

Significant reduction in radiation using the 4 Fr. instead of 6 Fr. WavelinQ endoAVF system in creating endovascular AV-Fistulas



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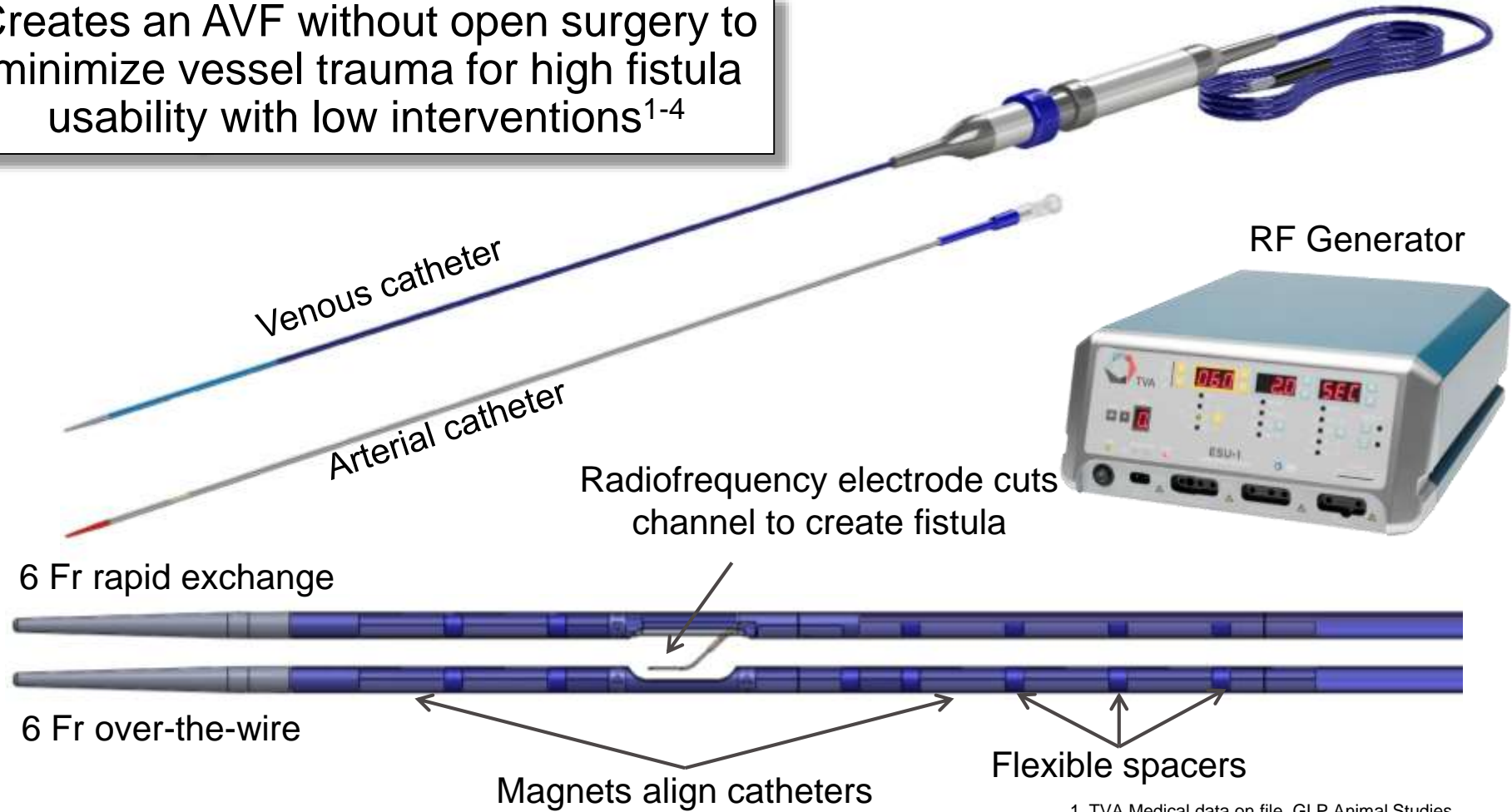
Disclosure

Speaker name: Dr. med. Tobias Steinke

I have the following potential conflicts of interest to report:

- Consulting (BD/Bard/TVA medical/Meritmedical)
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)
- I do not have any potential conflict of interest

Creates an AVF without open surgery to minimize vessel trauma for high fistula usability with low interventions¹⁻⁴



1. TVA Medical data on file. GLP Animal Studies.
2. J Vasc Interv Radiol 2015; 26:484-490.
3. Vasc Access 2017;28;18 (Suppl. 2):8-14.
4. Am J Kidney Dis. 2017 Jun 9. pii: S0272-6386(17)30692-3.



