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APHRS

PFA in APAC,
from Promise to Practice

Insights from electrophysiologists on the evolving role of pulsed field ablation across Asia Pacific

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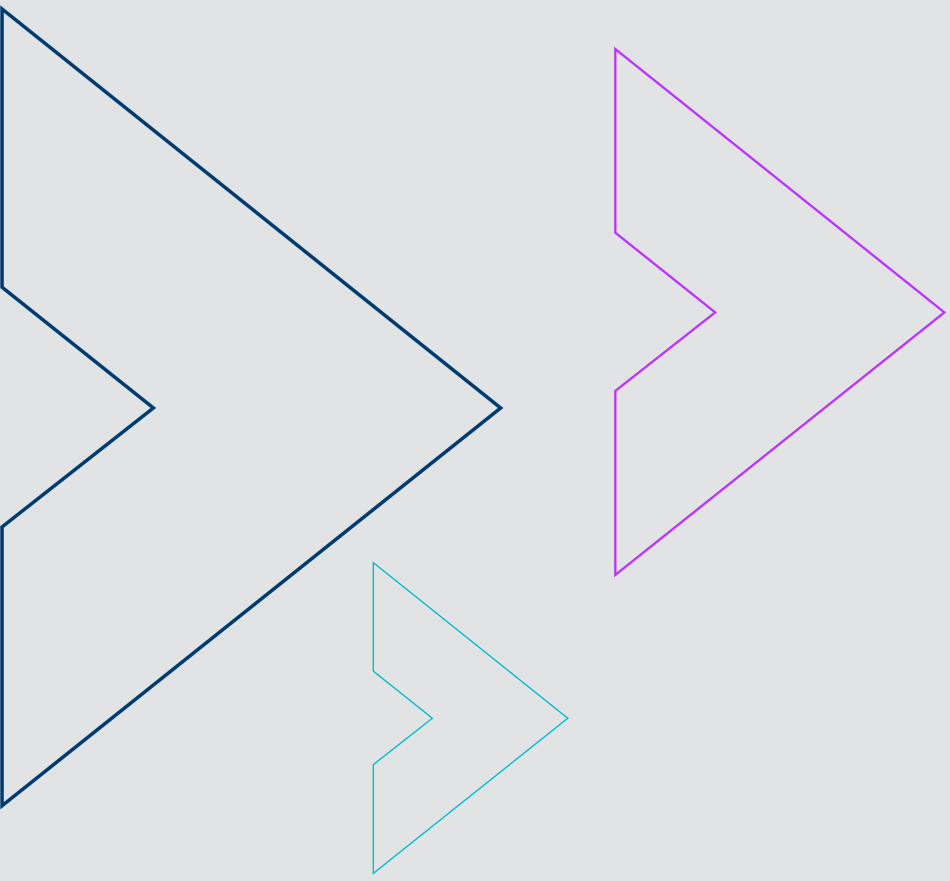


PART I
Foreword

Atrial fibrillation is becoming a growing healthcare concern across Asia Pacific, with tens of millions of people - higher than has been calculated for other global regions - living with the condition. Behind these figures are patients who live with the challenges of the condition and healthcare professionals striving to restore rhythm, reduce life-threatening risks and improve quality of life.

Catheter ablation has become a cornerstone in rhythm-control for many patients. New advances such as pulsed field ablation are offering progress toward safer, more precise and more efficient treatment. Yet innovation alone is not enough. It depends on the specialists who perform these procedures, the systems that enable them and the patients who place their trust in their care.

Electrophysiologists working on the front line play a crucial role in shaping how new therapies are adopted and integrated into atrial fibrillation management. This report brings together electrophysiologist voices from Australia, China, Japan and South Korea to provide timely perspectives on the evolving role of pulsed field ablation and the broader shift in atrial fibrillation care across Asia Pacific. The Asia Pacific Heart Rhythm Society (APHRS) thanks Boston Scientific for this collaborative initiative to gather valuable clinical perspectives from across the region.

As the regional society dedicated to heart rhythm disorders, APHRS continues to champion scientific exchange, education and collaboration across the region. We hope this report serves as both a resource and a call to action, encouraging continued partnership, shared learning and collective progress toward delivering safer, more effective and people-centered care for all patients living with atrial fibrillation.

Prof. Wei Hua, MD, PhD, FAPHRS
President of the APHRS (2026)

PART II
Executive summary

This report brings together insights from electrophysiologists (EPs) across Australia, China, Japan and South Korea to examine the evolving landscape of atrial fibrillation (AFib) management and the expanding role of pulsed field ablation (PFA) in Asia Pacific (APAC). Drawing on regional survey data, EP interviews and existing literature, the report highlights current practice realities, including EP confidence levels in PFA, perceived adoption gaps and enablers, and a forward-looking view of how ablation therapies may evolve in the region.

Developed with EPs, the report also outlines recommendations to enhance rhythm-control strategies, strengthen system-readiness and promote broader patient access and cross-sector collaboration for sustainable AFib care.

Key findings on EP experiences and perspectives

1 

EPs demonstrated growing confidence in PFA as an ablation modality within AFib management

- **71%** said PFA offered shorter procedure duration than other ablation methods.
- **63%** reported higher patient satisfaction with PFA procedures. EPs also noted faster recovery, with patients often returning to normal daily activities sooner following PFA.
- **56%** described the learning curve as easier than other ablation approaches.

2 

Multifaceted barriers to consistent and equitable PFA adoption

- **Only 26%** of surveyed EPs reported that PFA currently accounts for more than half of their AFib ablation cases.
- **83%** said that fewer than half of eligible AFib patients were referred for ablation within one year of diagnosis, pointing to delayed referral as a major barrier.
- **68%** cited knowledge gaps among referring healthcare professionals as a contributor to delayed referral and treatment.
- Other barriers identified by EPs included institutional readiness, workforce capacity, reimbursement and patient access across healthcare settings.

