Boston Scientific
Interventional Cardiology

# Important Medical Device Advisory
## WATCHMAN TruSeal™ Access System, WATCHMAN FXD Curve™ Access System, WATCHMAN TruSteer™ Access System

29 July 2025

Dear Healthcare Professional,
Cc: Chairman Medical Board and relevant Head of Department

This letter provides important information related to the risk of air embolism during WATCHMAN™ procedures as detailed in Appendix 2.

This notification is in response to observations of air embolism complaints received by Boston Scientific related to WATCHMAN procedures. The global rate of reported air embolism under any sedation type during the WATCHMAN procedure is 0.06%, associated with death in 0.009% of cases. After a comprehensive investigation, it was concluded that these complaints are not associated with the design or manufacture of the WATCHMAN system. Based on the review of the complaints, Boston Scientific has identified a higher likelihood of air embolism events when procedures are performed without positive pressure-controlled ventilation. According to published literature and clinical data [1-9], in percutaneous procedures requiring transseptal access to the left atrium when conscious or deep sedation is used, patients have an approximately three-times higher risk (clinical reference 3, U.S. study) of negative left atrium pressure and air ingress. This risk is especially prevalent in patients with pre-existing low left atrial pressure, hypovolemia, and partial upper airway collapse.

The WATCHMAN Access Systems Instructions for Use (IFUs) and WATCHMAN physician training will be updated to emphasize instructions related to Access System air management. This update will strengthen the information provided to clinicians regarding the potential for air embolism during WATCHMAN procedures performed under conscious or deep sedation and provide potential mitigation strategies.

This advisory affects only the WATCHMAN TruSeal, WATCHMAN FXD Curve, and WATCHMAN TruSteer Access Systems, per Appendix 1 (Affected Devices). Boston Scientific is not removing any affected devices from the field, and they all remain available for use.

**Clinical Impact**
The risk of air embolism is inherent to any percutaneous procedure requiring transseptal access to the left atrium, including WATCHMAN procedures. The current IFU includes instructions to flush devices and to introduce or remove devices slowly, which effectively mitigate the risk of air embolism for procedures performed under general anesthesia.

According to this investigation, during WATCHMAN procedures performed under conscious or deep sedation, the most frequent clinical manifestation of air embolism was ST-segment elevation or visible air bubbles during imaging. Most of these events either resolved on their own or required temporary medical intervention. **During procedures performed without positive pressure ventilation, there is a known risk of air embolism leading to severe outcomes, including life-threatening or fatal consequences**. These outcomes have been observed in this investigation and include arrhythmia, hemodynamic collapse, stroke (CVA), or other end-organ failure caused by ischemia.

The risk of air embolism is acute in nature and limited to the duration of the implant procedure. Patients who have a previously implanted WATCHMAN device do not require additional patient management and should continue to follow standard patient care at the discretion of their physician.

**Instructions**

1. Review IFU updates related to air embolism as detailed in Appendix 2. These updates will be added to the WATCHMAN Access Systems IFUs and WATCHMAN Physician Training.
2. Forward this letter to any other clinicians in your medical facility who perform WATCHMAN procedures and to any facilities where affected devices have been transferred, including hospitals or sites within your network.

   If you are a distributor, this notice must be forwarded to your customers to ensure notification of this Medical Device Advisory is carried out to the end-user level.
3. Complete and return the enclosed Acknowledgment Form per the instructions on page four.

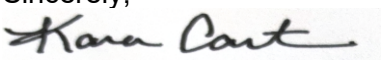
**Additional Information**

Any adverse events or quality concerns associated with use of this device should be reported to Boston Scientific via email at ICardioQAComplaints@bsci.com or the Food and Drug Administration's MedWatch Adverse Event Reporting program [www.fda.gov/MedWatch/report.htm or 1.800.FDA.1088 (332.1088)].

Relevant worldwide regulatory authorities are being notified of this communication as required.

Patient safety is Boston Scientific's highest priority. As such, we are committed to transparent communication with physicians and healthcare professionals to ensure you have timely, relevant information for managing your patients. If you require additional assistance or more information regarding this communication, please contact your local Boston Scientific representative.

Sincerely,



Kara Carter
Vice President, Quality Assurance
Boston Scientific

# Important Medical Device Advisory - Instructions

The Acknowledgment Form enclosed with this notification must be completed and returned to Boston Scientific.

**No impacted devices are being removed and you are not required to return impacted devices to Boston Scientific.**

1. Immediately post this information in a visible location near the device(s) to ensure information is easily accessible to all users.
2. Complete and return the Acknowledgment Form to the Boston Scientific.

# Appendix 1
## Affected Device Table

| Material | Material Description | GTIN | Batch |
|---|---|---|---|
| M635TS70010 | WATCHMAN TruSeal Access System SGL, OUS | 08714729965732 | All non-expired batches |
| M635TS70020 | WATCHMAN TruSeal Access System DBL, OUS | 08714729965749 | |
| M635TS70040 | WATCHMAN TruSeal Access System ANT, OUS | 08714729965756 | |
| M635TS80010 | WATCHMAN FXD Curve Access Sys Sgl, OUS | 00191506013820 | |
| M635TS80020 | WATCHMAN FXD Curve Access Sys Dbl, OUS | 00191506013837 | |
| M635TU70010 | WATCHMAN TruSeal Access System SGL, US | 08714729965701 | |
| M635TU70020 | WATCHMAN TruSeal Access System DBL, US | 08714729965718 | |
| M635TU70040 | WATCHMAN TruSeal Access System ANT, US | 08714729965725 | |
| M635TU80010 | WATCHMAN FXD Curve Access System Sgl, US | 00191506013806 | |
| M635TU80020 | WATCHMAN FXD Curve Access System Dbl, US | 00191506013813 | |
| M635TU90050 | WATCHMAN TruSteer Access System, US | 00191506022310 | |

