Je vois trop de retards de maturation qui se prolongent et je plaide pour davantage de PTFE pontages

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Cumulative patency of AVFs and AVGs

- Primary failure rate 2x > for for first time AVFs than for AVGs
  (AVF 40%; AVG 19%) p<0.001
- For subsequent AV access
  - Primary failure rate 2.6 x > for AVFs than for AVGs (39% vs 15%)
- If we exclude primary failures :

  Cumulative survival for AVFs > AVGs (57% vs 37%).

i cumulative patency for AVFs > AVGs (61.9 vs 23.8 mo. for 1st access).

- If we include primary failures:
  - No sig difference in first access survival between aVFs and AVGs (35% vs 31%)
- AVGs:

  2X >PTAs (3.2 vs 1.4/1000 days)

  (1.2 vs 0.44/ 365 days)

Black females
Obese (BMI >30)
Diabetic
CHF

1,140 dialysis pts from 2 Canadian Centers

1,012 (88.6%) AVFs, 128 (11.2%) AVGs

Lok, C, et al. CJASN May 07, 2013 vol. 8 no. 5 810-818

Demographics affecting primary failure rates

Male
Obese
Diabetic

44,5%

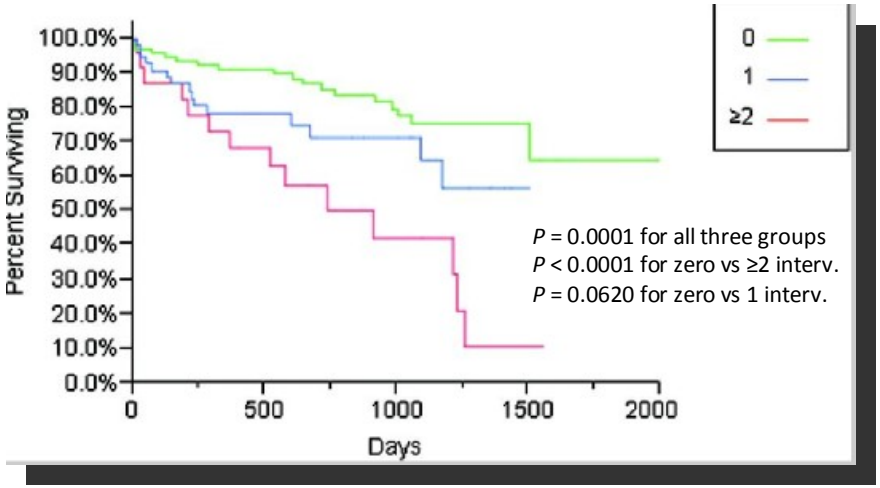
Baseline demographics by number of interventions to promote AVF maturation

	Zero Interventions	One Intervention	Two or More Interventions	*P*
Patients (*n* = 173)	96 (55.5%)	54 (31.2%)	23 (13.3%)	
Sex				0.0107
female	17 (17.7%)	16 (29.6%)	11 (47.8%)	
male	79 (82.3%)	38 (70.4%)	12 (52.2%)	
Race				0.2664
black	71 (74.0%)	38 (70.4%)	20 (87.0%)	
white	25 (26.0%)	16 (29.6%)	3 (13.0%)	
Diabetes				0.0422
yes	41 (42.7%)	30 (55.6%)	16 (69.6%)	
no	55 (57.3%)	24 (44.4%)	7 (30.4%)	
PVD				0.0415
yes	18 (18.8%)	7 (13.0%)	9 (39.1%)	
no	78 (81.2%)	47 (87.0%)	14 (60.9%)	
Access site				0.7710
upper arm	66 (68.8%)	38 (70.4%)	14 (60.9%)	
forearm	30 (31.3%)	16 (29.6%)	9 (39.1%)	
Age ≥65				0.4021
yes	24 (25%)	16 (28.3%)	9 (39.1%)	
no	72 (75%)	38 (71.7%)	14 (60.9%)	
BMI ≥30				0.0491
yes	28 (29.2%)	17 (31.5%)	13 (56.5%)	
no	68 (70.2%)	37 (68.5%)	10 (43.5%)	
First *versus* subsequent fistula				0.1727
first	61 (63.5%)	38 (70.4%)	19 (82.6%)	
subsequent	35 (36.5%)	16 (29.6%)	4 (17.4%)	

