


Best Bridging Stent Selection for the Gore Iliac Branch Endoprosthesis (IBE): What Works and What Doesn't

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Faculty disclosures

Steven Maximus, MD

- Consulting
WL Gore

Iliac Branch Devices



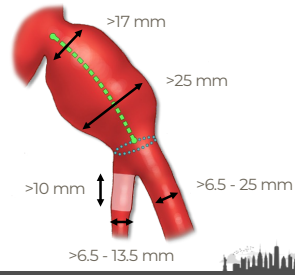
Cook Straight (ZBIS®), Helical and Bifurcated-Bifurcated Gore IBE® JOTEC®

IBE Pivotal Trial 5 year follow-up

- 32/63 patients with reported imaging @ 5 years
- No additional events reported since 3 year data
- 0 Type I / III Endoleaks
- 0 Ruptures
- 0 Migration

Patency- External iliac artery	100%
Patency- Internal iliac artery	95.1%
Freedom from reintervention	90.5%
Buttock claudication	0%
New onset erectile dysfunction	0%
Freedom from CIAA enlargement (>5mm)	96.8%

- Minimum renal artery to internal iliac artery distance ≥ 165 mm
- Adequate anatomy to receive EXCLUDER stent graft



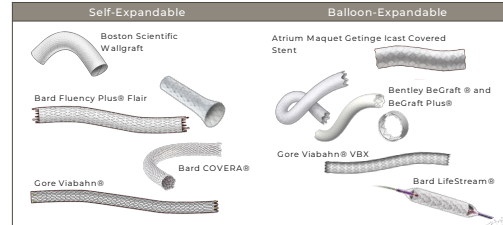
Internal Iliac Component

Catalogue Number	Diameter Iliac End (mm)	Iliac Branch Component Length (cm)
HGB161007A	10	7
HGB161207A	12	7
HGB161407A	14.5	7

Anatomical Considerations

- Most common limitation is inadequacy of the internal iliac artery due to aneurysms involving the landing zone
 - Repair can still be done by extending one of the branches (usually posterior divisional branch)
- Length from renal arteries to internal iliac artery >165mm

Covered stents and stent-graft options

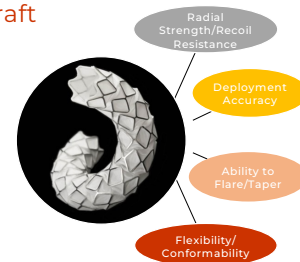


Profile, diameter and lengths

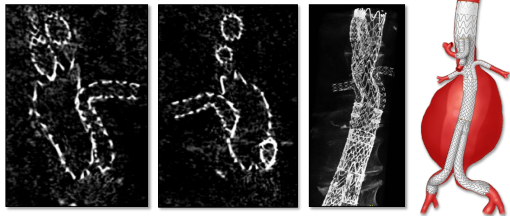
Stent	Manufacturer	Type	Profile (Fr)	Diameter	Length
Wallgraft®	Boston Scientific	SE	10/12	5-6/7-11	30-44-74-104
Fluency® Plus	Bard-BD	SE	8/9/10	6/7-10/12-13.5	40-6—80-100
Fluency Flair®	Bard-BD	SE	9	6-9 (13)	30-50
Viabahn®	WL Gore	SE	7/8/9/11	5-6/7-8/9/10-13	25-50-75-100
VBX®	WL Gore	BE	7/8	5-7/ 8-11	19-29-39-59-79
ICAST®	Getinge	BE	6/7	5-6/5-10	16-22/22-38-59

VBX® stent-graft

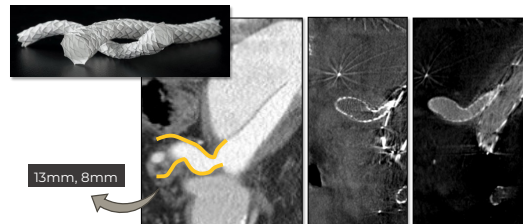
Benefits of both balloon expandable and self expanding stents...