1. Generation

Venous 6 Fr catheter

Arterial 6 Fr catheter

2. Generation

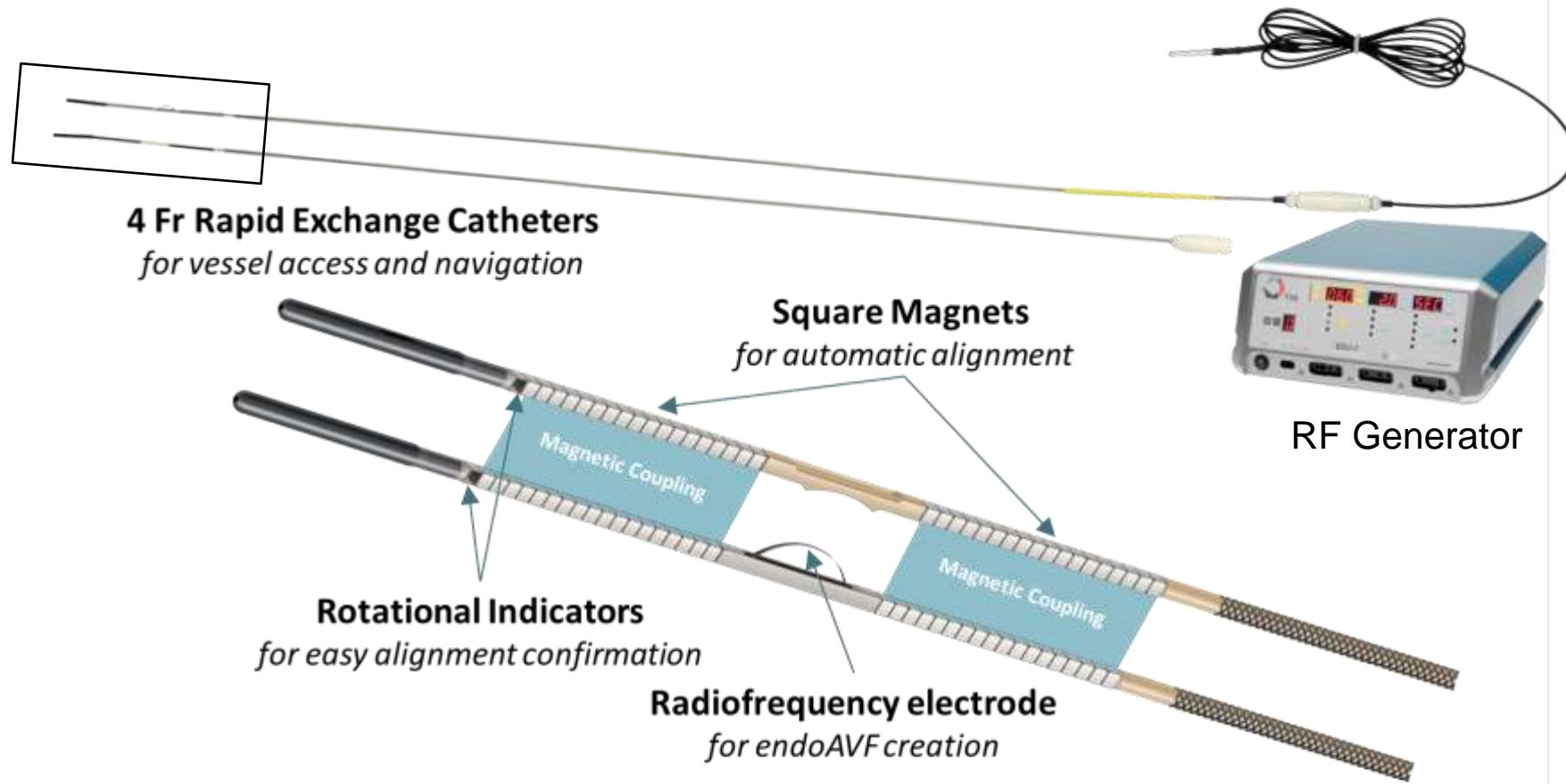
Venous 6 Fr catheter

Arterial 6 Fr catheter

Venous 4 Fr catheter

Arterial 4 Fr catheter

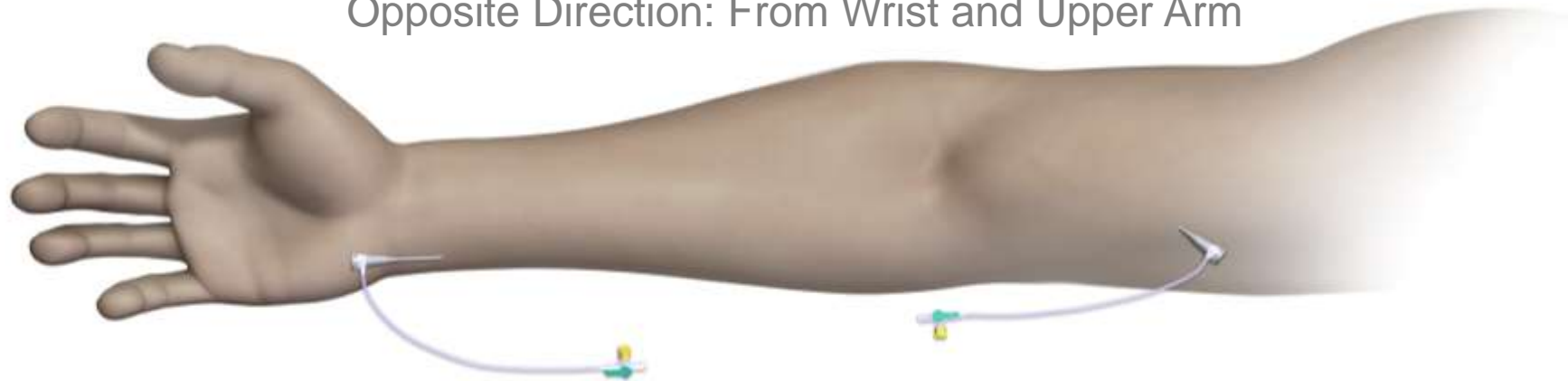