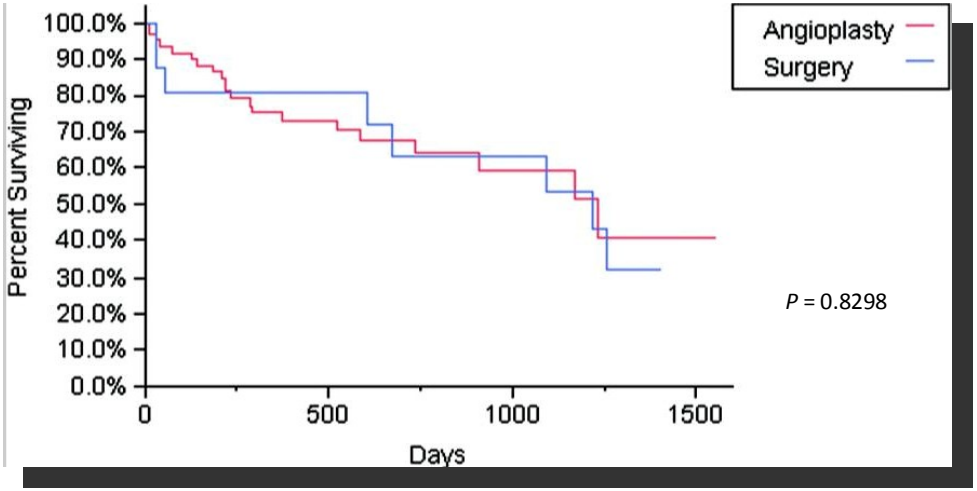
Lee, T et al. Clin J Am Soc Nephrol. Mar 2011

Salvage of primary AVF failures

interventions before use



Angioplasty vs surgery



Cum. Patency	0 intervention	1 intervention	≥ 2 interventions
1 year	92 %	78 %	68 %
2 years	85 %	71 %	57 %
3 years	75 %	57 %	42 %
# interventions to maintain patency	0.76 ± 0.10	1.37 ± 0.31	3.51 ± 2.20

Lee, T et al. Clin J Am Soc Nephrol. Mar 2011

Délais de maturation, échecs

- Causes multiples
  - Pression des organismes officiels
  - Terrain vasculaire précaire, voire, hostile
  - Démographie non-favorable
  - Thrombose d'emblée
  - Temps de maturation trop long; échec de maturation
- Le point de vu des patients
  - Refus de subir d'autres procédures douloureux, défigurants (surtout si le CVCT marche bien)
  - L'échec sème le doute sur la valeur d'une FAV

Peut-on faire mieux?

Available early cannulation grafts[1]