3 

Key enablers for broader and more confident PFA adoption

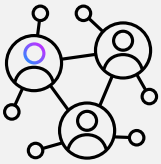
- **74%** of surveyed EPs identified long-term durability and efficacy data as a key factor influencing broader PFA adoption.
- **71%** emphasized the importance of optimizing referral pathways to improve patient access and procedural uptake.
- **63%** cited the need for evidence linking workflow optimization to improved clinical and operational outcomes.
- **55%** identified formal guideline inclusion as an important driver of adoption.

4 

EPs envisioned a future where PFA plays a more prominent role in AFib patient management

- **92%** said they were likely to make PFA their preferred ablation modality within the next two years.
- **64%** expected increased use of first-line ablation for patients with paroxysmal AFib.
- **61%** foresaw expansion of PFA into persistent AFib populations.
- **57%** anticipated earlier intervention in asymptomatic or early-stage AFib.
- Together, these findings indicate that EPs expect PFA to play a more prominent role in future rhythm-control strategies as healthcare systems, evidence and procedural readiness continue to evolve.

Priority recommendations for collective action

1. 
   Shift AFib care from reactive treatment to earlier and proactive multidisciplinary care
2. 
   Strengthen guideline implementation and workflow integration within existing AFib care pathways
3. 
   Improve awareness, health literacy and patient empowerment
4. 
   Enable and support timely and equitable access
5. 
   Strengthen end-to-end collaboration with EPs in informing medical technology innovators

PART III

EP voices on the value of PFA, AFib care gaps and recommendations

"The clinical outcome and patient experience are the ultimate test of innovation. It is very rewarding to see patients treated with PFA return to their daily lives and work within just a few days.

To ensure that more AFib patients benefit from ongoing innovation in ablation therapy, efforts are needed across the entire clinical community, from primary care doctor to specialist care physicians, so that patients can be identified, referred and treated as early as possible.

Additionally, strengthening public awareness of AFib and new innovative therapies, such as PFA, can action more access for all, to these new treatments.

Engaging electrophysiologists in discussions like this helps translate real world experience into clinical practice."

Dr. Emily Kotschet,
Victorian Heart Hospital, Australia

"PFA is a well-evidenced and important ablation modality that is increasingly being used in clinical practice. Japan's universal healthcare coverage for PFA has enabled more equitable adoption of ablation innovations for eligible patients.

Moving forward, a critical area that requires continued effort is early intervention in AFib care. Timely access to electrophysiologists, effective doctor-patient consultations and broader public awareness of AFib, all influence how promptly patients can receive the most appropriate treatment.

Electrophysiologists' clinical experience and observations should also help guide continued innovation and the advancement of care pathways to deliver better outcomes for patients."

Dr. Hidehira Fukaya,
Kitasato University School of Medicine, Japan

"The adoption and promotion of PFA in AFib has been rapid and widespread, driven by its safety profile, efficacy and procedural efficiency. It is encouraging to see that most patients are able to return to their daily activities within just a few days after the procedure.

At the same time, continuous improvements in clinical experience and procedural expertise in AFib ablation are enabling more patients to receive timely, standardized care. Looking forward, I hope to see ongoing technological innovations and clinical advancement, expanded EP workforce, more proactive and early rhythm-control strategies, and strengthened cross-disciplinary collaboration to drive innovation, so that more patients can benefit from safer and more effective AFib care."

Anonymous EP,
China

“PFA offers clear advantages in procedure time and workflow simplicity, translating into meaningful benefits for both patients and physicians.

For example, with significantly lower post procedural discomfort compared to radiofrequency ablation, patients experience faster recovery and can return to their daily lives and responsibilities more quickly. This is an important consideration when evaluating treatment approaches.

Additionally, the simplified workflow makes the procedure more reproducible and easier to adopt across different practice settings, thereby expanding and decentralizing access to care.

In Korea, as efforts continue to reduce the financial burden for patients, PFA is expected to become an increasingly feasible option for broader use in routine practice.”

Dr. Daehoon Kim,
Severance Cardiovascular Hospital, South Korea

“It is encouraging to see policy progress aimed at ensuring more equitable access to PFA.

As financial barriers begin to be addressed, this creates an opportunity for the entire healthcare system to collaborate on enabling earlier intervention for more patients and achieving better outcomes.

This includes strengthening ablation capacity across the country by leveraging PFA’s advantages in streamlined workflow and a short learning curve. Additionally, involving electrophysiologists in the continued development of ablation modalities will ensure that innovation remains closely aligned with the specific patient and clinical needs in our region.”

Dr. Hyoung-Seob Park,
Keimyung University Dongsan Hospital, South Korea

Disclaimer: All survey and interview data were collected prior to the PFA reimbursement policy update in Korea, effective May 1, 2026, and should be interpreted within that context.

PART IV

About the report

EPs and broader clinical teams are at the forefront of delivering the specialized care that patients with AFib require. Their experiences are essential to understanding how innovation in ablation technologies such as PFA is shaping clinical outcomes and patient experiences. Their insights can also help illuminate real-world implementation challenges encountered in daily practice and identify priority areas for collective action to advance AFib care across the region.

As a global leader in medical technology for more than 45 years, Boston Scientific seeks to bring these frontline experiences to light, helping inform meaningful progress in AFib care, so more patients can receive better care and more health systems can fully realize the benefits of innovation.

To this end, Boston Scientific commissioned an online survey of practicing EPs across four APAC markets: Australia, China, Japan and South Korea. The survey, conducted between January and February 2026, included **137 EP participants** (17 in Australia, 60 in China, 30 in Japan and 30 in South Korea). It used close-ended, multiple-choice and scaled-response questions to capture EP perspectives, clinical experiences and future visions of PFA use in AFib care. The survey was double-blinded and administered online through a secure digital platform.

Data analysis used descriptive, cross-market methods to provide a pulse check on clinical realities across the region. Data are presented at the overall APAC regional level, with findings aggregated across all four markets. Findings were synthesized into key thematic patterns and interpreted alongside broader evidence to strengthen their validity and relevance given the specialized field and modest sample size.

Further, semi-structured interviews with five EP representatives were conducted following the survey, and their insights were triangulated with the findings to enrich the analysis.