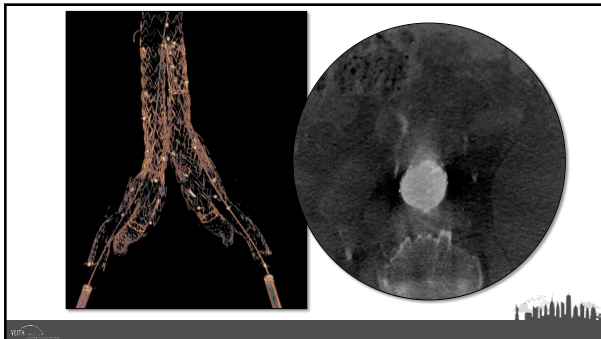
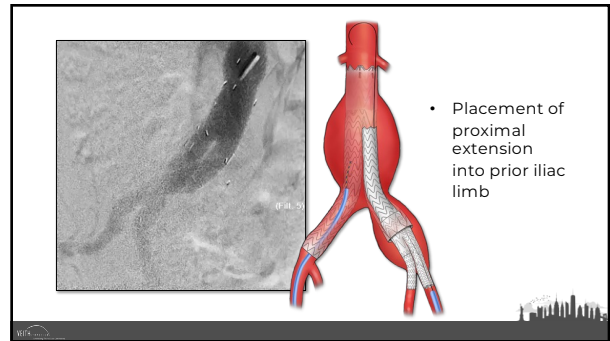
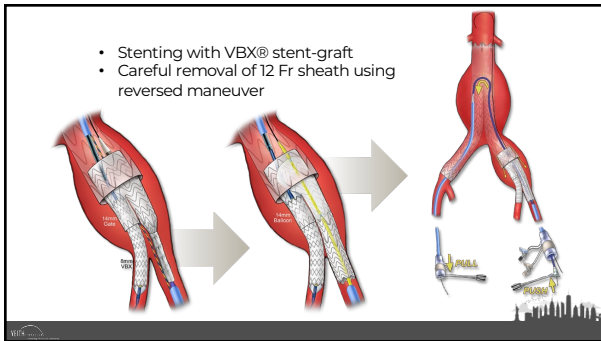
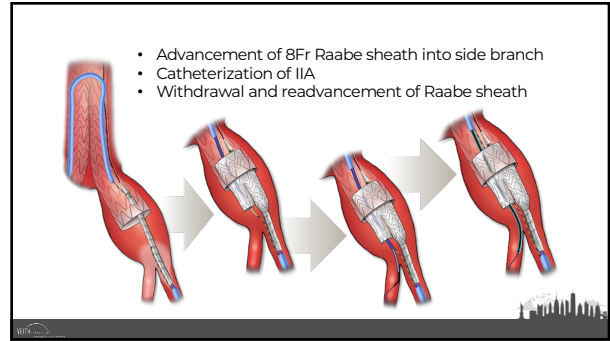
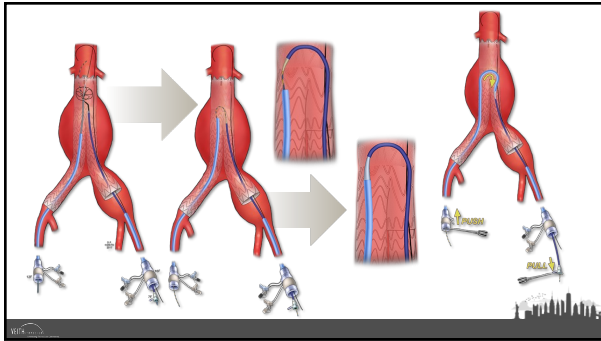


Flexibility and conformability



Diameter flaring





Comparison of balloon vs self-expandable stent-graft for internal iliac branch endoprosthesis

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Methods

- Retrospective review of consecutive patients treated by Gore Iliac Branch Endoprosthesis (IBE) with iliac branch side self-expandable stent-graft or VBX balloon-expandable stent-graft
- Excluded patients treated by Cook Iliac Branch Device or other internal iliac bridging stent-grafts (e.g. Maquet iCAST, Viabahn, etc)
- End-points:
 - Technical success
 - Type IC/ IB/ IIIC endoleak
 - Freedom from target vessel instability
 - IIA primary and secondary patency
 - Freedom from reinterventions

90 patients / 109 iliac aneurysms

	All patients n=90	VBX n=36	Gore ISB n=54	P value
Mean age	74±7	76±7	73±7	.06
Male	96%	97%	94%	.64
Hypertension	89%	89%	89%	.94
Hyperlipidemia	81%	89%	75%	.17
Cigarette smoking	46%	32%	55%	.05
Coronary artery disease	36%	38%	34%	.82
Chronic kidney disease III-IV	34%	41%	30%	.37

Anatomical measurements

	All patients n=90	VBX n=36	Gore ISB n=54	P value
Max aortic diameter	47±16	48±17	47±15	.72
Max CIA diameter	36±10	37±12	36±7	.57
Length CIA	69±22	72±24	67±20	.31
Length IIA	36±10	43±14	39±13	.18
Max IIA diameter	19±13	24±15	15±9	.008
Length from lowest renal artery to aortic bifurcation	122±34	123±44	121±24	.67

