

HOW TO?

# IMPULSVORTRAG TLE VON CSP-ELEKTRODEN

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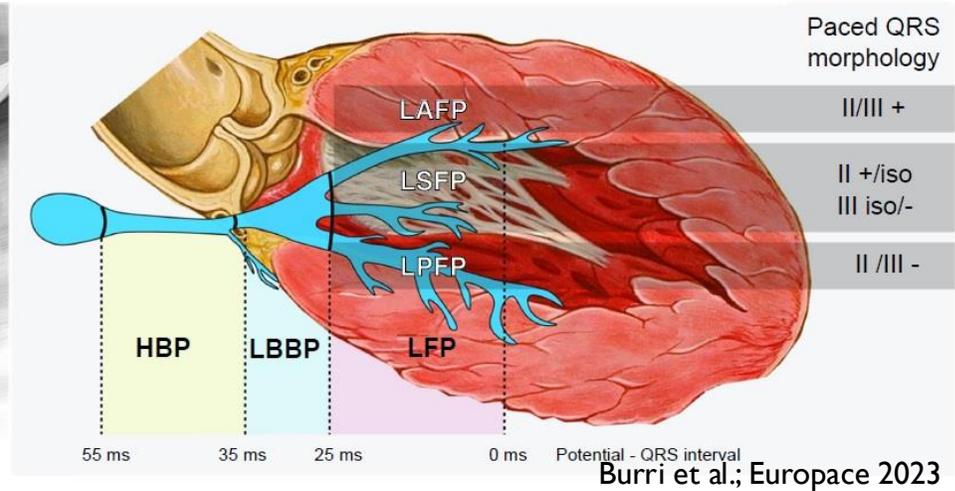
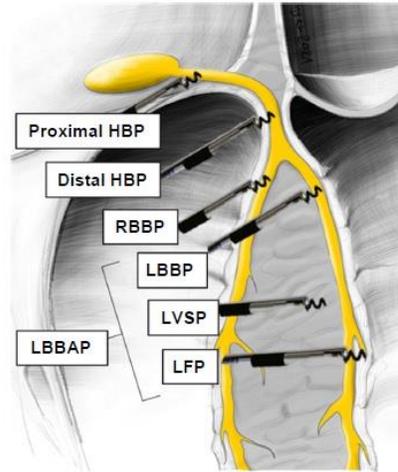
## **TLE COMMUNITY & FRIENDS**

The future belongs to those who prepare for it today!

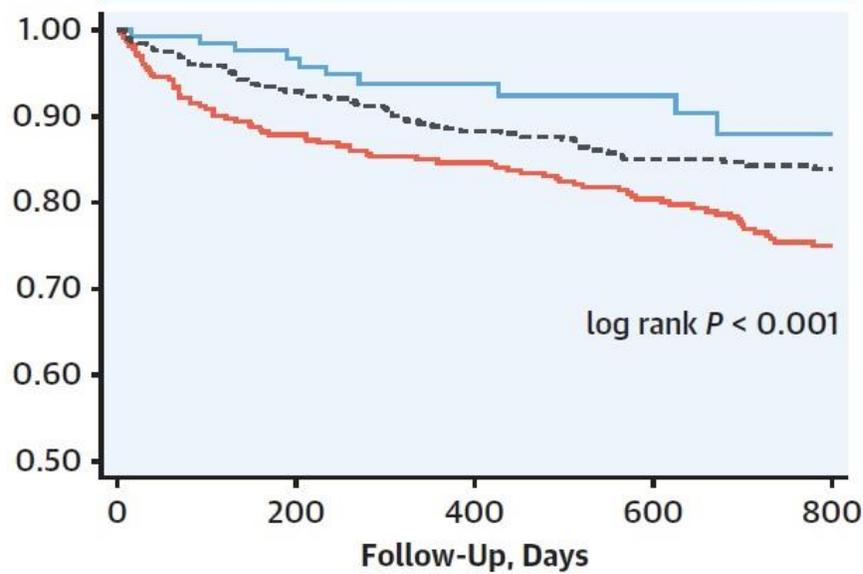
## **WISSENSCHAFTLICHE LEITUNG:**

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Crowne Plaza City Alster, Graumannsweg 10, 22087 Hamburg

