

Fenestrated EVAR in the UK

Addenbrooke's Hospital, Cambridge
Birmingham Heartlands Hospital, Birmingham
Charing Cross Hospital, London
Freeman Hospital, Newcastle upon Tyne
Guy's & St. Thomas' Hospital, London
King's College Hospital, London
Leicester Royal Infirmary, Leicester
Manchester Royal Infirmary, Manchester
Royal Free Hospital, London
Royal Liverpool University Hospital, Liverpool
Royal United Hospital, Bath
St. George's Hospital, London
St. Mary's Hospital, London
University College London Hospital, London



Faculty Disclosure

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I disclose the following financial relationships:

Consultant for **Philips**

Receive grant/research support from **COOK** Medical

Je déclare les informations suivantes : je suis consultant pour la société **XYZ**, employé de la Société **ABC**, je reçois des fonds/support pour mes recherches de la société **ACME**, fais partie du comité de direction de la société **ACE**, je parle pour la société **DRUG**, je suis actionnaire majoritaire de la société **ABC** **OU** je n'ai **aucune relation financière** à déclarer.

f-EVAR

- What is the magnitude of early benefit ?
(↓ death)
- How long does this last?
- Target Vessel patency?

Material & Methods

- All f-EVAR procedures done 2007-2010
- Centres that have done more than 10 procedures
- b-EVAR not included
- On-line data collection

Results

- 318 patients (2 unsuccessful)
- Age mean 74 y (47-86, median 74)
- Aneurysm size mean 65 mm (46–113, median 62)
- Cook stent-grafts

Target vessels		Configuration	n
CA+SMA+ Rt & Lt renals	64	4F	8
		1S 3F	53
		2S 2F	2
		1S 2F	1
SMA+ Rt & Lt renals	168	3F	48
		1S 2F	114
		2S 1F	6
Rt & Lt renals	57	1S 1F	13
		2F	44
One renal	16	1S	4
		1F	12

	S	F	
CA	59 (0)	13 (10)	
SMA	128 (2)	120 (111)	
Rt renal	10 (3)	274 (266)	
Lt Renal	4 (1)	281 (277)	
Total	201 (6)	688 (664)	889 (670)

Duration of op 4h 31m (1:20 – 12, median 4)

Blood loss 807 ml (50-7000 median 500)

Adjuvant procedures

- Performed in 52 (16.4%)
- Access (9)
- Endoleak (7)
- Target vessel (12)
- BMS to prevent limb kink (12)
- Assorted (12)

Completion angio (n=306)

Type of endoleak	n
Proximal Type 1	14 (4.6%)
Distal Type 1	3 (1%)
Type 3 (Target vessel junction)	2 (0.7%)
Type 3 (between bodies)	2 (0.7%)
Type 3 (between limbs)	1 (0.3%)
<i>All type 3</i>	<i>5 (1.7%)</i>
Type 2	22 (7.2%)

All TV fully patent 296 (97%)

Lost = 5 (0.6%) Threatened = 5 (0.6%)

Morbidity (97 events in 52 pts)

- Cardiac 23
- Respiratory 11
- GI 8
- Sepsis 18
- Renal 18 (11)
- Bleeding 6
- Neurological 8(5 spinal)
- Ischaemic 5