As an exploratory study, several considerations should be taken into account when interpreting the report:

- The survey included a modest sample of EPs across the APAC region, providing directional insights rather than a generalizable view of the broader EP community.
- Responses reflected self-reported perceptions that may be influenced by individual practice setting, familiarity with emerging technologies and local healthcare context.
- The survey was designed to present an overall regional perspective. Therefore, the findings should not be interpreted as market-specific and should be contextualized to local healthcare systems, reimbursement structures and technology access.
- As clinical evidence and real-world experience with PFA continue to progress, physician perspectives and adoption patterns may evolve over time. The insights, therefore, capture a specific point in time within a rapidly developing field.

Ultimately, this report aims to take a step forward in surfacing clinical experience and emerging evidence to foster greater collaboration, enabling patients, health systems and societies across the APAC region to collectively benefit from the future of AFib care.

Boston Scientific thanks APHRS for its support in raising awareness of this report among the EP community across APAC and looks forward to continued opportunities to advance dialogue on AFib care in the region.

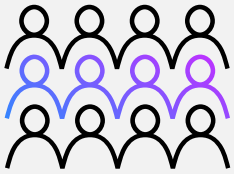
PART V

Key findings and recommendations

Chapter 1: AFib in APAC: Growing burden, growing need

A multifront disease burden

AFib places a growing burden on patients and healthcare systems across APAC.



Tens of millions of

people

- higher than has been calculated for other global regions - living with the condition.[1,2,3]

When compared to the projected prevalence of AFib in the United States by 2030 and European Union by 2060, estimated at

12M[2] and **17M**[3]

respectively, the scale of need in APAC becomes clear.

The burden of AFib across the region is projected to intensify as populations age and grow larger in many economies, compounded by increasing coexisting cardiometabolic risk factors such as hypertension, obesity and diabetes.[1,4,5] Each of these factors, individually and collectively, amplify the need for AFib care and may further strain healthcare resources.

The prevalence of AFib in the APAC region has increased substantially over the past decades, reflecting broader trends observed globally. For example, South Korea documented a doubling of AFib prevalence over a decade, accompanied by a rising comorbidity burden and higher stroke risk.[6]

When assessing the impact of AFib, a holistic perspective is essential. AFib is strongly associated with an increased risk of ischemic stroke, heart failure and premature mortality.[7] Therefore, its effects extend beyond a single condition, reflecting a complex interplay of comorbidities and complications that together heighten its impact on patients and healthcare systems.[8]

These clinical challenges also extend outward to create a significant socioeconomic burden as they can increase financial strain, limit productivity, reduce time spent with family and community, and divert resources that could otherwise support social and economic progress.[9,10,11]

While APAC country data on the exact magnitude of this burden remains limited, evidence from other country-level studies provides useful reference points. For example, a 2023 Swiss study involving five years of follow-up data from 14 clinical centers reported that patients with AFib had about 50% higher direct medical costs than comparable individuals from the general population without AFib.[12]

In terms of broader socioeconomic impact, a 10 year Danish study published in 2017 estimated the average three year societal cost per patient attributable to AFib at approximately

$22,000 - $28,500

during the study period.[13]

Similarly, a 2026 U.S. cross-sectional study of over 1.6 million adults aged 18-64 years found that AFib imposed a substantial economic burden on working-age adults, driven by higher outpatient care costs and productivity losses. Beyond direct medical expenses, individuals with AFib incurred an average of $840 in annual productivity loss from sick leave and short-term disability compared to those without AFib.[14]

PFA as a key innovation in catheter ablation

In response to the growing burden of AFib, global clinical communities have endorsed a comprehensive, multidisciplinary approach to AFib care. As outlined in international and regional guidelines and consensus statements from the European Heart Rhythm Association (EHRA), Heart Rhythm Society (HRS), APHRS and Latin American Heart Rhythm Society (LAHRS), core AFib care components include risk factor modification, stroke prevention, rate or rhythm control and the management of comorbid conditions and lifestyle-related risk factors.[15]

Within this framework, catheter ablation is recognized as a key evidence-based rhythm-control strategy.[16] It plays a central role in maintaining sinus rhythm and reducing arrhythmia-related symptoms, particularly in patients with symptomatic and recurrent AFib, as well as in those with persistent AFib who are unresponsive or intolerant to at least one antiarrhythmic drug.[16] Beyond symptom relief, growing evidence demonstrates that catheter ablation can enhance quality of life (QoL), and favorably influence long-term clinical outcomes.[15]

Recent years have witnessed significant advancements in ablation technology for AFib.

Among these is PFA. Employing electroporation-based energy delivery as its

unique mechanism

of action, it has emerged as a meaningful evolution in AFib care, garnering growing clinical and research interest and reshaping the contemporary electrophysiology landscape.[17]

The 2024 EHRA/HRS/APHRS/LAHRS Expert Consensus Statement reflected this growing momentum by formally recognizing PFA as part of a broader set of validated energy sources used in AFib ablation, alongside radiofrequency and cryoablation, and highlighting its potential contributions to improved procedural safety and efficiency.[15]

In real-world clinical practice, the increasing adoption of PFA has been supported by evidence demonstrating efficacy comparable to established thermal approaches, with the added advantages of shorter procedure duration and enhanced safety profiles, particularly regarding collateral tissue injury. These benefits are most clearly observed in patients with paroxysmal AFib, where the evidence base is currently strongest.[17]

For example, in the randomized ADVENT trial, which evaluated patients with paroxysmal AFib, PFA was found to be non-inferior to conventional thermal ablation at the trial's composite one-year effectiveness endpoint.[17] Furthermore, PFA demonstrated procedural efficiency advantages, including shorter total procedure times and reduced left atrial dwell times, as summarized in published reports.[18]

Collectively, these findings underscore PFA's growing clinical relevance and its potential to redefine procedural paradigms in contemporary AFib management.

Inconsistent utilization of ablation innovation

Despite growing evidence and broad clinical consensus on the role of ablation and the increasing attention toward

newer modalities

such as PFA, the translation of these innovations into routine clinical practice remains uneven across APAC's diverse healthcare systems.