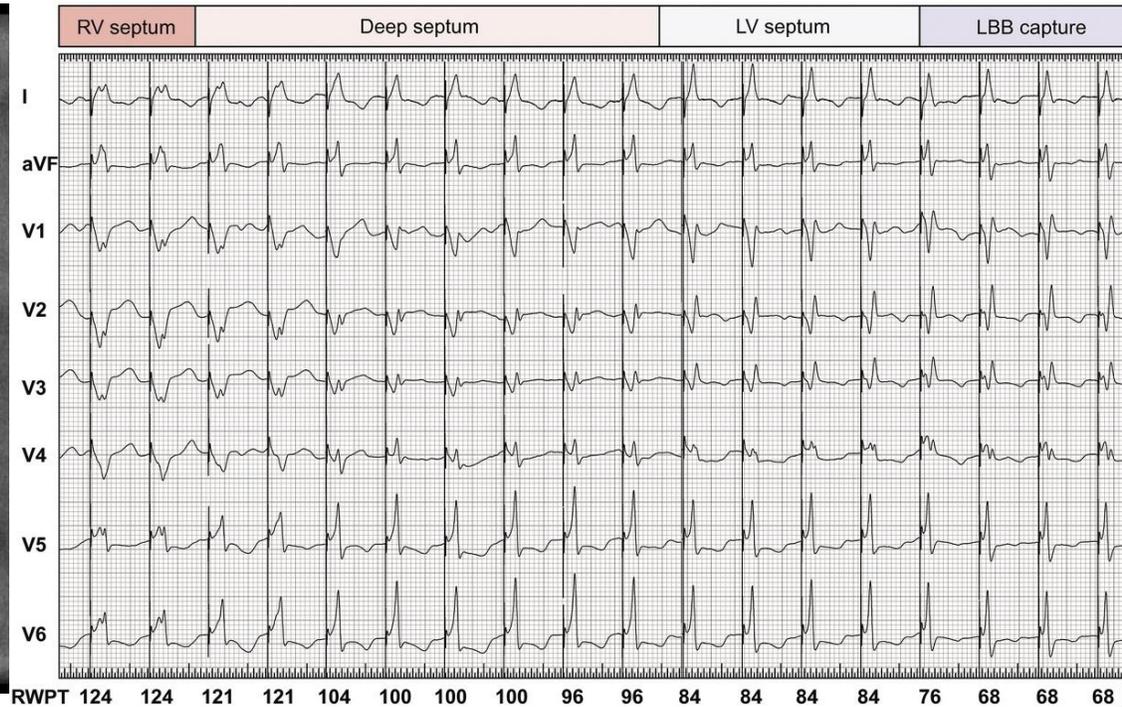
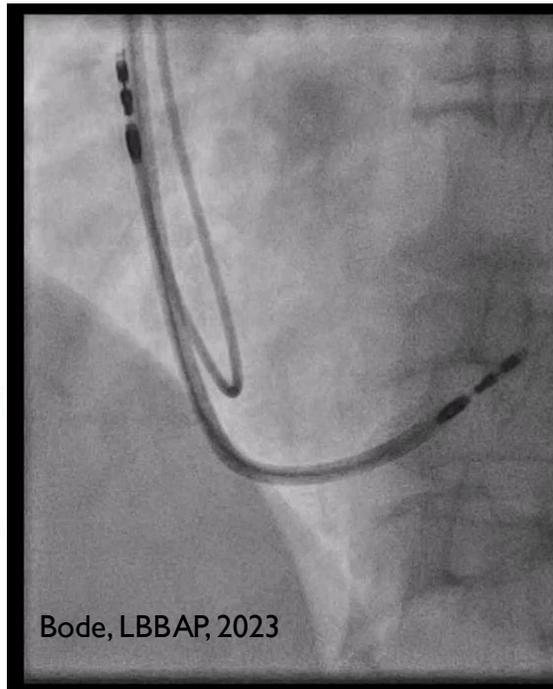
# INTRODUCTION CONDUCTION SYSTEM PACING