Small profile, Expanded Fistula Locations, Streamlined Procedure



Same Direction: From Wrist



Opposite Direction: From Wrist and Upper Arm





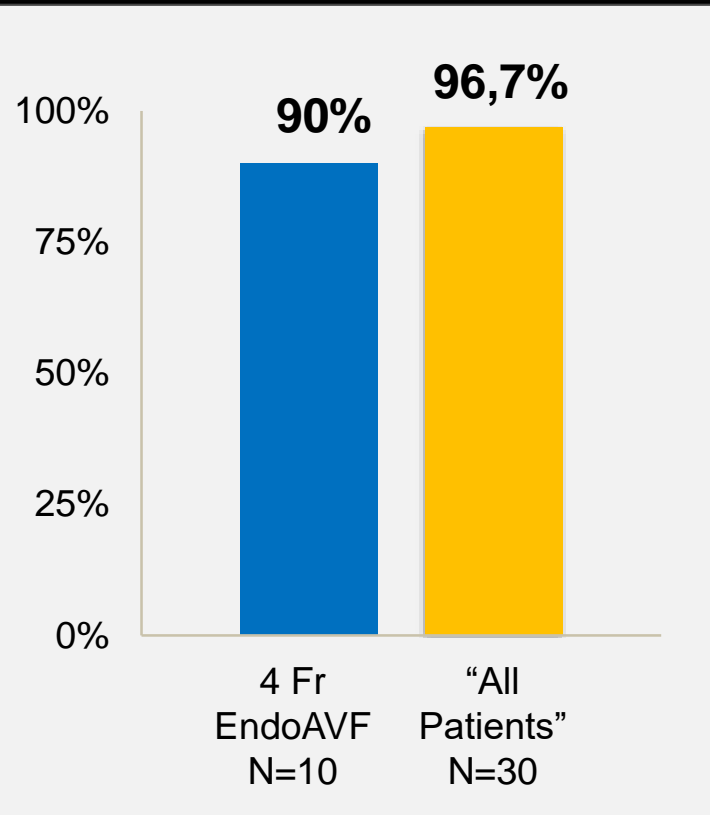
Courtesy of Rob Jones and Nick Inston, Queen Elizabeth Hospital in Birmingham, UK