In South Korea for example, fewer than 1% of eligible patients with AFib underwent any catheter ablation in 2022.[19]

The factors influencing who receives ablation, when it is provided and which technologies are available in clinical practice are complex and multifaceted. Barriers at any stage, whether related to diagnosis-treatment pathways, timing of intervention, capacity readiness or access policies, can result in untapped opportunities to fully realize the potential benefits of ablation innovation for patients, healthcare systems and society as a whole. For example, an expert position statement highlighted the importance of training, accurate patient selection and access to specialized centers as critical for ablation outcomes in Australia and New Zealand.[20]

EPs play a central role in advancing innovation in ablation

Overcoming such barriers demands coordinated effort and clinical leadership, with EPs playing a pivotal role in turning technological progress into tangible patient and system benefits.

As the specialists responsible for rhythm-control strategies and ablation delivery, EPs operate at the intersection of clinical evidence, technological innovation and

healthcare system realities.

In everyday clinical practice, EPs guide patients through their treatment journey from diagnosis and shared decision-making to the delivery of therapeutic interventions.

Their observations and reflections provide invaluable insight into where innovation is creating meaningful value and what changes are required for AFib care to become more proactive, efficient and equitable across APAC.

Looking ahead, EP perspectives on the current and future state of rhythm-control and ablation advancement are central to ensuring innovation is translated into real-world practice so that more patients can benefit from timely, effective and scalable care. Their input is particularly vital in areas such as training and education, protocol development, multidisciplinary coordination and the alignment of new technologies within existing clinical infrastructure. EPs can also help identify opportunities for continued innovation, ensuring that progress in AFib care remains both clinically effective and systemically sustainable.

The following chapters of this report draw directly on EP insights, highlighting how AFib care, and in particular the evolving role of PFA, can continue to advance to better meet the needs of patients, healthcare systems and societies across APAC.

Chapter 2: Key findings on EP experiences and perspectives

The cross-market EP survey identified four key insights spanning **the clinical value of PFA, current adoption, enablers for improved innovation utilization and EPs' vision for the future of AFib care.**

These insights are presented through the survey findings and supported by broader evidence from clinical and market data.

Insight 1 EPs recognize the clinical value of PFA

Clinical benefit:

Survey results indicated that EPs viewed PFA as a clinically credible and advantageous ablation modality, enhancing treatment efficiency and procedural confidence.

71%
of respondents reported that PFA offered shorter procedure duration than other ablation methods.

56%
described the learning curve for PFA as easier than with other ablation methods.

Notably, **the top three PFA features** that respondents said strengthened their procedural confidence were:

1) **Streamlined workflow integration**
2) **Catheter maneuverability to reach target area**
3) **Consistent energy delivery**

The efficacy of PFA, as highlighted by EPs in the survey, indicates its potential to deliver durable outcomes with fewer repeat interventions alongside shorter procedure times, helping reduce workloads and enhance overall efficiency in AFib care. This is particularly relevant for enhancing EP clinical experiences, as survey respondents shared that limited workforce capacity led to increased personal stress and reduced treatment output.

Approximately **6 in 10** participating EPs reported that staffing shortages and lengthy procedure times continued to contribute to electrophysiology lab stress and reduced throughput.

Higher patient satisfaction:

Importantly, these clinical advantages are translating into a more positive and comfortable experience for patients.

In the survey, **63%**
of EPs observed higher patient satisfaction with PFA procedures.

What does the broader evidence suggest?

An expanding body of evidence continues to demonstrate theclinical value of PFA in terms of efficacy and procedural efficiency.

Based on data from a multicenter 2023 study across 13 centers in Europe and Canada, patients treated with PFA demonstrated a 78.9% freedom from symptomatic arrhythmia and 92.3% freedom from repeat ablation, outcomes that are comparable to those reported in multicenter studies using radiofrequency ablation technologies.[21]

The mean total procedure time was 70.1 ± 27.7 minutes in the second wave compared to the first wave which was 82.4 ± 20.0 minutes. Procedural efficiency may continue to improve as operators gain additional experience.[21]

In terms of patient experience, studies also show that PFA delivers a meaningful improvement in overall comfort and recovery. Patients treated with PFA often experience less discomfort in the 24 hours after the procedure and shorter hospital stays compared with traditional thermal ablation methods.[22,23] For example, a 2025 comparative analysis conducted in Italy found that patients treated with PFA resumed normal activities significantly earlier and experienced greater symptom relief, as reflected by higher QoL scores, compared with those who underwent high-power short-duration radiofrequency, conventional radiofrequency or cryoablation. It is interesting to note that among PFA patients, those who received general anesthesia, reported higher QoL scores than those who underwent deep sedation.[24]

Conversations with EPs who participated in this study further highlighted that improved patient experience was one of the most meaningful day-to-day benefits of PFA. For example, they shared that some patients were able to mobilize and return to their daily responsibilities as soon as the next day, a groundbreaking and deeply rewarding outcome for healthcare professionals. Post procedure discomfort, including chest pain and gastrointestinal symptoms, was often reported to be significantly lower compared with other ablation methods.

Furthermore, EPs noted that PFA's consistency and reproducibility could lead to a simplified workflow, making adoption easier across different practice settings and helping more centers provide ablation therapy. The strong safety profile, efficacy and clinical efficiency demonstrated in real-world experience are driving wider and faster adoption of PFA, enabling more patients to benefit from this innovative therapy and supporting greater equity in patient care.

What this means

PFA's value is not only supported by evidence but is already reflected in clinical practice. The combination of safety profile, workflow efficiency and patient tolerance is expected to play an increasingly important role in the future of rhythm-control strategies.

Insight 2 Despite strong clinical recognition, PFA adoption remains inconsistent due to multifaceted barriers

A clear intention-usage gap:

While EP participants expressed a strong willingness to use PFA, they also indicated that its clinical application is not yet consistently integrated into routine practice.

92%
of surveyed EPs stated they were likely to make PFA their preferred ablation modality within two years.

However, only **26%** reported that PFA currently accounted for more than half of their AFib ablation cases.

What does the broader evidence suggest?