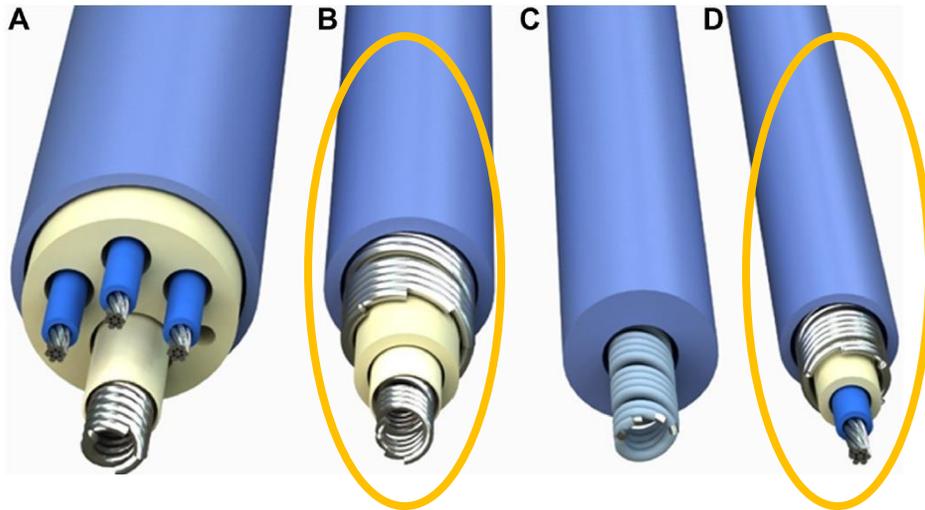
Primary Outcome of HF Hospitalization, BiVP Upgrade, or All Cause-Mortality



Number at risk					
	0	200	400	600	800
— (CSP, Vp >20%)	330	281	264	235	200
— (RVP, Vp >20%)	132	103	71	46	30
- - - (Vp ≤20%)	386	334	292	246	210

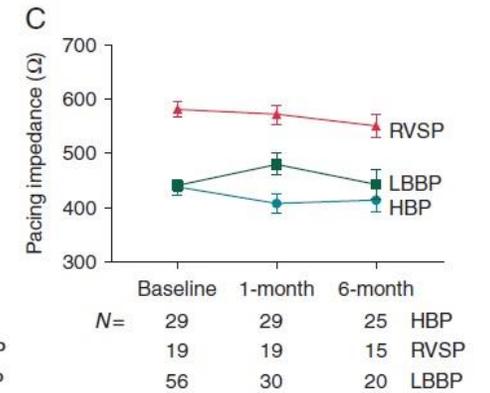
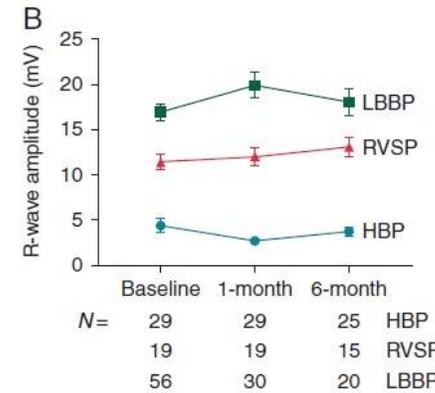
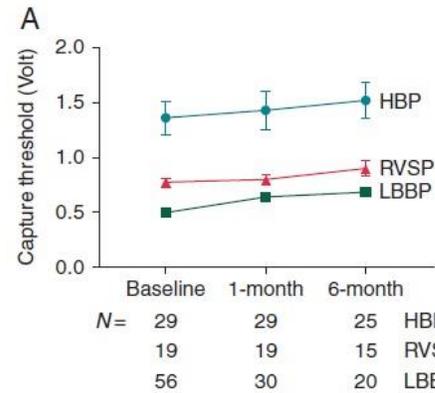