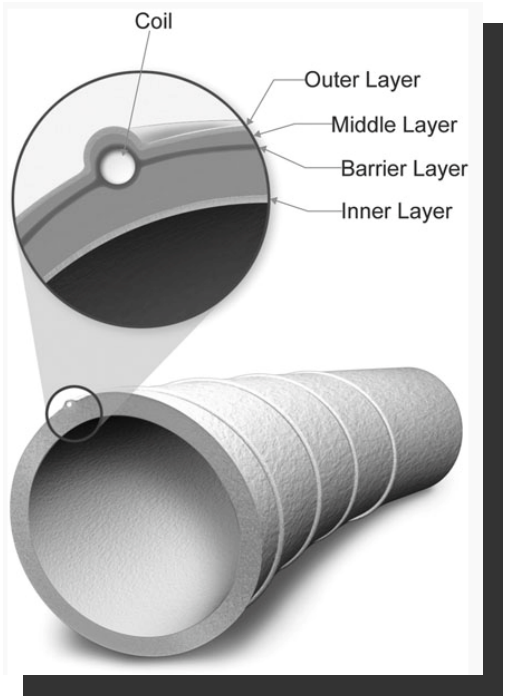
Author	Graft	Primary patency (1 year)	Secondary patency (1 year)	Infection rate	Days to 1st dialysis
Glickman (11)	PU	51%	85%	5.6%	3-14
Matsuda (12)	PU	44%	79%	4.34%	2.4
Scher (13)	ePTFE	58%	79%	-	-
Schild (14)	ePTFE (Flixene™)	49%	-	6.06%	1-3
Chiang (15)	ePTFE (Flixene™)	34%	51%	20.2%	3
Aitken (16)	ePTFE (Acuseal™)	32.4%	40.5%	16.2%	1
Karatepe (5)	Avflo™	50%	75%	4.16%	1
Ferraresso (present study)	AVflo™	56%	81%	0%	7

Infection rates[2]

Access type	AVF	AVflo	AVG	TCVC	NTCVC
n/1000 dialysis procedures	0.2	0.45	0.6	3.1	5.2
n/ pt yr	0.18		0.39	1.45	

[1] Ferraresso M et al. J Vasc Access. 2016;17(3): 210-214 [2] Taylor G et al. Infect Control Hosp Epide- miol. 2002;23(12):716-720

A novel electrospun nano-fabric graft allows early cannulation access and reduces exposure to central venous catheters



Time to cannulation (N=24)[1]

	Frequency (n)	Percent	Cumulative Percent
Up to 12 hours	1	4.2	4.2
12-24 hours	11	45.8	50.0
24-48 hours	12	50.0	100.0

Thrombotic events (4.05/1000 graft days)[2]

Thrombotic events per patient (n)	Affected patients - n (%)	Cumulative thrombotic events – n (%)
0	14 (58.3%)	0
1	5 (20.8%)	5 (26.3%)
2	2 (8.3%)	4 (21.05%)
3	2 (8.3%)	6 (31.6%)
4	1 (4.2%)	4 (21.05%)
Total	24 (100%)	19 (100%)

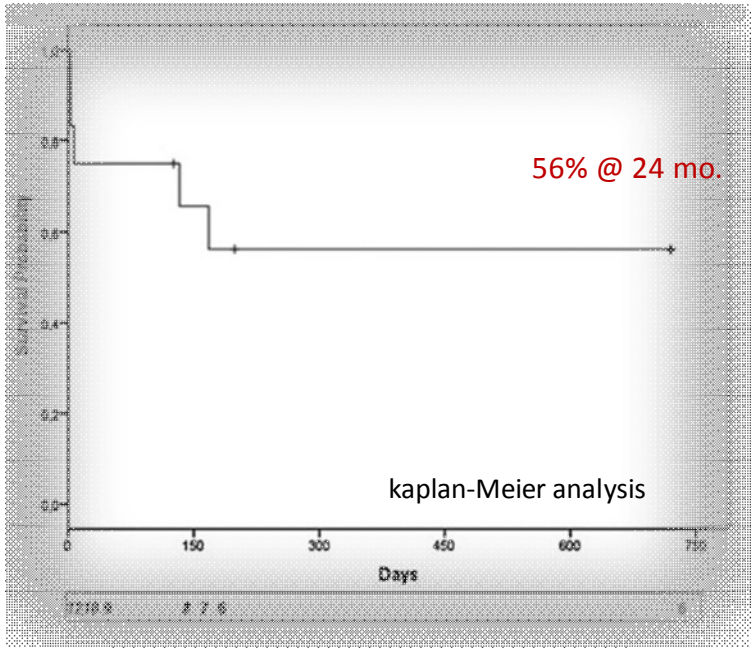
(No endovascular interventions)