At the global level, the application of PFA has been increasing as more centers gain experience and regulatory approvals expand. For example, according to a 2025 EHRA Scientific Initiatives Committee survey conducted between April and June 2025, PFA was being used in half the ablation procedures for AFib in Europe.[25]

In APAC, PFA utilization remains at an early stage but holds significant potential. Even though the overall ablation rates are still low, the region has potential to become a key global leader in integrating and optimizing this emerging innovation within comprehensive AFib care. According to market forecasts, although APAC accounted for only 6.4% of the global PFA market in 2024, the segment is projected to grow at a compound annual growth rate of 40.9% from 2025 to 2030.[26]

Momentum has been seen across APAC markets. In China, hospitals in Beijing and Shanghai began pilot studies on PFA in 2023,[27] and PFA is now commercially available in the country. This early adoption, alongside a projected 20% annual growth rate in the market, highlights the significant opportunities in China's evolving healthcare landscape.[27] In South Korea, practitioners are gaining proficiency in the use of PFA not just for AFib but also for other arrhythmias such as atrial flutter, and there is also an increasing demand from patients.[28,29] In Japan, studies show that PFA's favorable safety profile and shorter procedure times compared with conventional thermal ablation, have led to its rapid adoption in clinical practice since becoming available in 2024.[30]

Multifaceted barriers:

The survey findings identified barriers across the domains of care referral pathway, system readiness and patient awareness and access, factors that collectively impact the consistent integration of PFA into clinical practice and its translation into patient benefit.

Domain 1: Late referrals

Delays in the patient referral pathway were cited as a barrier to PFA application.

- **83%** of surveyed EPs reported that fewer than half of eligible AFib patients were referred for ablation within one year of diagnosis.
- Additionally, **81%** indicated that patients were typically referred only after they experienced multiple AFib recurrences.
- **68%** further cited knowledge gaps among referring healthcare professionals as a key clinical setting contributor to these delays.
- Additionally, **25%** cited scheduling delays and limited EP capacity as additional barriers to timely treatment.

What does the broader evidence suggest?

Delays in the referral process can hinder timely rhythm-control intervention and ablation procedures, reducing the likelihood of achieving optimal patient outcomes.[31] A metanalysis performed using MEDLINE (1946-), EMBASE (Excerpta Medica Database 1974-) and the Cochrane Library databases including manuscripts published up to 2019 showed that shorter time between diagnosis and ablation, preferably less than a year, was associated with an increased likelihood of procedural success and lower risk of AFib recurrence.[32]

Domain 2: System readiness

Challenges related to infrastructure and resource readiness were identified as constraints to broader PFA adoption.

- **32%** of surveyed EPs cited high initial equipment or setup costs as a barrier to adoption.

What does the broader evidence suggest?

While PFA's novelty may present some financial barriers to widespread adoption, it is critical to note that increasing evidence demonstrates that PFA delivers long-term positive economic outcomes[33] supported by shorter procedure times, fewer complications and reduced hospital stays. For example, a systematic review in 2025 found PFA to be cost saving compared to thermal ablation, with savings ranging from $520 to $2,387[34] despite variations in healthcare settings and cost assessment methods.

Domain 3: Patient awareness and access

Surveyed EPs identified several barriers faced by patients that hinder broader access to, and benefit from, PFA. The two most cited areas identified were **emotions and awareness factors and limited access to PFA.**

- **Emotions and awareness: 78%** of surveyed EPs indicated that patient fear or lack of understanding of ablation options played a significant role in delaying their treatment decisions.
- **Access: 49%** of surveyed EPs reported that a lack of financial support or reimbursement options remained a major patient level barrier to receiving PFA.

What does the broader evidence suggest?

These findings mirror patient perspectives observed globally. A general lack of patient engagement in decision-making for catheter ablation procedures is observed.[35] According to the American Heart Association, 62% of AFib patients had no prior knowledge of the condition before their diagnosis.[36]

Furthermore, the inclusion of catheter ablation procedures within universal health coverage remains inconsistent across the region. These procedures are currently subject to reimbursement in markets such as the United States and countries in Europe.[37,38] In APAC, only a limited number of markets currently provide reimbursement or access support, creating unequal opportunities for patients to benefit from the technology.[38]

EP interviews also revealed that while the willingness to adopt PFA was consistent among clinicians, the reality of implementation varied across different healthcare systems and clinical settings. EPs shared that in markets with universal healthcare coverage for PFA, where out-of-pocket expenses for patients were minimized, adoption tended to be more consistent. In contrast, in settings where patients had limited financial support, the procedure cost remained a critical barrier, even when patients recognized the benefits of PFA. Furthermore, financial considerations extended beyond patient-level costs to the institutional perspective, depending on whether hospital administrations viewed PFA as a strategic investment in innovation, patient well-being and overall care efficiency rather than as an isolated expense.

Beyond these financial factors, EPs highlighted three important areas. First, in some settings, not all eligible patients were referred to EPs at the earliest opportunity, which could limit both the application and benefits of PFA. Second, even in advanced health systems, shortages and uneven distribution of the EP and anesthetist workforce could constrain the broader adoption and accessibility of PFA. Third, EPs shared that patient awareness and education, particularly through digital platforms and peer-to-peer engagement, could also be an important factor. This is especially relevant in settings where cultural beliefs may influence patients to delay ablation, potentially leading to poorer outcomes.

What this means

The reported clear intention among clinicians to adopt PFA, contrasted with its current inconsistent stage of clinical integration, highlights both missed opportunities and potential to fully realize the value of this technology in APAC. The barriers identified across access, referral pathways, patient engagement and system readiness indicate that coordinated cross-sector collaboration will be essential to drive sustainable adoption and optimize outcomes.

Insight 3 EPs identified four key enablers needed to support broader and more confident PFA adoption

Surveyed EPs consistently identified four enablers that could facilitate the broader adoption of PFA, including strengthening of clinical evidence, alignment of practice guidelines with emerging data, improvement of referral pathways and enhancement of system readiness.

Enabler 1: Strength of evidence

Across responses, EPs emphasized the importance of evidence maturity around PFA to strengthen clinical confidence and accelerate adoption. They specifically focused on long-term durability and safety, as well as workflow optimization.