# INTRODUCTION SPECIAL CONSIDERATIONS

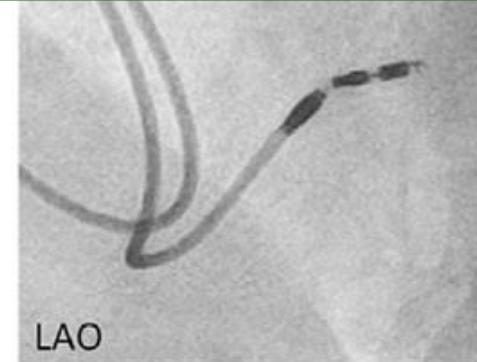


*Biotronik Solia 60*  
oft eingesetzt für  
LBBAP; 5,6F, SDL

*Medtronic 3830*  
oft eingesetzt für  
HBP, seltener für  
LBBAP; 4, 1F, LLL



Nichtinfektiöse Extraktionsgründe:  
HBP: Sensing-/Reizschwellenprobleme  
LBBAP: mechanische Überlastung → Elektrodenfraktur



# DATA

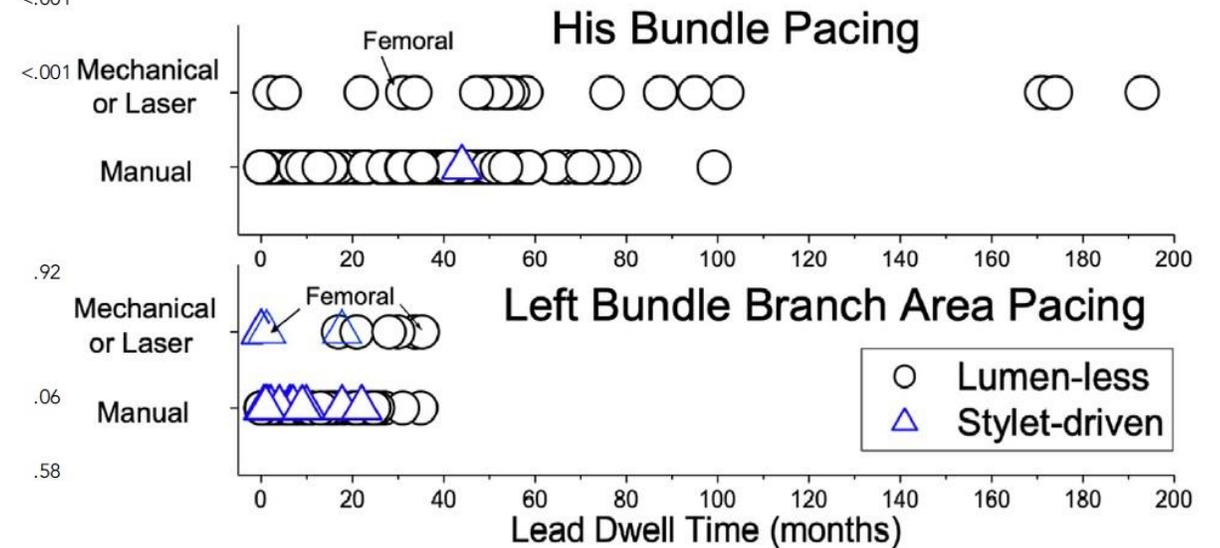
**Table 2** Procedural characteristics

Characteristic	All patients (N = 341)	HBP (n = 224)	LBBAP (n = 117)	P
Duration of lead dwell time (mo)	22 ± 26	29 ± 29	9 ± 10	<.01
0-1 mo	54 (16)	28 (13)	26 (22)	
>1-6 mo	61 (18)	26 (12)	35 (30)	
≥6 mo	226 (66)	170 (76)	56 (48)	
Type of leads				<.001
Lumenless	321 (94)	223 (99.6)	98 (84)	
Stylet driven	20 (6)	1 (0.4)	19 (16)	
Indication for explantation				
Infection	64 (19)	20 (9)	44 (38)	
High threshold/lead dislodgment	231 (68)	185 (83)	46 (39)	
Lead fracture	5 (1.5)	1 (0.5)	4 (3.4)	
Loss of resynchronization	7 (2)	3 (1.4)	4 (3.4)	
Pacing-induced cardiomyopathy	9 (2.6)	3 (1.4)	6 (5)	
Upgrade to defibrillator	8 (2.3)	2 (1)	6 (5)	
Other	17 (5)	10 (4.5)	7 (6)	
Extraction method				.92
Manual	309 (91)	202 (90)	107 (92)	
Mechanical	26 (8)	18 (8)	8 (7)	
Laser	6 (2)	4 (2)	2 (2)	
Femoral tools	3 (1)	1 (0.5)	2 (2)	
Extraction success				.06
Complete	338 (99)	223 (99.6)	115 (98.3)	
Partial (retained distal fragment)	3 (1)	1 (0.4)	2 (1.7)	
Complications	7 (2.1)	4 (1.8)	3 (2.6)	.58
AV block (transient)	1	1	0	
New severe tricuspid regurgitation	1	0	1	
Other lead dislodgment	2	2	0	
Residual lead fragments	3	1	2	

Values are presented as mean ± SD or n (%).

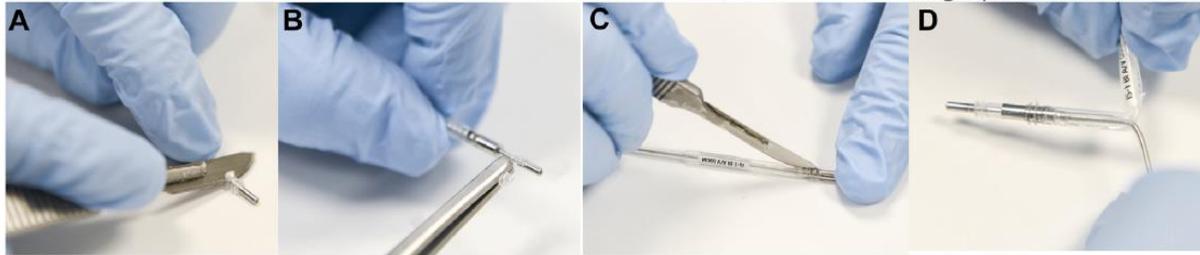
AV = atrioventricular; HBP = His bundle pacing; LBBAP = left bundle branch area pacing.

