



Advantages And Current Status Of The Artivion IBD Device For Treating Common And Internal Iliac Artery Aneurysms:

The PLIANTII Study + Zuyderland MC study

VEITH Symposium, November 20th 2024


Lee H. Bouwman MD PhD FEBVS
Vascular surgeon, Zuyderland Medical Center
Professor of Clinical Engineering, Faculty of Science and Engineering

Disclosures



- Research grant Artivion
- Research grant Abbott




Recommendation 103	Class	Level	References
In patients with iliac artery aneurysm endovascular repair may be considered as first line therapy.	Ib	B	IR 113,205,375



Recommendation 60	Class	Level	References
In most patients with suitable anatomy and reasonable life expectancy, endovascular abdominal aortic aneurysm repair should be considered as the preferred treatment modality.	Ia	B	48,70,71,78, 100,192,259, 194,237,270, 385,386,387, 401,447,541, 545,558,563, 577,698,709, 710,779




Recommendation 103	Class	Level	References
In patients with iliac artery aneurysm endovascular repair may be considered as first line therapy.	Ib	B	



Recommendation 60	Class	Level	References
In most patients with suitable anatomy and reasonable life expectancy, endovascular abdominal aortic aneurysm repair should be considered as the preferred treatment modality.	Ia	B	48,70,71,78, 100,192,259, 194,237,270, 385,386,387, 401,447,541, 545,558,563, 577,698,709, 710,779

Preserving Pelvic circulation




Recommendation 104	Class
Preserving blood flow to at least one internal iliac artery during open surgical and endovascular repair of iliac artery aneurysms is recommended.	I






Preferred graft iliac bifurcation

E-iliac stentgraft system

Artivion®



E-liac

01 Aorto-iliac Aneurysms
 Dimensions: $\varnothing 14$ mm, $\varnothing 8$ mm, $\varnothing 10/14$ mm, 53 mm, 44/56 mm.

02 Isolated Iliac Aneurysms
 Dimensions: $\varnothing 14/16/18$ mm, $\varnothing 8$ mm, $\varnothing 10/14$ mm, 65 mm, 44/56 mm.

Logos: zuyderland, Maastricht University

E-liac

Logos: zuyderland, Maastricht University

E-liac

Logos: zuyderland, Maastricht University

PLIANT II study

Thirty-day and one-year outcomes of the E-Liac Stent Graft System in patients with left or bilateral aortoiliac aneurysms
 On behalf of the PLIANTII study group
 Prof. Dr. Med. Jan Brunkwall

Zuyderland MC study

Single-Center Mid-term Experience with E-Liac Branched Device from Artivion®
 Ozan Yazici¹, Stefanie Willems², Niek Zonneveld², Pieter B. Salemans², Chunfu Wong², Jeroen B. Bouman²

PLIANTII study group

Alexander Oberhuber	Adam Hultberg	Miroslav Dinkic
Stefano Sforza	Ignacio Valero-Cabré	Roger Suckale
Graf Kiefer	Said Akca	Detlev Michels
Vladimir Malozzi	José Ramiro-Marcos Garcia	Marcel Linn
Yoshitaka Suzuki	Giuseppe Trovati	Alain Verstraete
Giuseppe Santini	José Pedro Sobral	Alvaro Fernandez Hernandez
Roland Trues	Paulo Luis Hoffmann	Clara Acosta-Martinez
Alessandro Caporali	Julio Cesar Costa	Fred Gaskard
Bernhard Dorward	Juan Carlos Lopez Muñoz	Elio Gonzalez
Vincent Van Biele	Ignacio Aguilera Gómez	Louise O van der Horst

Logos: zuyderland, Maastricht University

PLIANT II	Zuyderland MC
Observational, prospective, non-randomized, international multicenter study	Large single center, retrospective study
Follow-up: 30 days and 12 months	Mean follow-up: 36 months