WAVELINQ 4 FRENCH ENDOAVF PROCEDURE



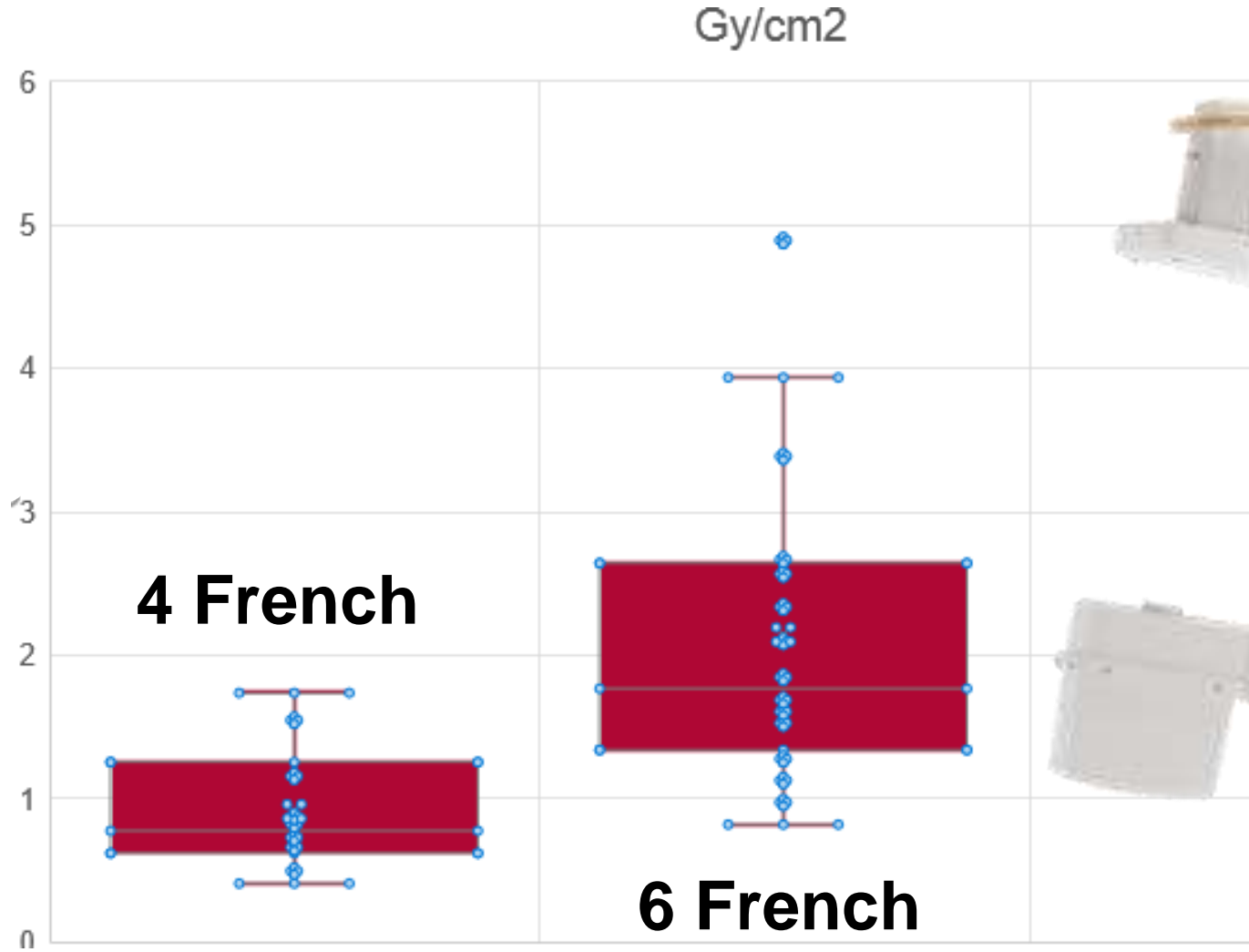
Patient Characteristics	Düsseldorf (4Fr / all Pat.)
Patients evaluated	10 / 30
Dialysis patients	3/10 (30%)
Age (median, min.-max.)	60 (19-84)
Gender: male	8/10(80%)
BMI (median, min.-max.)	28,8 (21,6-54,0)
Diabetes	6 / 10 (60%)
Hypertension	8 / 10 (80%)
Hyperuricemia	6 / 10 (60%)