## TIME-COURSE of CSP LEAD EXTRACTION

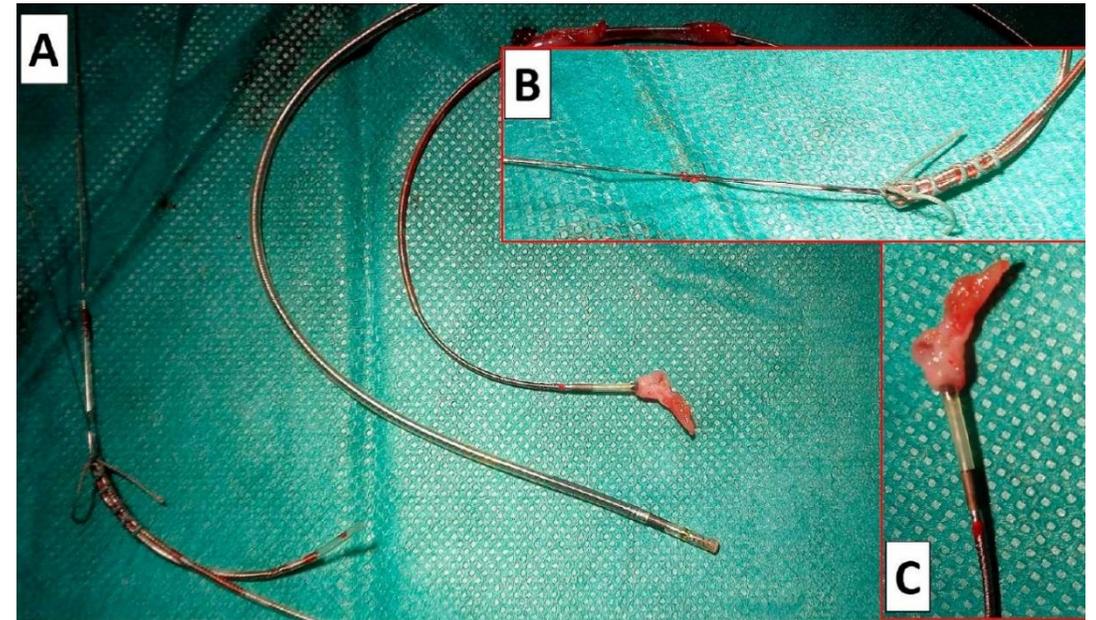


# LLL-PREPARATION FOR EXTRACTION

- 1) Slice the proximal seal ring
- 2) Peel seal ring off with pick-ups
- 3) Slice the length of the connector grip sleeve
- 4) Peel the sleeve in a single piece of silicone