- **74%** of EPs cited the need for long-term durability and efficacy data as the primary factor that would drive broader clinical adoption.
- Similarly, **66%** highlighted safety and lesion durability or effectiveness as the most important considerations when performing PFA.
- **59%** emphasized the need for stronger integration of research, real-world data and clinical insights.
- **63%** cited the need for evidence linking workflow optimization to improved clinical and operational outcomes.

What does the broader evidence suggest?

Real-world evidence and more clinical trials are particularly important as the use of PFA expands into more complex AFib populations, where long-term safety, efficacy and lesion durability remain to be fully established. For instance, a 2024 EHRA/HRS/APHRS/LAHRS Expert Consensus Statement on Catheter Ablation of Atrial Fibrillation states the need for more clinical trials to establish long-term safety and efficacy, particularly as its use expands beyond paroxysmal into persistent AFib populations.[15]

Enabler 2: Guidelines recognition

PFA-specific guidelines within the broader AFib clinical practice guidelines were identified as a key factor in accelerating adoption and standardizing its use across healthcare systems.

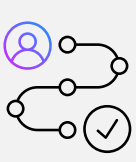
- **55%** of respondents cited formal guideline inclusion as an important driver of adoption.

What does the broader evidence suggest?

Recommendations from the 2024 EHRA/HRS/APHRS/LAHRS Expert Consensus on Catheter Ablation of Atrial Fibrillation highlighted the ongoing need for standardization of PFA delivery parameters and clarification of optimal dosing strategies, particularly as the technology's use expands beyond paroxysmal to persistent and more complex AFib populations.[15]

Enabler 3: Optimized referral pathway

An efficient and well-coordinated referral pathway was considered by surveyed EPs as essential to unlock the full clinical value of PFA, facilitating early identification of eligible patients and timely access to treatment.



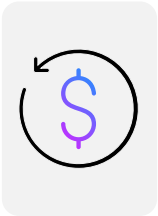
- **71%** of respondents indicated that referral pathway optimization would significantly enhance patient access and procedural uptake.
- **62%** of respondents emphasized the need for stronger collaboration across clinicians, healthcare systems and industry to accelerate adoption and integration of PFA into routine care.

What does the broader evidence suggest?

Ablation innovation adoption is not determined solely within the EP lab. It is also being shaped at the interface between primary care, general cardiology and electrophysiology. Two clinical studies showed an optimized referral pathway reduced the time between diagnosis, ablation and improved outcomes.[39,40]

Enabler 4: Education and reimbursement support

Respondents emphasized that comprehensive training and supportive funding frameworks were critical to ensure consistent practice standards and equitable patient access.



- **48%** of respondents noted the importance of comprehensive clinical education programs, including those for general cardiologists and general physicians, as well as case observation opportunities to enhance procedural confidence and consistency.
- **Institutional reimbursement** has been emphasized as essential for the confident adoption of PFA, particularly in markets where PFA is not included in universal health coverage.

What does the broader evidence suggest?

The management of AFib requires a multidisciplinary team approach. It includes both vertical development, deepening expertise among EPs and horizontal efforts across their clinical partners, such as general cardiologists, anesthetists and primary care providers, who together influence procedural planning and patient outcomes.[41]

Data from the DISRUPT-AF registry showed that PFA is associated with a rapid operator learning curve, with progressive improvements in procedural efficiency and fluoroscopy utilization alongside consistently low complication rates as experience accumulates.[42]

Professional societies such as EHRA and APHRS (2024 consensus updates) stress the importance of standardized training frameworks and competency benchmarks to ensure reproducible outcomes as PFA extends beyond paroxysmal into persistent AFib populations.[15]

In terms of the reimbursement landscape for catheters, it remains inconsistent across the APAC region though progress is being made.[38] Advancing reimbursement frameworks is critical to achieving inclusive and equitable access to PFA therapies.

During EP interviews, on-site training and exchange programs between centers were highlighted as effective ways to enhance overall EP capacity and capability.

Additionally, the EP interviews revealed two further areas that are critical for PFA adoption. First, clinical professionals' consistent understanding and application across the entire continuum of care, from primary care to specialized electrophysiology practice, was seen as essential. This pointed to an opportunity to enhance care coordination, supporting more effective AFib referrals and seamless patient care.

Second, while EPs agreed with the survey finding that awareness among the public, patients and clinical practitioners is a critical enabler, they also emphasized the importance of effective doctor-patient communication in supporting PFA adoption and building patient confidence. They shared that when patients were well-informed and physicians clearly explained their treatment options, it facilitated shared decision-making and helped ensure that the most appropriate ablation method was selected for each individual. Additionally, in some healthcare systems, EPs recommended developing PFA-specific clinical guidelines to support more consistent and clearer communication between doctors and patients.

What this means

Consistent with the multifaceted barriers identified, the primary enablers span multiple dimensions. Insights from survey findings, supporting evidence and frontline EP perspectives suggest that successful PFA adoption depends not only on the strength of evidence and guidelines, but on how effectively they are implemented, communicated and understood in practice. This underscores the need for a coordinated cross-sector approach where clinical practice, institutional readiness and policy frameworks evolve in tandem to ensure sustainable and equitable integration of the technology.

Insight 4 EPs envisioned a future where PFA plays a more prominent role in AFib patient management

Surveyed EPs expressed strong forward intent to expand the role of PFA within AFib management, anticipating three trends of **greater procedural uptake, earlier and broader application and holistic measurement.**

Trend 1: Greater procedural uptake

The findings from the survey demonstrated that PFA would become a leading ablation technique in EP clinical practice within the near term.

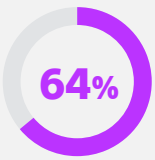
When asked how likely they were to make PFA their preferred ablation modality within the next two years (rated on a scale from 1 = unlikely to 5 = very likely):

The average score was **4.47**

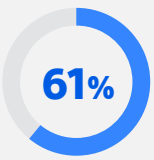
92%
of respondents selected a rating of 4 or above, signaling widespread expectation that PFA will become the leading ablation technique in their clinical practice within the near term.

