



## Highlights from:

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# Initial Clinical Experience with VersaCross Transseptal System for Transcatheter Mitral Valve Repair

## HIGHLIGHTS

The novel **VersaCross™** Radiofrequency (RF) Transseptal Solution enabled MitraClip™ Guide delivery in under 7.5 minutes.\* The initial experience shows using the **VersaCross™** RF Transseptal Solution is:

- ▶ Efficient: Achieved TSP and MitraClip™ Guide delivery under 7.5 mins.
- ▶ Exchangeless: Reduced number of wire exchanges.
- ▶ Effortless: Repositioned on the fossa without rewiring.

## INTRODUCTION

- ▶ Transseptal puncture (TSP) location is critical for transcatheter mitral valve repair success.
- ▶ Brockenbrough needles can cause excessive tenting of the septum, leading to unpredictable TSP location and complications.
- ▶ Purpose-built RF devices avoid excessive septal tenting or slippage to allow crossing at the desired location and have increased in use during MitraClip™ procedures (Abbott).
- ▶ The **VersaCross™** RF Transseptal Solution (Baylis Medical†) utilizes an RF wire and shapeable dilator for targeted TSP while reducing wire exchanges to improve procedural efficiency.
- ▶ This study describes the initial clinical experience using the **VersaCross™** RF Transseptal Solution in 25 prospective consecutive MitraClip™ procedures.

## METHODS

- ▶ Right femoral vein access was obtained using standard techniques.
- ▶ The **VersaCross™** RF Wire (pigtail configuration) was used to introduce the transseptal sheath and dilator, perform RF TSP, and introduce the MitraClip™ Guide into the LA with no wire exchanges.
- ▶ Procedural efficiency was evaluated in terms of time from **VersaCross™** RF Wire insertion to (A) TSP and (B) MitraClip™ Guide in the left atrium (LA).
- ▶ Major adverse events were assessed at hospital discharge.

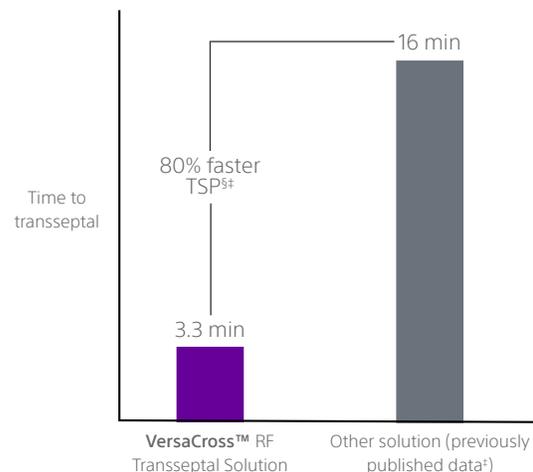
## RESULTS

- ▶ TSP using the **VersaCross™** RF Transseptal Solution was 100% successful with no major adverse procedural events.
- ▶ TSP was achieved within  $3.3 \pm 1.6$  min (Figure 1) or  $1.2 \pm 0.5$  attempts.
- ▶ MitraClip™ guide catheter was placed in the LA within  $3.8 \pm 3.0$  min.

## DISCUSSION & CONCLUSIONS

- ▶ The **VersaCross™** RF Transseptal Solution combines several tools to minimize exchanges that are typically required to insert the MitraClip™ Guide into the LA, including:
  - Shapeable dilator to optimize position on the fossa ovalis
  - Soft pigtail wire for easy repositioning
  - RF puncture device for targeted TSP
  - Long supportive wire to advance the MitraClip™ sheath
- ▶ Case series demonstrates the safety and feasibility of targeted TSP using the **VersaCross™** RF Transseptal Solution in under 5 min.
- ▶ Outcomes suggest a potential improvement in procedural efficiency using the **VersaCross™** RF Transseptal Solution.

### Transseptal Time for MitraClip™ Procedures



**Figure 1.** TSP time for MitraClip™ procedures reported by Sayah et al using the **VersaCross™** RF Transseptal Solution is 80% faster, as compared to previously published data.‡§

\* From femoral access; based on 3.3 min for TSP and 3.8 min for subsequent MitraClip™ guide exchange.

† A wholly-owned subsidiary of Boston Scientific Corporation.

