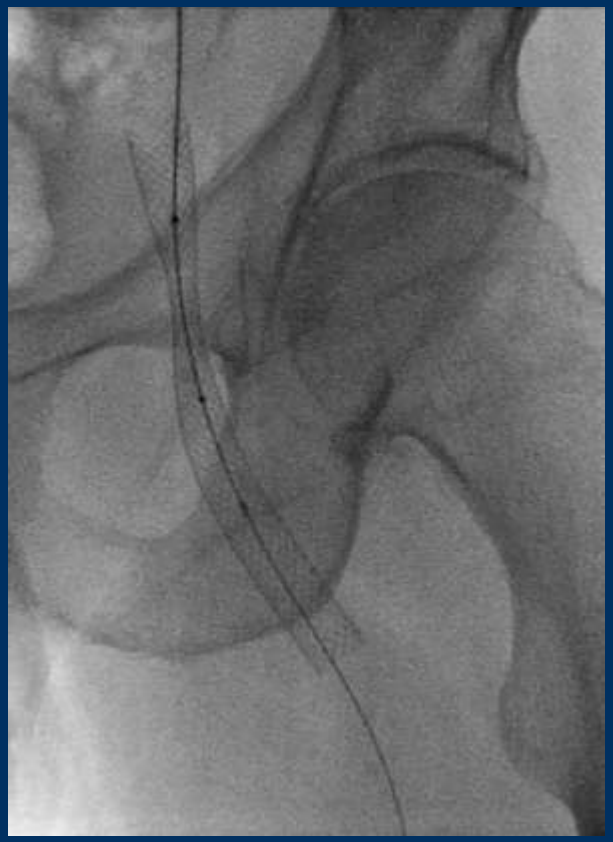
- Braided meshed stent made of two 0.22mm electropolished nitinol wires
- Braiding technique with two wires enables closed loop design
- Each wire loops back when it reaches the stent tip, thus creating 14 radial force stable end loops
- Two wires are welded together at two points in the center of the stent



Blueflow case: 1

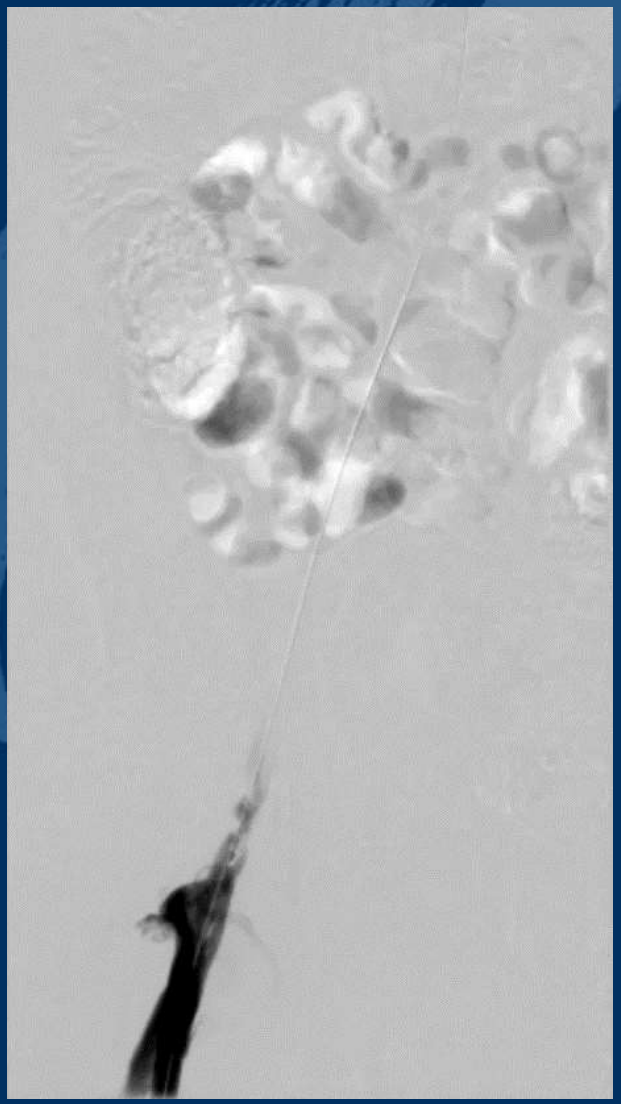
68 y, male with phlegmasia
Occlusion of the common femoral vein due to iatrogenic intramural CFV hematoma
Treatment: 12 x 100 mm Blueflow Stent





Blueflow case: 2

- 48 y, male with severe PTS and leg ulcers
- History of i.v. heroin injections CFV
- Treatment: 14 x 150 mm Blueflow Stent



Blueflow Venous Stent for common femoral vein (plusmedica)

- Two centers (Arnsberg, Zurich) initiated a post-market introduction follow-up plan in februrary 2018
- Overall, 36 patients were treated with the blueflow stent between february and december 2018, mainly for PTS
- No device-related complications were reported
- Overall, 19 patients had complete 3 month-follow up data in December 2018

Primary patency: 89,5% (17 of 19 patients)
Secondary patency: 94,7% (18 of 19 patients)

Summary

- Endovascular treatment of PTS often requires stent placement in the common femoral vein
- Conventional stents (laser cut nitinol or woven steel alloy) may cause problems when placed in the common femoral vein
- The blueflow stent was specifically designed for the CFV
- Initial experience shows promising results
- Further evidence is required to confirm efficacy and safety of the blueflow stent

Thank you for your attention!

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