

## ONLINE SUPPLEMENT

# Multi-national Survey on the Methods, Efficacy and Safety on the Post-approval Clinical use of Pulsed Field Ablation (*MANIFEST-PF*)

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## **Additional Disclosures**

Vivek Reddy's disclosures with medical companies unrelated to this manuscript include: Abbott (Consultant), Ablacon (Consultant, Equity), Acutus Medical (Consultant, Equity), Affera (Consultant, Equity), Apama Medical (Consultant, Equity), APN Health (Consultant, Equity), Aquaheart (Consultant, Equity), Atacor (Consultant, Equity), AtiAN (Consultant), Autonomix (Consultant, Equity), Axon Therapies (Consultant, Equity), Backbeat (Consultant, Equity), BioSig (Consultant, Equity), Biosense-Webster (Consultant), BioTel Heart (Consultant), Biotronik (Consultant), Boston Scientific (Consultant), Cardiac Implants (Consultant, Equity), CardiaCare (Consultant, Equity), Cardiofocus (Consultant), Cardionomic (Consultant), CardioNXT / AFTx (Consultant, Equity), Circa Scientific (Consultant, Equity), CoreMap (Consultant), CoRISMA (Consultant, Equity), Corvia Medical (Consultant, Equity), Dinova-Hangzhou DiNovA EP Technology (Consultant, Equity), East End Medical (Consultant, Equity), EBR (Consultant), EPD-Philips (Consultant, Equity), EP Frontiers (Consultant, Equity), Epix Therapeutics (Consultant, Equity), EpiEP (Consultant, Equity), Eximo (Consultant, Equity), Fire1 (Consultant), Gore & Associates (Consultant), HRT (Consultant, Equity), Impulse Dynamics (Consultant), Intershunt (Consultant, Equity), Javelin (Consultant, Equity), Kardia (Consultant, Equity), Keystone Heart (Consultant, Equity), LuxMed (Consultant, Equity), Manual Surgical Sciences (Equity), Medlumics (Consultant, Equity), Medtronic (Consultant), Middlepeak (Consultant, Equity), Neutrace (Consultant, Equity), Newpace (Equity), Nuvera-Biosense Webster (Consultant, Equity), Philips (Consultant), Pulse Biosciences (Consultant), Restore Medical (Consultant, Equity), Sirona Medical (Consultant, Equity), Surecor (Equity), Valcare (Consultant, Equity) and Vizamed (Equity).

## MANIFEST-PF Survey Forms

**MANIFEST-PF: Multi-national Survey on Methods, Efficacy and Safety on the Post-approval  
Clinical use of Pulsed Field Ablation**  
**[ Case Report Form ]**

1. Region: Which country is your center from? \_\_\_\_\_
  
2. Demographics/Practice:
  - a. How many different operators at your center perform pulsed field ablation?  
\_\_\_\_\_
  - b. Years in practice of the electrophysiologist(s)  
\_\_\_\_\_
  - c. Approximate annual number of AF ablations performed at your center  
\_\_\_\_\_
  - d. Practice location: Academic, Semi-academic, Private  
\_\_\_\_\_
  
3. When was commercial pulsed field ablation introduced at your center (month/year)?  
\_\_\_\_\_
  
4. For data provided below, what is the date of the last procedure performed (month/year)?  
\_\_\_\_\_
  
5. How many pulsed field ablation procedures have been performed at your center for atrial fibrillation/flutter over the past 12 months? (please complete in table below)

How many patients with Paroxysmal AF?	
How many patients with persistent AF?	
How many patients with long standing persistent AF?	
How many patients with atrial flutter only?	
Other indications (please specify # and type of procedure)	
Total	

*Note: if two procedures in the same patient, please count as two procedures.*

6. What are the baseline characteristics of the patients who have undergone pulsed field ablation (for AF only) at your center? (please complete table below)

Age (average, minimum, maximum)	
Sex (male=n, female=n)	
BMI (average, min, max )	
CHA2DS2vasc score (average, min, max)	
First time ablation? (n)	
Re-do ablation? (n)	
No. of patients undergoing more than 1 PFA procedure? (n)	
LA Diameter-short axis, mm (average, min, max)	
LVEF, % (average, min, max)	
No. of pts with LVEF < 40% (n)	
Medical History	
Hypertension (n)	
Diabetes (n)	
Congestive heart failure (n)	
Coronary artery disease (n)	
Prior stroke or TIA (n)	
Failed Class I or III AADs (n)	
Failed Class I, II, III or IV AADs (n)	
Baseline Oral Anticoagulants	
None (n)	
VKA (n)	
N/DOAC (n)	