‡ Results from different clinical investigations are not directly comparable. Information provided for educational purposes only. Sayah et al compared the time to transseptal puncture in their case series to data previously published by Maisano et al.<sup>5</sup>

§ Maisano, et al. Transseptal access for MitraClip™ procedures using surgical diathermy under echocardiographic guidance. *EuroIntervention*. 2012;8(5):579-86.

## Brief Summary | VersaCross™ RF Wire

**CAUTION:** Federal law (USA) restricts this device to sale by or on the order of a physician. Rx only. Prior to use, please see the complete "Instructions for Use" for more information on Indications, Contraindications, Warnings, Precautions, Adverse Events, and Operator's Instructions.

**INDICATIONS FOR USE:** The VersaCross™ RF Wire is indicated for creation of an atrial septal defect in the heart.

**CONTRAINDICATIONS:** The VersaCross™ RF Wire is not recommended for use with any conditions that do not require the creation of an atrial septal defect. The Connector Cable is not recommended for use with any other Baylis RF Generator or any other device.

**WARNINGS:** • Laboratory staff and patients can undergo significant x-ray exposure during RF puncture procedures due to the continuous usage of fluoroscopic imaging. This exposure can result in acute radiation injury as well as increased risk for somatic and genetic effects. Therefore, adequate measures must be taken to minimize this exposure. • The VersaCross™ RF Wire and Connector Cable are intended for single patient use only. Do not attempt to sterilize and reuse either device. Reuse can cause patient injury and/or the communication of infectious disease(s) from one patient to another. Reuse may result in patient complications. • The VersaCross™ RF Wire must be used with the Connector Cable provided. Attempts to use it with other connector cables can result in electrocution of the patient and/or operator. • Do not use the VersaCross™ RF Wire with electrocautery or electrosurgery generators, connector cables or accessories as attempted use can result in patient and/or operator injury. • The Connector Cable must only be used with the RFP-100A Baylis RF Generator and the included VersaCross™ RF Wire. Attempts to use it with other RF Generators and devices can result in electrocution of the patient and/or operator. • The VersaCross™ RF Wire must be used with 0.035" compatible Baylis RF Generator and the included VersaCross™ RF Wire. Attempts to use it with other RF Generators and devices can result in electrocution of the patient and/or operator. • The VersaCross™ RF Wire has only been validated for transseptal puncture use through VersaCross™ dilators which have been demonstrated to provide the required support for optimal function. • The VersaCross™ RF Wire is not intended for use with neonatal patients (i.e. less than one month of age). Do not attempt to treat neonatal patients with the VersaCross™ RF Wire.

**PRECAUTIONS:** • In order to prevent the risk of ignition, ensure that flammable materials are not present in the room during RF power application. • Careful manipulation of the VersaCross™ RF Wire must be performed to avoid vessel trauma. If resistance is encountered, DO NOT use excessive force to advance or withdraw the VersaCross™ RF Wire or ancillary sheath and/or dilator assembly. Excessive force may lead to bending or kinking of the device limiting advancement and retraction of sheath and/or dilator device. • The Baylis RF Generator is capable of delivering significant electrical power. Patient or operator injury can result from improper handling of the VersaCross™ RF Wire and/or DIP electrode, particularly when operating the device. • During power delivery, the patient should not be allowed to come in contact with ground metal surfaces. • If using electroanatomical mapping guidance, it is recommended to use it along with alternative imaging modality in the event there is loss of visibility of the device.

**ADVERSE EVENTS:** Adverse events that may occur while creating an atrial septal defect include: • Tamponade • Sepsis/Infection • Thromboembolic episodes • Vessel perforation • Atrial Fibrillation • Myocardial Infarction • Vessel spasm • Sustained arrhythmias • Atrial Flutter • Hemorrhage • Vascular thrombosis • Perforation of the myocardium • Hematoma • Allergic reaction to contrast medium • Ventricular Tachycardia • Pain and Tenderness • Arteriovenous fistula • Pericardial effusion • Tachycardia • Vascular Trauma • Additional Surgical Procedure • Wire entrapment/ entanglement • Foreign body/wire fracture

EP-1504711-AA

## Brief Summary | VersaCross™ Transseptal Dilator

**CAUTION:** Federal law (USA) restricts this device to sale by or on the order of a physician. Rx only. Prior to use, please see the complete "Instructions for Use" for more information on Indications, Contraindications, Warnings, Precautions, Adverse Events, and Operator's Instructions.