Trend 2: Earlier and broader application

Respondents anticipated that PFA will play an increasingly prominent role across the AFib care pathway, with greater emphasis on earlier-stage application and broader patient eligibility.



expected an **increase in first line ablation** use for patients with paroxysmal AFib.



foresaw **expansion into persistent AFib** populations.

anticipated **earlier intervention** in asymptomatic or early-stage AFib.

What does the broader evidence suggest?

Growing evidence suggests that ablation can serve as an early first line rhythm-control treatment for carefully chosen patients. This challenges the conventional approach where ablation is used only after extended antiarrhythmic drug therapy and instead points to a shift toward more proactive rhythm-control strategies. The landmark EAST-AFNET 4 demonstrated that early rhythm-control initiated soon after AFib diagnosis yielded a 21% risk reduction in cardiovascular outcomes.[43] Recent guideline updates, including the 2024 EHRA/HRS/APHRS/LAHRS Expert Consensus Statement on Catheter Ablation of Atrial Fibrillation, reinforced earlier rhythm-control consideration in appropriate patients rather than reserving intervention as a late stage strategy.[15]

Ablation plays a key role in early rhythm-control. A recent meta-analysis of early rhythm-control, which included 500,000 patients, showed that greater reductions in major cardiovascular events were observed in studies that incorporated catheter ablation, suggesting that ablation plays a central role in driving the clinical benefits of early intervention.[44]

Trend 3: Holistic measurement

Respondents highlighted the importance of redefining success in AFib care through a comprehensive, patient-centered lens that goes beyond traditional metrics, aiming for meaningful improvements in overall wellness and care experience.

When asked about markers of success, **35%** of EPs selected a comprehensive set of indicators spanning clinical outcomes, workflow efficiency and patient access rather than a single metric, signaling an emerging shift toward more holistic definitions of progress.

Notably, **44%** identified enhanced patient outcomes, improved QoL and more equitable access as the true benchmarks of progress, underscoring a shift toward innovations that prioritize patient impact and fairness in care delivery.

What does the broader evidence suggest?

The assessment of PFA's value is moving beyond traditional clinical endpoints toward a multidimensional focus on clinical effectiveness, care delivery efficiency and patient outcomes. International centers conducting real-world evaluations increasingly include metrics such as procedure efficiency, recovery time, patient-reported QoL and more equitable access alongside traditional efficacy and safety outcomes. For example, the PULSED AF trial included patient-reported QoL as one of the endpoints of the trial.[45] Several small-scale studies have focused on comparing patients' perception of symptoms and QoL improvement after PFA versus other ablation procedures.[46,47] Real-world studies have also used parameters of procedure duration, cost and effectiveness to compare PFA with other ablation procedures.[48] This trend also aligns with broader health technology assessment practices, where conversations are evolving to extend beyond traditional clinical outcomes to incorporate socioeconomic value, patient experience, health system impact and environmental considerations in evaluating new medical technologies.[49]

EPs who participated in the interviews also expressed strong confidence in the future role of PFA. This confidence was reflected in two ways. First, they anticipated that PFA would see broader and more routine use among a wider patient population as financial and procedural readiness improves.

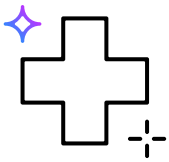
Second, EPs suggested that PFA could evolve toward becoming a first line treatment option, rather than primarily being used after pharmacological therapy. This shift, as noted by EPs, aligned with the broader evolution of AFib care toward earlier and more proactive rhythm-control strategies.

What this means

The outlook for PFA is increasingly optimistic with anticipated growth in its scope, depth and scale of application. As adoption progresses, its role is expected to extend beyond volume growth to earlier and broader application. This will position PFA as a central component of a more proactive and patient-centered approach to AFib care, shaped by both clinical confidence and system readiness.

Chapter 3: Recommended shared priorities for collective action

The rising burden of AFib across the APAC region, coupled with uneven access to and adoption of newer technologies, underscores the need for coordinated action across the entire AFib care continuum. Insights from EPs, gathered through the regional survey and semi-structured interviews with representative EPs, supported by a review of existing literature, revealed five shared priorities spanning clinical practice and care pathways, system readiness and long term sustainability. Together, these priorities inform future conversations, decisions and investments aimed at strengthening patient outcomes, system performance and the overall quality of AFib care across APAC.



1 Shift AFib care from reactive treatment to earlier and proactive multidisciplinary care

Recommendation:

In many practice settings, rhythm-control strategies and catheter ablation are still considered late-stage options, pursued only after patients experience prolonged symptom burden, recurrent episodes or structural cardiac remodelling. A consistent theme across expert recommendations is the need to shift AFib care upstream toward earlier identification and intervention.

A growing body of evidence supports the value of earlier rhythm-control, showing that timely intervention can slow disease progression, reduce cardiovascular complications and enhance QoL.[43,44] Likewise, earlier adoption of ablation has been associated with better rhythm outcomes and a lower likelihood of recurrence compared to delayed treatment when AFib becomes more complex and harder to treat.[43,50]

EPs reinforced that many patients are not reaching specialist care early enough, highlighting opportunities to strengthen awareness and referral practices at the primary care level. Clinicians emphasized that improving upstream education and earlier engagement across the care pathway will be critical to enabling timely rhythm-control intervention.

What's needed:

- Timely referral pathways, ensuring patients are evaluated for rhythm-control strategies soon after diagnosis rather than after repeated failure of rate control.
- Evidence-based risk stratification and patient selection, using clinical scoring systems and imaging to identify those most likely to benefit from early intervention.
- Multidisciplinary collaboration with shared ownership of AFib pathways across disciplines including general cardiologists, primary care providers, anesthesiology teams, nursing staff and hospital administrators to improve referral quality, procedural readiness and post-procedure follow-up to reduce delays and variability in care.
- Systematic and accessible education and training for EPs and the broader AFib care teams, grounded in both global and local insights. Programs should cover the latest innovations and best practices, highlight evidence on the long-term benefits of early rhythm management and ablation and provide practical approaches for integrating new technologies into everyday clinical practice and coordinated care.