Logos: zuyderland, Maastricht University

PLIANT II	Zuyderland MC
<ul style="list-style-type: none"> 30 sites in Europe 295 patients between September 2018 and September 2023 The E-liac Stent Graft was used both for isolated iliac aneurysms and in combination with AAA stent graft systems 340 E-liac Stent Grafts implanted 	<ul style="list-style-type: none"> Single site experience 70 patients between September 2015 and December 2022 The E-liac Stent Graft was used for isolated iliac aneurysms and in combination with AAA stent graft systems + E-liac stent graft implanted for type 1B EL 91 E-liac Stent Grafts implanted

Logos: zuyderland, Maastricht University

Comparing data:



	PLIANTII (n=295)	ZUYDERLAND MC (n=70)
Mean age	72.7 ± 7.8	71 (53-85)
Male	96%	94%

Comparing data:

	PLIANTII (n=295)	ZUYDERLAND MC (n=70)
Mean age	72.7 ± 7.8	71 (53-85)
Male	96%	94%

	PLIANTII (n=340)	ZUYDERLAND MC (n=91)
Left	146 (40%)	47 (52%)
Right	194 (60%)	44 (48%)






Comparing data:



	PLIANTII (n=295)	ZUYDERLAND MC (n=70)
Mean age	72.7 ± 7.8	71 (53-85)
Male	96%	94%

	PLIANTII (n=340)	ZUYDERLAND MC (n=91)
Left	146 (40%)	47 (52%)
Right	194 (60%)	44 (48%)

	PLIANTII (n=295)	ZUYDERLAND MC (n=70)
Isolated E-Iliac	59 (20%)	5 (7%)
E-Iliac + AAA stent graft	236 (80%)	57 (81%)
IBD post EVAR (uni and bilateral)		8 (11%)



<p>PLIANT II</p> <p>Observational, prospective, non-randomized, international multicenter study</p> <p>Follow-up: T=0 → n=295 T=30 days → n=291 T=12 months → n=220</p>	<p>Zuyderland MC</p> <p>Large single center, retrospective study</p> <p>Mean follow-up: 36 months N=70</p>
--	--

Comparing data: Technical Success



Freedom from

- type I or III endoleak
- graft limb occlusion

Comparing data: Technical success

	PLIANTII (n=291)	ZUYDERLAND MC (n=70)
Technical Success (day 30)	271* (93,1%)	66 (94,3%)

Comparing data: Technical success

	PLIANTII (n=291)	ZUYDERLAND MC (n=70)
Technical Success (day 30)	271* (93,1%)	66 (94,3%)

	PLIANTII (n=220)	ZUYDERLAND MC (n=70)
Technical Success	202 (91,8%)	61 (87,1%)
Mid term FU	12 months	Mean 36 months



Comparing data: Technical success

	PLIANTII (n=291)	ZUYDERLAND MC (n=70)
Technical Success (day 30)	271* (93,1%)	66 (94,3%)

	PLIANTII (n=220)	ZUYDERLAND MC (n=70)
Technical Success	202 (91,8%)	61 (87,1%)
Mid term FU	12 months	Mean 36 months
Device related deaths	Nil	Nil



Comparing data: Mid-Term overall Patency

	PLIANTII (n=220)	ZUYDERLAND MC (n=70)
Follow-up	12 months	Mean Follow-up 36 months
Patency (prim + sec)	97%	97%



Summary

- PLIANTII study vs. Zuyderland MC study
Outcome comparable
- High technical success rate
 - PLIANT II 91.8% (1 year)
 - Zuyderland MC 87.1% (36 months)
- High patency rate (97% vs 97%)
- No device related deaths



Conclusion

The E-iliac Stent Graft System seems safe and efficient for treating isolated iliac aneurysm and aortoiliac aneurysm

Long term follow up is needed

Special thanks to:

Prof. dr. Jan Brunkwall
+
PLIANTII study group