Vatterot et al; Heart Rhythm, 2023

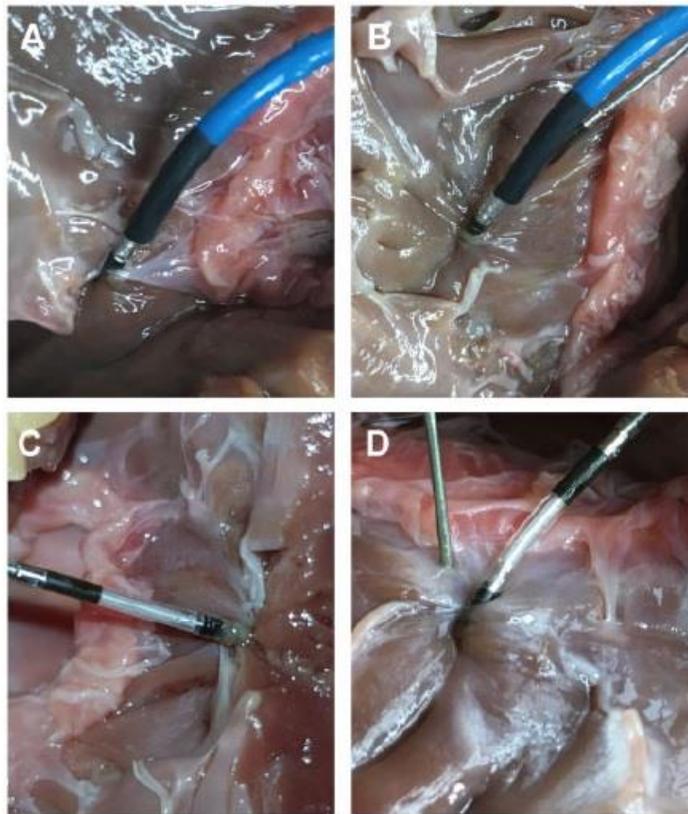


Stefanczyk et al; Biomedicines, 2024

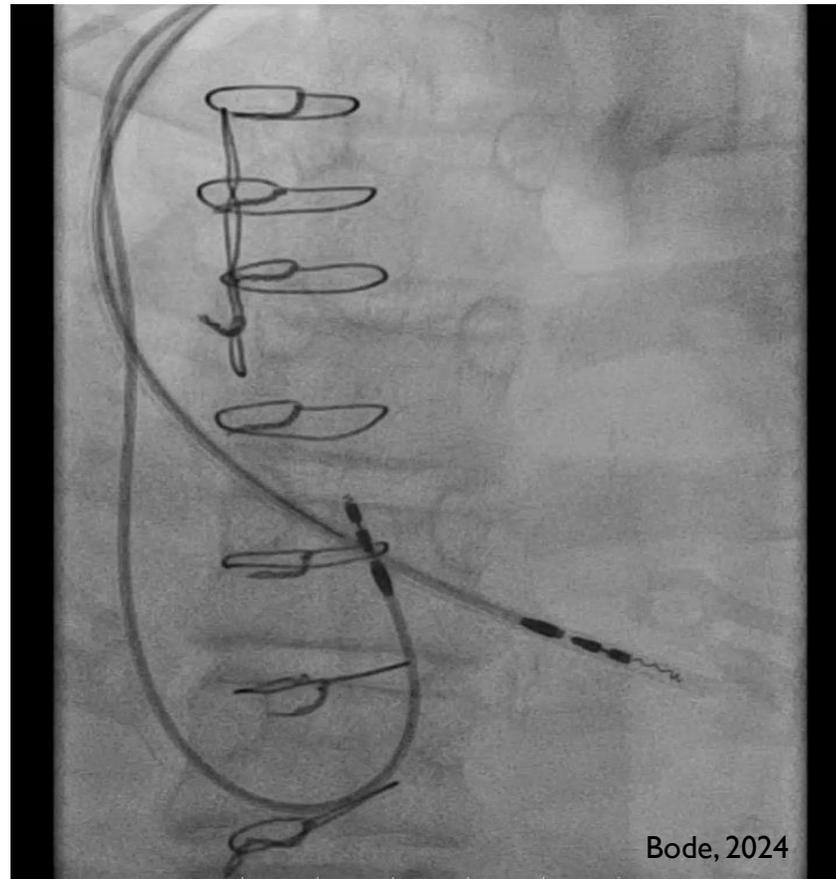


Migliore et al; Journal of interventional Electrophysiology, 2024

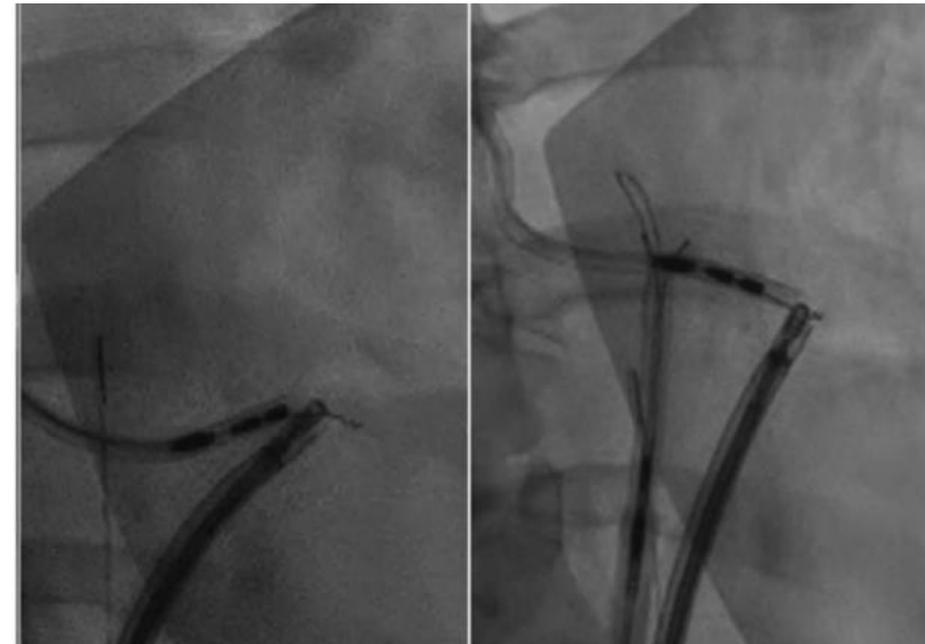
# EXPERIENCE



Jastrzebski et al.; Europace 2020



Bode, 2024



Vijaraman et al; Heart Rhythm 2024

# CONCLUSION

- TLE für CSP wird zunehmen
- V.a. für LBBAP erhöhte TLE-Schwierigkeit bei länger zurückliegenden Implantzeiten erwartet (mech. Stress, tief septale Lage)
- Hohe innere Stabilität der LLL MDT3830, aber spezielle Vorbereitung (Pin erhalten+Faden oder lead extender) nötig
- SDL mittels Lockingstylets stabilisierbar, Schraubmechanismus bei SDL für LBBAP (HBP?) nicht umkehrbar
- Notwendigkeit der Entwicklung von schneidenden Extraktionstools an der verankerten Elektrodenspitze