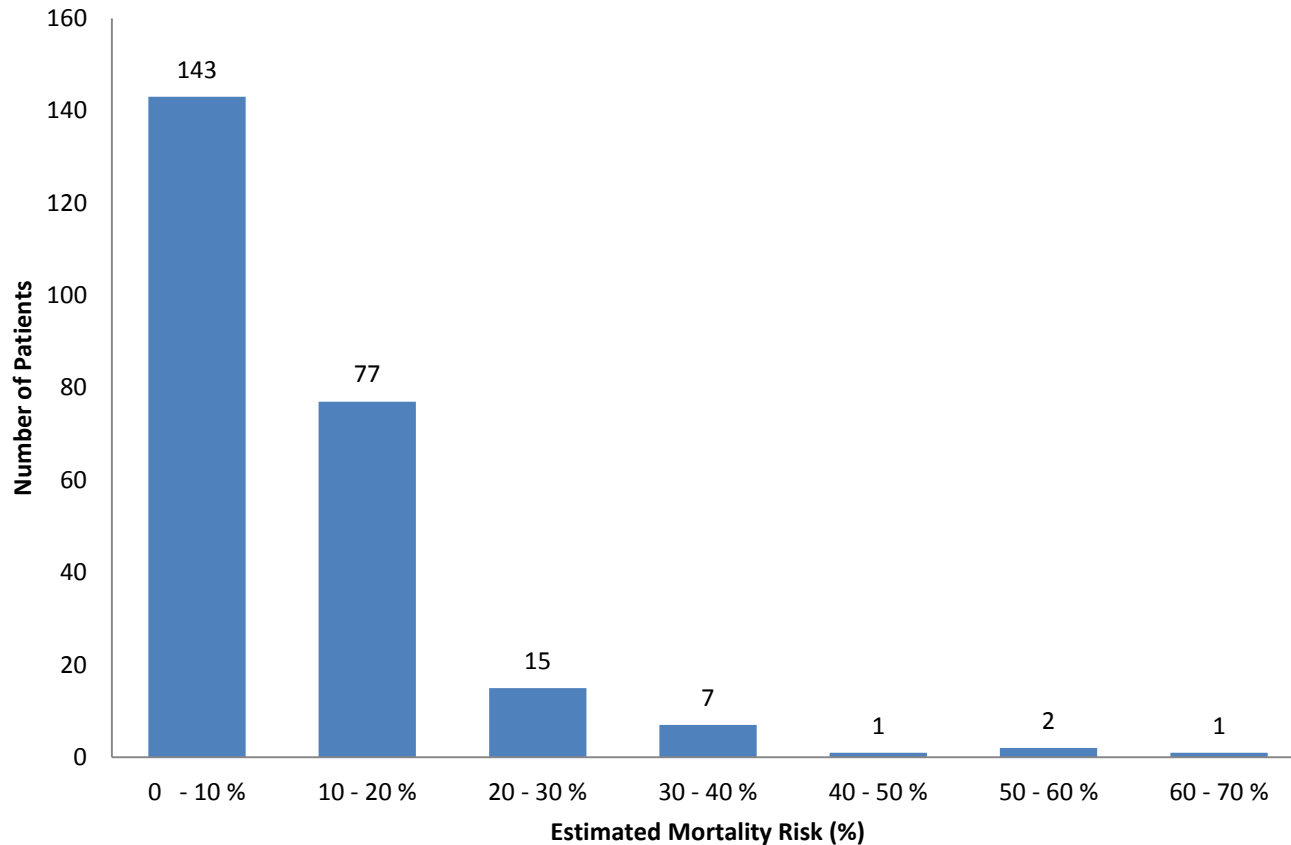
Early reintervention (n=20 / 6%)