# Appendix 2
## Pending IFU and Physician Training Updates

The following warning and precaution statements are planned to be added in the IFUs:

**Warning:**

Patients under deep or conscious sedation are at increased risk for negative left atrial pressures, especially in the presence of hypovolemia or partial upper airway obstruction. Patients under controlled positive pressure ventilation such as general anesthesia have a reduced risk of negative atrial pressures. Negative left atrial pressures may increase the risk of air ingress through the hemostasis valve, particularly when the valve is open while introducing, removing or exchanging devices, which may result in air embolism. The most appropriate anesthesia method should be based on individual patient characteristics. Additional caution should be used with patients under deep or conscious sedation, such as:

- Ensure the patient is not hypovolemic,
- Make device exchanges with the access system valve below the level of the heart or under fluid, and withdraw devices slowly until near the valve, then make exchanges during expiration.

**Precaution:** Patients should not be hypovolemic, particularly if not under positive pressure ventilation, to reduce the likelihood of negative left atrial pressures and air embolism.

**Precaution:** Hold the WATCHMAN access sheath valve below heart level and/or under fluid during insertion to reduce the likelihood of air ingress. Vacuum can be minimized by withdrawing devices slowly until near the valve, then making exchanges during expiration.

# Appendix 3
## Clinical References


1. Franzen OW, Klemm H, Hamann F, et al. Mechanisms underlying air aspiration in patients undergoing left atrial catheterization. Catheter Cardiovasc Interv. Mar 1 2008;71(4):553-8. doi:10.1002/ccd.21445
2. Kuwahara T, Takahashi A, Takahashi Y, et al. Clinical characteristics of massive air embolism complicating left atrial ablation of atrial fibrillation: lessons from five cases. Europace. Feb 2012;14(2):204-8. doi:10.1093/europace/eur314
3. Kapadia SR, Yeh RW, Price MJ, et al. Outcomes With the WATCHMAN FLX in Everyday Clinical Practice From the NCDR Left Atrial Appendage Occlusion Registry. Circ Cardiovasc Interv. Sep 2024;17(9):e013750. doi:10.1161/CIRCINTERVENTIONS.123.013750
4. Kawaguchi N, Suzuki A, Usui M, et al. Clinical Effect of Adaptive Servo-Ventilation on Left Atrial Pressure During Catheter Ablation in Sedated Patients With Atrial Fibrillation. Circ J. Jul 21 2021;85(8):1321-1328. doi:10.1253/circj.CJ-20-1263
5. Ikoma T, Naruse Y, Kaneko Y, et al. Prevalence and Characteristics of Inspiration-Induced Negative Left Atrial Pressure during Pulmonary Vein Isolation. J Cardiovasc Dev Dis. Feb 26 2023;10(3)doi:10.3390/jcdd10030101
6. Miyazaki S, Hasegawa K, Mukai M, et al. Clinically manifesting air embolisms in cryoballoon ablation: Can novel water buckets reduce the risk? Innovations in Clinical Electrophysiology. 2020;6(9):1067-72.
7. Saw J, Holmes DR, Cavalcante JL, et al. SCAI/HRS Expert Consensus Statement on Transcatheter Left Atrial Appendage Closure. J Soc Cardiovasc Angiogr Interv. May-Jun 2023;2(3):100577. doi:10.1016/j.jscai.2022.100577
8. Piayda K, Hellhammer K, Nielsen-Kudsk JE, et al. Clinical outcomes of patients undergoing percutaneous left atrial appendage occlusion in general anaesthesia or conscious sedation: data from the prospective global Amplatzer Amulet Occluder Observational Study. BMJ Open. Mar 24 2021;11(3):e040455. doi:10.1136/bmjopen-2020-040455
9. McCarthy CJ, Behravesh S, Naidu SG, Oklu R. Air Embolism: Practical Tips for Prevention and Treatment. J Clin Med. Oct 31 2016;5(11)doi:10.3390/jcm5110093

**CUSTOMER ACKNOWLEDGEMENT FORM**
**PRODUCT NAME: WATCHMAN TruSeal Access System WATCHMAN FXD Curve Access System WATCHMAN TruSteer Access System**

**Instructions**: **This form must be completed and returned in all cases even if you do not have any affected product.**

**Immediately complete form and Scan/e-mail to:** **OR** **Fax to #:**

| **Account #:** | **Customer Name:** |
|---|---|

**Contact Name:**
**Address:**
**City:** **State:** **Province:** **Postal Code:**
**Country:**

***PLEASE COMPLETE, SIGN AND RETURN THIS FORM AS A CONFIRMATION THAT YOU RECEIVED THIS NOTICE FROM BOSTON SCIENTIFIC (even if you do not have any of the referenced product on the enclosed product listing in your current inventory).***

**My signature below acknowledges receipt of the Boston Scientific Notice regarding 97423085-FA Watchman Air Embolism Advisory Field Action**

**Section to be filled out by Customer:**

**1. Please Indicate:**
Are you a Distributor?

☐ Yes, and we have notified all customers that have been shipped/sold affected product
☐ No

**2. Sign and Date to acknowledge this Field Action Notification (must be completed):**

Print Name:_____Signature:_____Date:_____