2 Strengthen guideline implementation and workflow integration within existing care pathways

Recommendation:

While clinical guidance for AFib and ablation is well established, EPs consistently highlight that the key challenge lies in how these guidelines are implemented in practice. Variability in awareness, interpretation and application across the broader care ecosystem limits their impact. Strengthening guideline implementation, alongside clearer integration of PFA into existing workflows, will be critical to supporting consistent, confident and timely use of ablation in clinical practice. The primary challenge is not the absence of guidelines, but their consistent implementation in practice across different points of care.

What's needed:

- Long-term evidence generation to support practical application of PFA within existing clinical frameworks, including patient selection and risk stratification, referral pathways, optimal timing of intervention, standardized procedural endpoints and follow-up protocols to ensure consistent and safe practice.
- Standardized workflows encompassing pre-procedure assessment, periprocedural management and follow-up to improve efficiency and predictability in high-demand electrophysiology services. These improvements are especially valuable in capacity-constrained settings, where streamlined processes can enhance throughput, optimize resources and reduce staff fatigue.
- Adaptation of global guidelines to reflect APAC healthcare contexts, with a focus on improving their implementation across diverse clinical settings and taking into account regional differences in infrastructure, expertise and patient populations through collaboration with clinical societies, professionals and patient groups.
- Integration of PFA recommendations into broader AFib care and rhythm-control guidelines to ensure PFA is a seamless component of comprehensive AFib management rather than a standalone intervention.
- Development of coordinated guidance promoting a clinical ecosystem approach that fosters multidisciplinary collaboration and alignment across the entire patient journey.
- Targeted education and implementation support across the broader clinical ecosystem, particularly for referring physicians, to ensure consistent understanding and application of guidelines in practice.

3 Improve awareness, health literacy and patient empowerment

Recommendation:

Patient understanding, ownership and preferences are often overlooked in the design of the AFib care journey, contributing to delayed care and sub-optimal decision-making.[35,51] Surveyed EPs emphasized the importance of embedding patient education and engagement as core components of care delivery with information, tools and care support.

Improving health literacy and awareness - particularly around the risks of untreated AFib, the role of rhythm-control strategies and advances in ablation procedures - can empower patients to engage earlier with care pathways, navigate complex treatment options and take a more active, confident role in decision-making with informed expectations.

The awareness gaps extend beyond patients to the broader care ecosystem, particularly how early referral pathways are understood and navigated. In practice, patient acceptance is strongly influenced by how clearly treatment options are explained, with informed patients more likely to engage in earlier and more confident decision-making.

What's needed:

- Targeted and engaging awareness campaigns through media and social platforms to promote prevention, screening and early diagnosis of AFib.
- Culturally relevant and equitable access to educational materials, co-created with clinicians, patients and communication experts to inform health decisions and behavior change.
- Support, training and digital health tools for patient groups to enable system-level patient engagement that extends beyond specialist centers, empowering community-based networks to drive awareness, education and earlier engagement in care pathways.
- Patient communication and consultation skills in medical education and professional development to build physician-patient trust, enable shared decision-making and shared understanding of intervention success.

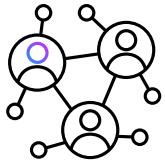
4 Enable and support timely and equitable access

Recommendation:

Across APAC in healthcare systems where reimbursement for PFA is not universal, the cost to patients remains a critical factor in accessing advanced ablation technologies such as PFA. EP insights emphasized that policy and hospital administration evaluations of PFA should adopt a more holistic approach. This should include clinical outcomes, patient experience and system-level efficiencies. EPs suggested that strengthening such holistic approaches would be critical to enabling equitable access and sustainable adoption of innovation.

What's needed:

- Holistic assessment frameworks that integrate clinical outcomes, QoL, health system performance and socioeconomic benefit indicators to guide access policy decisions, recognizing that both clinical effectiveness and broader system and societal value are essential.
- Transparent, systematic and inclusive decision-making mechanisms that formally engage patients and clinicians in reimbursement evaluation and priority-setting processes.
- Evidence generation, outcome measurement design and capacity-building support for policymakers and payers to enhance institutional ability to holistically assess the value of innovation beyond immediate cost considerations, navigate uncertainty in emerging technologies and enable evidence-informed, agile policy adaptation.
- Regional coordination and collaborative learning platforms to share best practices, address fragmented reimbursement environments and explore new models tailored to nuanced realities.



5 Strengthen end-to-end collaboration with EPs in informing medical technology innovators

Recommendation:

EP perspectives and insights are essential to drive innovation improvements in AFib care. EPs recommended their deeper engagement in evidence generation, innovation optimization and guiding future pipeline development.

This end-to-end collaboration can help ensure that innovation reflects clinical need and translates into meaningful, scalable improvements in AFib care.

In practice, collaboration is often fragmented or occurs too late in the innovation cycle, with engagement varying across organizations and markets. Strengthening early, structured and continuous collaboration with clinicians can help ensure that innovation is better aligned with real-world clinical needs, including context-specific considerations such as patient characteristics, usability and workflow integration.

What's needed:

- An EP-informed shared vision for the future of AFib care and the role of innovation as a foundation for strategic partnership and alignment.
- Collaborative innovation roadmaps that embed EPs in early-stage R&D, aligning clinical insights with technology development pipelines from the outset.
- Partnership models focused on care delivery readiness, including support for the clinical ecosystem, operational strategies, training programs and data infrastructure to enable seamless integration of new technologies.
- Continuous EP feedback loops and advisory structures to ensure iterative learning, responsiveness to real-world practice and sustained advancement of innovation.

This report represents a step toward bringing EP perspectives more prominently into regional conversations about AFib care and innovation. As the treatment landscape continues to advance, ongoing engagement among clinicians, healthcare leaders, policymakers, patient communities and industry will be essential to translate innovation into meaningful improvements for patients. Through continued collaboration, shared learning and partnership, stakeholders across APAC can help shape a future where more people living with AFib have access to timely, effective and patient-centered care.

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A total of 137 EPs participated in a double-blinded survey, and five EPs participated in individual non-blinded interviews.

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