- Target vessel 9+1
- Endoleak 1+1
- Assorted 8

Postoperative course

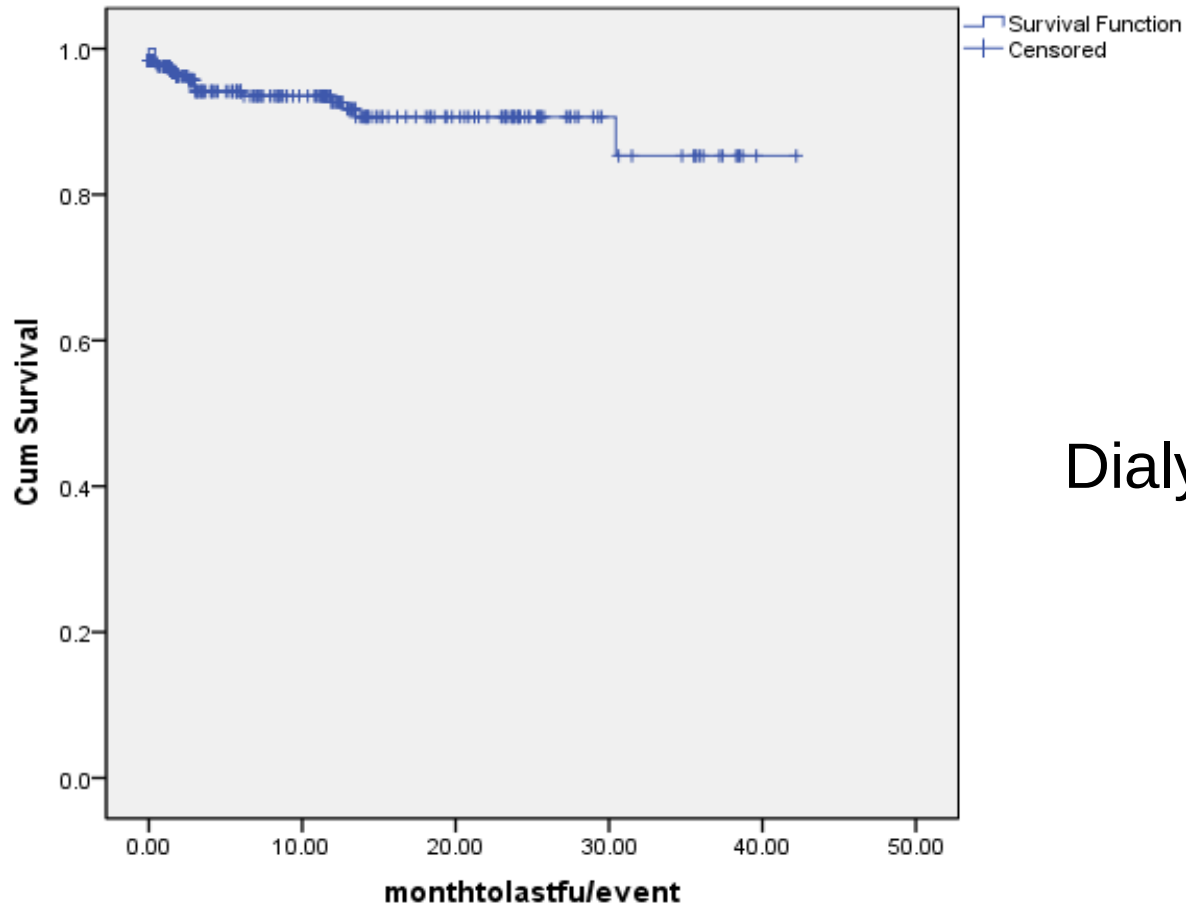
- Mean stay 9 days (1-100 median 6)
- ICU admission in 38%
 - Mean 3.7 days (1-38 median 2)
- 11 patients died within 30 days
- 2 more died in hospital
- 4.1% perioperative death

Risk estimation (for open repair)



Total deaths estimated = 27 / 246
(11%)