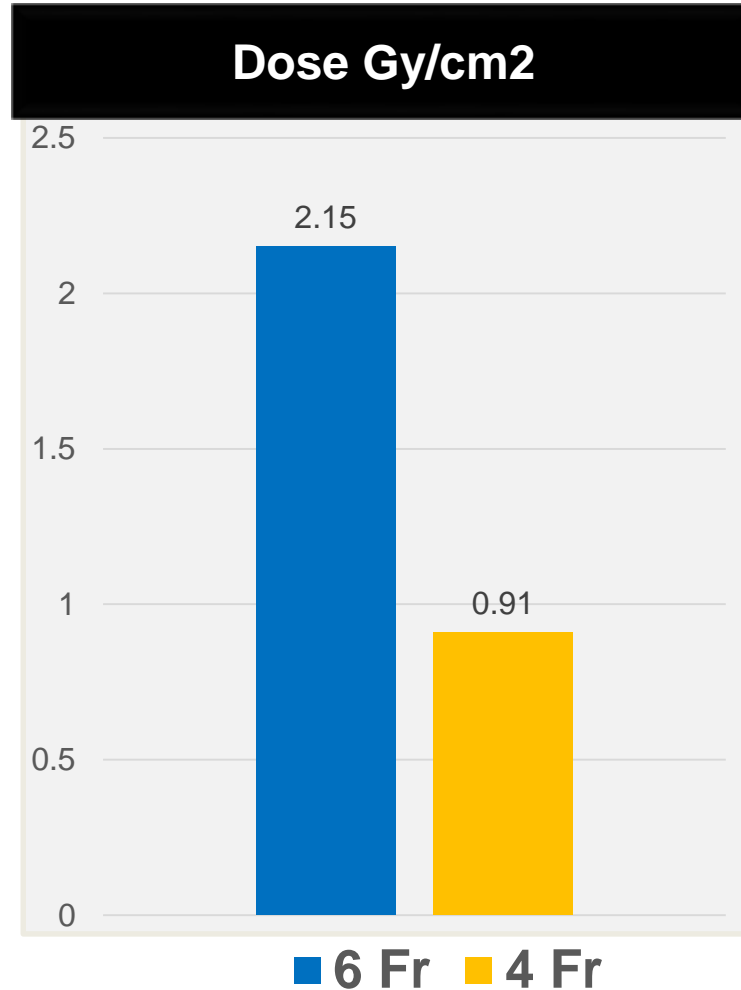
Procedure Success



Procedure Outcomes

- Mean baseline vein diameter: $2.2 \pm 0.2\text{mm}$
- 1 patient out of 10 patients experienced a procedure-related serious adverse event in our 4 Fr series (bleeding at the anastomotic site)
- Only 1 patient out of 30 patients experienced a serious adverse event (all cases 6 Fr. and 4 Fr.)





Procedure Outcomes: Gy/cm²

- Using the 6 Fr. system we had an average radiation dose of 2,15 Gy/cm² (minimal 0,82, maximal 4,89, median 1,77 Gy/cm²)
- Using the 4 Fr. system we more than halved the radiation exposure with an average of 0,91 Gy/cm² (minimal 0,41, maximal 1,74, median 0,78 Gy/cm²).

Dose area product Gy/cm²
Steinke

4 Fr endoAVF

0,91

2018 Endovaskuläre Anastomosetechniken in der Shuntchirurgie, Gefäßchirurgie, 23(6), 412-419, DOI 10.1007/s00772-018-0466-9

6 Fr endoAVF

2,15

Radosa

 2017 Endovascular Creation of an Arteriovenous Fistula (endoAVF) for Hemodialysis Access: First Results. *Cardiovasc Intervent Radiol.* 40, S. 1545-1551.

6 Fr endoAVF

46,4

Majewska

 2011 Patients' radiation doses during the implantation of stents in carotid, renal, iliac, femoral and popliteal arteries. *Eur J VascEndovasc Surg*, 41, S. 372-377

PTS Fem

6,3-70

PTS Iliac

53-199

Carotid

53

Coro

27,2

Coro PTA

56,8

Coro PTS

97

WAVELINQ™ 4F EndoAVF System proximal forearm location enables a variety of strategies to provide patients with a functional fistula.

Using wrist access:

- **more options to get vessel access**
- **shorter operating time**
- **less exposition to radiation**
- **better hemostasis**

THANK YOU



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