Procedure details

	All patients n=90	VBX n=36	Gore ISB n=54	P value
Concomitant EVAR	87%	69%	98%	<.001
"Up and over" technique	23%	39%	13%	.006
Any internal iliac aneurysm	31%	50%	19%	.003
Isolated IBE	13%	31%	2%	<0.001
Total percutaneous femoral	86%	86%	86%	.93
Brachial access	4%	8%	2%	.30
IIA seal zone				<0.001
Main trunk	80%	56%	95%	
Divisional branch	20%	44%	5%	

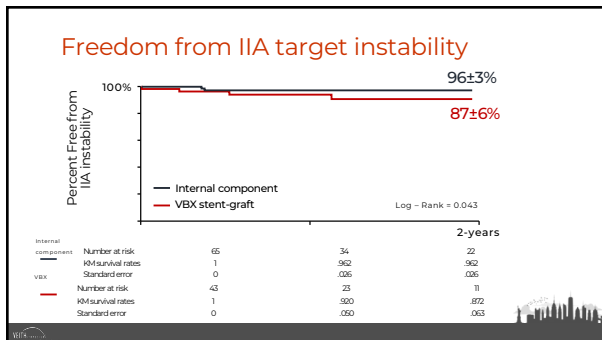
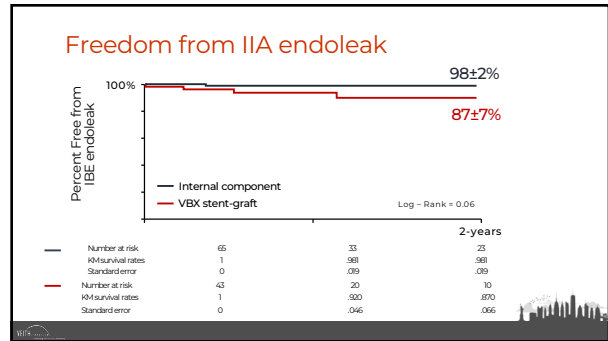
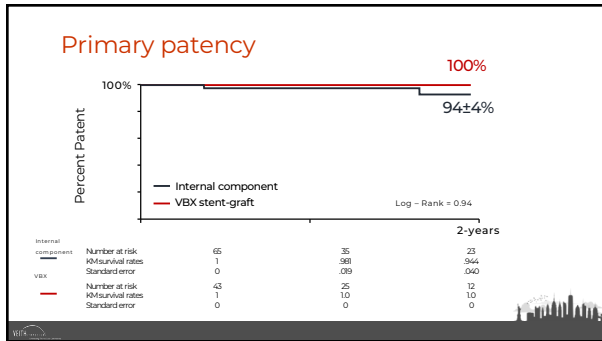
Procedure metrics

	All patients n=90	VBX n=36	Gore ISB n=54	P value
Contrast use (mL)	134±54	132±58	135±51	.70
Total operating time (min)	180±83	206±92	162±72	.04
Total fluoroscopy time (min)	52±29	65±32	43±24	.001
Cumulative air kerma (mGy)	1131±858	1165±702	1108±956	.35
Dose area product (Gy.cm ²)	201±147	240±148	164±137	.02
Technical success	99%	97%	100%	.40

One patient (3%) treated by VBX had technical failure due to inability to catheterize the IIA

IIA target vessel instability

	All IBE N = 109	VBX n=43	Gore ISB n=65	P value
Any instability	7 (6%)	5 (12%)	2 (3%)	.11
IIA target occlusion	3 (3%)	1 (2%)	2 (3%)	.1
Stent disconnection	1 (1%)	1 (2%)	0 (0)	.39
IBE endoleak	5 (5%)	4 (9%)	1 (2%)	<0.08
Endoleak Type IC	2 (2%)	1 (2%)	1 (2%)	.1
Endoleak Type IB	1 (1%)	1 (2%)	0 (0%)	.4
Endoleak Type IIIC	2 (2%)	1 (2%)	0 (0%)	.17
IBE reintervention	3 (3%)	2 (5%)	0 (0%)	.56



Conclusion

- VBX stent-grafts have been indicated more often for revisions of EVAR, IIA aneurysms and stenting of divisional branches
- There were no integrity issues at mean follow up of 25 months
- Patency and freedom from buttock claudication are comparable to iliac side branch stent
- Freedom from branch instability was lower than that observed for iliac side branch stent, but differences in patient anatomy likely was the main factor affecting outcomes

THANK YOU!

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