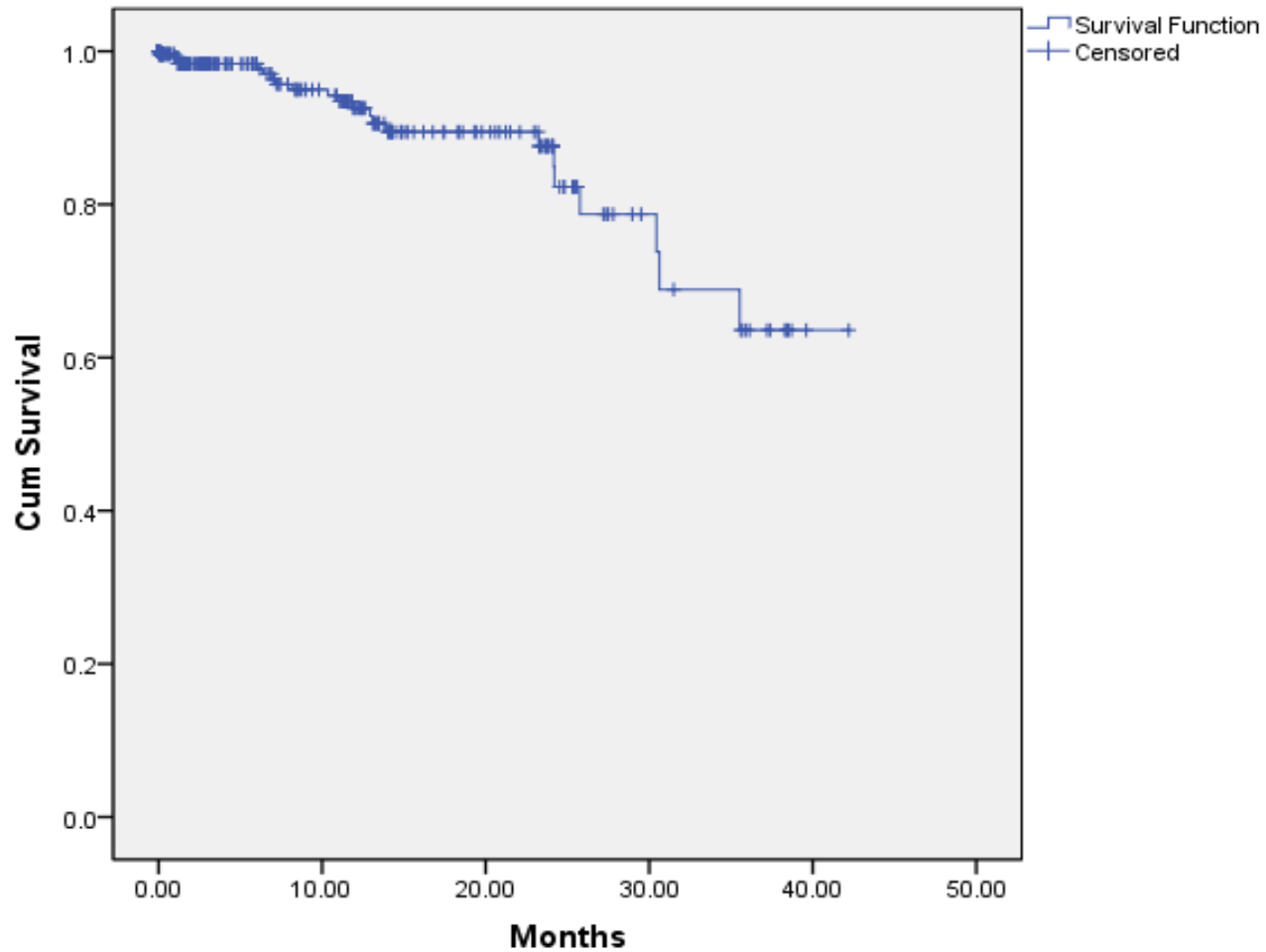
Target Vessel Patency



Dialysis 1

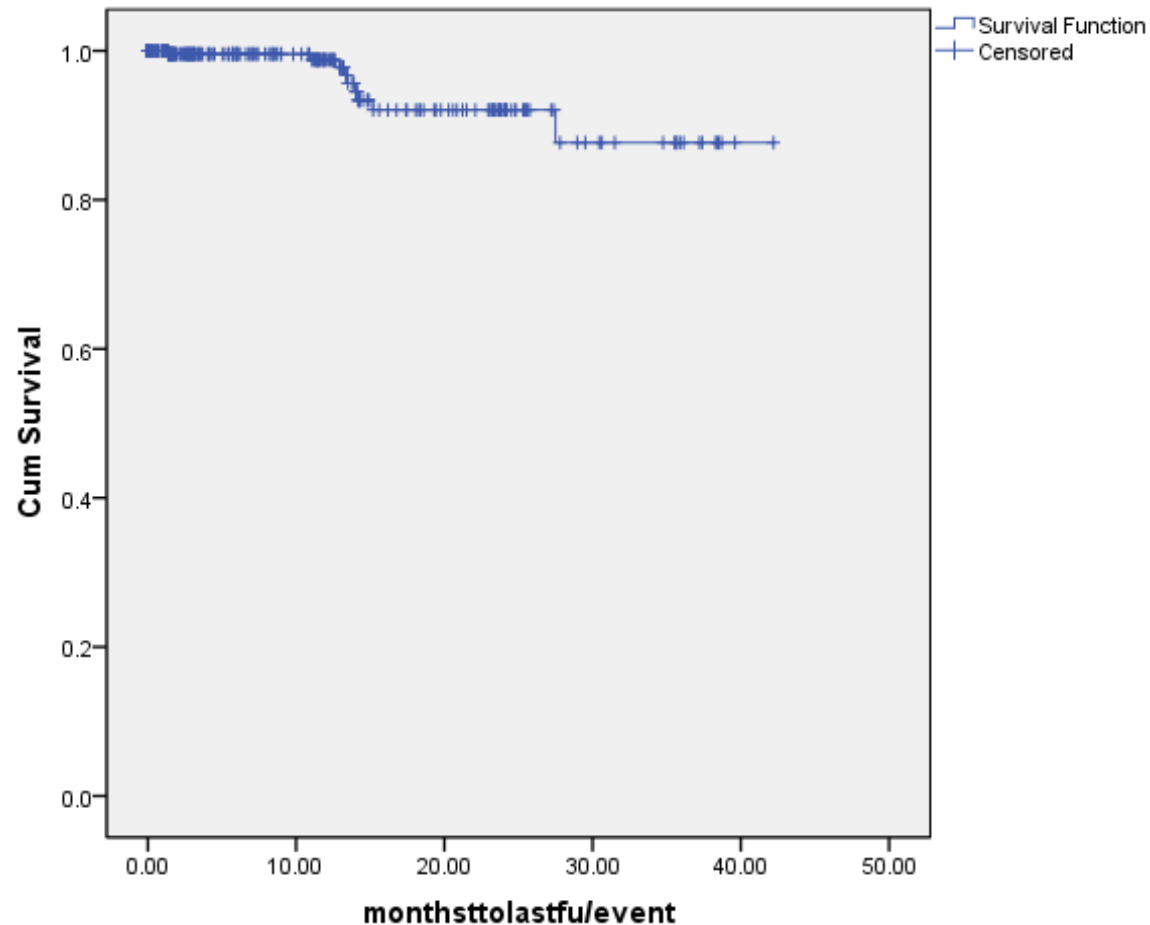
Time(months)	0	3	6	12	24	36	42
n (TV) at risk	889	573	472	365	149	40	3
Cum Survival (%)	99	98	98	97	97	95	95
Std err (Cum.surv.)	0.00	0.00	0.01	0.01	0.01	0.02	0.02