7. Do you routinely perform pre, intra or post procedural imaging? If Yes, complete table below (enter yes or no if applicable)

Yes  No

<u>Imaging Modality</u>	<i>Prior</i>	<i>During</i>	<i>Post / Follow-Up</i>
<b><u>TEE</u></b>	Never / Sometimes / Frequently / Always	Never / Sometimes / Frequently / Always	Never / Sometimes / Frequently / Always
<b><u>CT</u></b>	Never / Sometimes / Frequently / Always	N/ A	Never / Sometimes / Frequently / Always
<b><u>MRI</u></b>	Never / Sometimes / Frequently / Always	N/ A	Never / Sometimes / Frequently / Always
<b><u>ICE</u></b>	N/ A	Never / Sometimes / Frequently / Always	N/ A
<b><u>Fluoro</u></b>	N/ A	Never / Sometimes / Frequently / Always	N/ A

8. Type of anesthesia for the procedure:
- Number of procedures using GA (with endotracheal intubation): \_\_\_\_\_
  - Number of procedures using deep sedation (no intubated): \_\_\_\_\_
9. Do you create an electroanatomical map to guide your ablation procedures?
- For paroxysmal AF ablation? Never / Sometimes / Frequently / Always
  - For persistent AF ablation? Never / Sometimes / Frequently / Always
  - For LS-persistent AF ablation? Never / Sometimes / Frequently / Always
10. How many transeptal punctures per patient for a typical procedure? \_\_\_\_\_
11. What is the acute pulmonary vein isolation success rate at your center? \_\_\_\_\_
12. For patients with persistent / LS-persistent atrial fibrillation, what additional ablation do you perform with pulsed field ablation? (complete table below)

Lesion set	Yes/No
Roof Line	Never / Sometimes / Frequently / Always
Lateral Mitral Line	Never / Sometimes / Frequently / Always
Posterior Box	Never / Sometimes / Frequently / Always
Anterior Line	Never / Sometimes / Frequently / Always
SVC isolation	Never / Sometimes / Frequently / Always
CFAE	Never / Sometimes / Frequently / Always
Left Atrial Appendage Isolation	Never / Sometimes / Frequently / Always
Non- PV trigger	Never / Sometimes / Frequently / Always

13. What is the mean procedure time for pulsed field ablation for atrial fibrillation at your center? \_\_\_\_\_
14. What is the mean fluoroscopy time for pulsed field ablation for atrial fibrillation at your center? \_\_\_\_\_
15. What proportion of patients were discharged on the same day? \_\_\_\_\_

16. How many patients had minor or major complications after pulsed field ablation? Please complete table below.

Complications	n
Peri-procedural Death (within 30 days)	
Myocardial Infarction (within 30 days)	
Phrenic nerve injury ---Number recovered be next day ---Number recovered by 1 month ---Not yet recovered	_____ _____ _____ _____
Stroke	
TIA	
Silent cerebral events (if screening MRIs done) ----Number of pts with MRI ----Number with positive MRIs	_____ _____
Other thromboembolism	
Pericardial effusion --no intervention --requiring intervention (percutaneous) --requiring intervention (surgical)	_____ _____ _____ _____
Pericarditis requiring intervention	
Vascular complications --hematoma --pseudoaneurysm --A-V fistula --Other (please specify) --How many required surgical intervention?	_____ _____ _____ _____ _____ _____
Pulmonary Vein stenosis	
Atrio-esophageal fistula --requiring surgery --causing death	_____ _____ _____
Esophageal/Gastric Dysmotility	
Coronary artery injury/spasm	
Other complications (please specify)	
<b>Total</b>	



**Table S1: Routine Post-PFA Brain MRI**

Center	No. of Patients with MRI	Positive MRIs	
		No.	%
Center #1	65	10	15.4%
Center #2	30	1	3.3%
Center #3	19	9	47.4%
Total Cohort	114	20	17.5%