[1] Karatepe C, et al. J Vasc Access. 2013;14(3):273-280

[2] Ferraresso M et al. J Vasc Access. 2016;17(3): 210-214

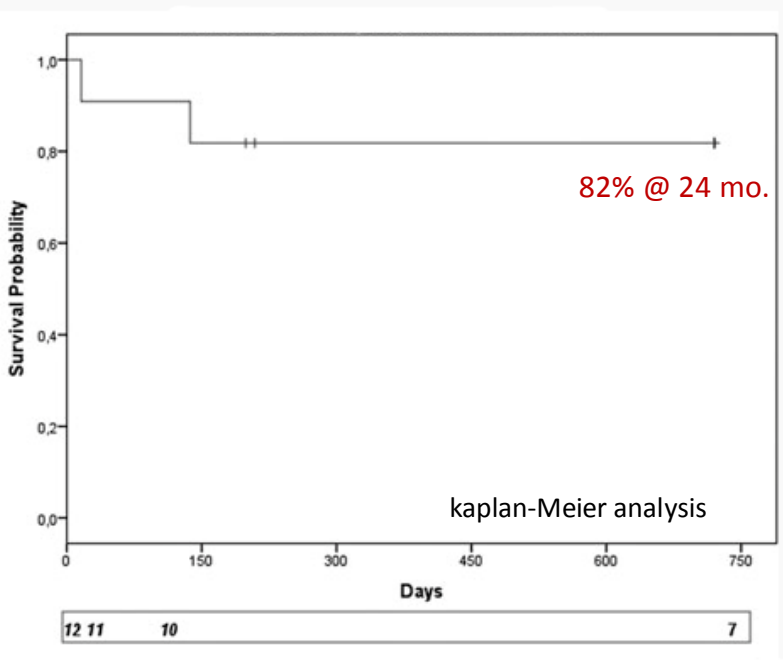
A two-year experience with a rapid access, self-sealing, polycarbonate urethane nanofiber vascular access graft for hemodialysis

Primary patency



Surgery-censered 1° patency @ 24 mo: 75%

Secondary patency



Ferraresso M et al. J Vasc Access. 2016;17(3): 210-214

Cumulative patency: AVF vs. AVG vs. EC-AVG

AVF[1]

Cum. Pat/# interv	0	1	≥ 2
1 year	92 %	78 %	68 %
2 years	85 %	71 %	57 %
3 years	75 %	57 %	42 %
# interventions to maintain patency	0.76 ± 0.10	1.37 ± 0.31	3.51 ± 2.20

AVG[2,3] EC-AVG[4,5]

PTFE	ePTFE	AVflo
52-67.7 %	40.5-79%	75-81 %
53-54.24%		81 %
35.1%		
(1.2)*	(1.2)*	(1.2)*

[1] Lee, T et al. Clin J Am Soc Nephrol. Mar 2011

[2] Almonacil, V.Sala et al. J Cardiovasc Surg (Torino), 52 (2011)

[3] Morosetti, M. et al. J Vasc Surg, 54 (2011)

[4] Karatepe C, et al. J Vasc Access. 2013;14(3)

[5] Ferraresso M et al. J Vasc Access. 2016;17(3)

*Lok, C, et al. CJASN May 07, 2013 vol. 8 no.5

Conclusions: pontages

- Place importante dans la stratégie des abords d'hémodialyse
- *Option précieuse en cas d'épuisement du capital veineux, démographie non favorable, durée de vie limitée*
- *Survie cumulative semblable aux FAV autogènes*
- *Utilisation presque immédiate et à long terme*
- *Gain d'au moins 5 semaines sure les FAV autogènes*
- *Eviter la plupart des CVC*
- *Taux d'infection 7X moins que les CVCT*
- Partie intégrale de fistula first, lines last … ou presque jamais!