Target Vessel Stent distortion



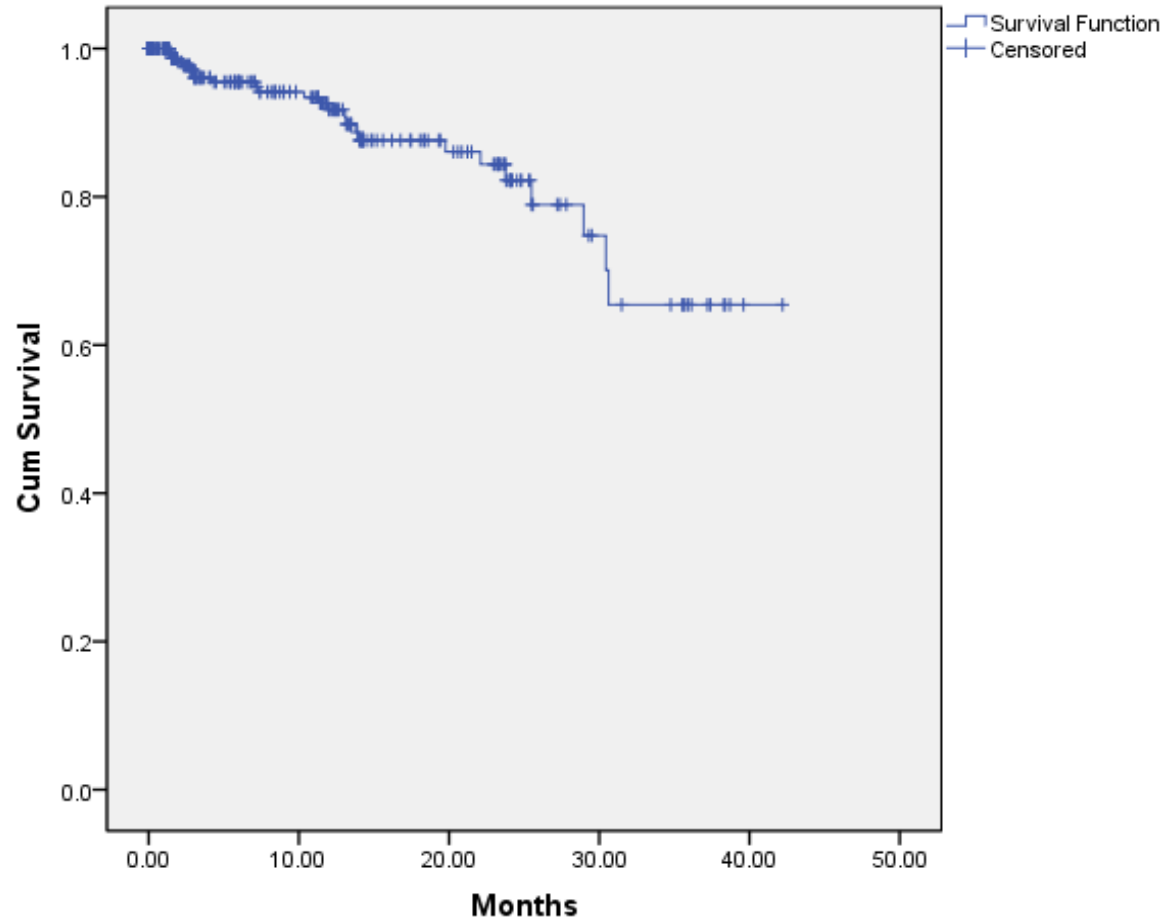
Time (months)	0	3	6	12	24	36	42
n at risk	309	197	162	123	49	13	1
Cum. Freedom (%)	100	98	98	92	87	63	63
Std.Err.(Cum.surv.)	0.00	0.01	0.01	0.02	0.03	0.09	0.09