**INDICATIONS FOR USE:** The VersaCross™ Transseptal Dilator is indicated for introducing various cardiovascular catheters to the heart, including the left side of the heart through the interatrial septum.

**CONTRAINDICATIONS:** There are no known contraindications for this device.

**WARNINGS:** • Laboratory staff and patients can undergo significant x-ray exposure during interventional procedures due to the continuous usage of fluoroscopic imaging. This exposure can result in acute radiation injury as well as increased risk for somatic and genetic effects. Therefore, adequate measures must be taken to minimize this exposure. • The VersaCross™ Steerable Sheath kit is intended for single patient use only. Do not attempt to sterilize and reuse the VersaCross™ Steerable Sheath kit. Reuse can cause the patient injury and/or the communication of infectious disease(s) from one patient to another. Failure to follow this instruction may result in patient complications • Maintain continuous hemodynamic monitoring throughout procedure • Provide continuous heparinized saline infusion while the introducer remains in vessel.

**PRECAUTIONS:** • Careful manipulation must be performed to avoid cardiac damage, or tamponade. Sheath, dilator and guidewire advancement should be done under fluoroscopic guidance. If resistance is encountered, DO NOT use excessive force to advance or withdraw the device.

**ADVERSE EVENTS:** Adverse events that may occur while using the VersaCross™ Sheath include: • Infection • Air embolus • Local nerve damage • Vasovagal reaction • Dissection • Vessel spasm • AV fistula formation • Atrial septal defect • Pseudoaneurysm • Aortic puncture • Arrhythmias • Perforation and/or tamponade • Hematoma • Hemorrhage • Catheter entrapment • Thromboembolic events • Stroke • Valve damage • Myocardial infarction • Pacemaker/defibrillator lead displacement • Pulmonary edema • Coronary artery spasm and/or damage • Vessel trauma • Pericardial/pleural effusion

EP-1506213-AA

## Brief Summary | VersaCross™ Transseptal Sheath

**CAUTION:** Federal law (USA) restricts this device to sale by or on the order of a physician. Rx only. Prior to use, please see the complete "Instructions for Use" for more information on Indications, Contraindications, Warnings, Precautions, Adverse Events, and Operator's Instructions.

**INDICATIONS FOR USE:** The VersaCross™ Transseptal Sheath kit is used for the percutaneous introduction of various types of cardiovascular catheters and guidewires to all heart chambers, including the left atrium via transseptal perforation/puncture.

**CONTRAINDICATIONS:** There are no known contraindications for this device.

**WARNINGS:** • Laboratory staff and patients can undergo significant x-ray exposure during interventional procedures due to the continuous usage of fluoroscopic imaging. This exposure can result in acute radiation injury as well as increased risk for somatic and genetic effects. Therefore, adequate measures must be taken to minimize this exposure. The use of echocardiography is recommended. • The VersaCross™ Transseptal Sheath kit is intended for single patient use only. Do not attempt to sterilize and reuse the VersaCross™ Transseptal Sheath kit. Reuse can cause patient injury and/or the communication of infectious disease(s) from one patient to another. • Do not attempt direct percutaneous insertion of the sheath without the dilator as this may cause vessel injury. • Careful manipulation must be performed to avoid cardiac damage or tamponade. Sheath advancement should be done under fluoroscopic guidance. Echocardiographic guidance is also recommended.

**PRECAUTIONS:** • Careful manipulation must be performed to avoid cardiac damage or tamponade. Sheath, dilator and guidewire advancement should be done under fluoroscopic guidance. If resistance is encountered, DO NOT use excessive force to advance or withdraw the device. • The VersaCross™ Transseptal Sheath is compatible with introducer sheaths 11Fr or larger. • The VersaCross™ Transseptal Sheath and Dilator are compatible with transseptal devices and guidewires .035" or smaller. • The VersaCross™ Transseptal Sheath kit is NOT compatible with transseptal needles such as the "NRG™ Transseptal Needle".

**ADVERSE EVENTS:** Adverse events that may occur while using the VersaCross™ Transseptal Sheath kit include: • Infection • Air embolus • Local nerve damage • Hemorrhage • Embolic events • Vessel spasm • AV fistula formation • Atrial septal defect • Pseudoaneurysm • Perforation and/or tamponade • Arrhythmias • Pericardial/pleural effusion • Hematoma • Vessel trauma • Valve damage • Catheter entrapment

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