Freedom from Late Migration



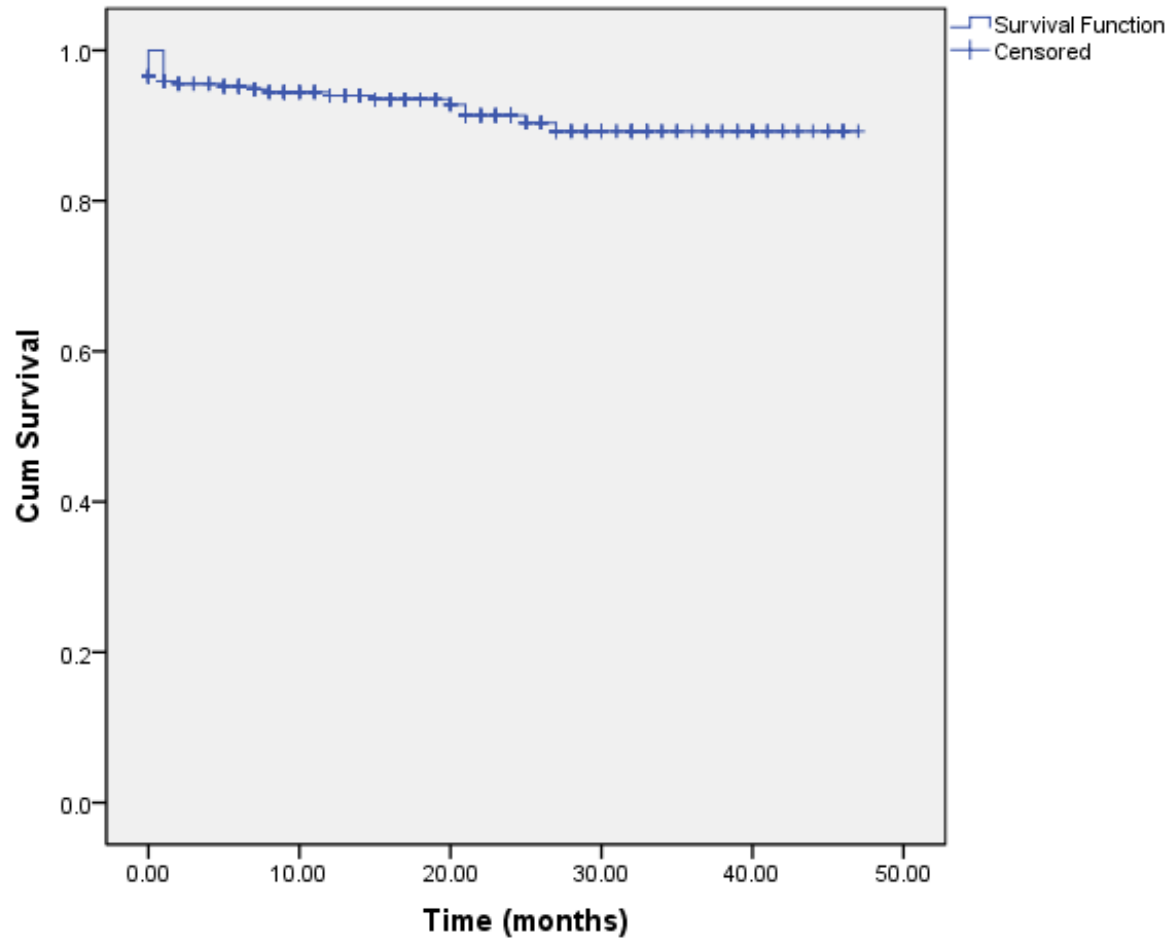
Time (months)	0	3	6	12	24	36	42
n at risk	309	199	164	128	51	13	1
Cum. Freedom (%)	100	100	100	99	92	88	88
Std.err. (Cum.surv.)	0.00	0.00	0.00	0.01	0.03	0.05	0.05

Late Secondary Intervention



Time (months)	0	3	6	12	24	36	42
n at risk	309	198	161	122	48	12	1
Cum freedom (%)	100	97	95	90	86	70	70
Std.Err.(Cum.surv.)	0.00	0.01	0.01	0.02	0.03	0.08	0.08

Overall Survival



Time (months)	0	3	6	12	24	36	45
n at risk	318	284	273	215	110	38	12
Cum. Survival (%)	96	95	95	94	91	89	89
Std err (Cum.surv.)	0.01	0.01	0.01	0.01	0.02	0.02	0.02

Conclusion

- f-EVAR $\approx$ 7% absolute risk reduction
- Target Vessel patency is acceptable (serious consequences of target vessel loss is rare)
- Broad application appears justified