Quality time for better care

TERUMO
MEDICAL CARE
SOLUTIONS

All-In-One Midline Catheter

SURFLO MIDELA™

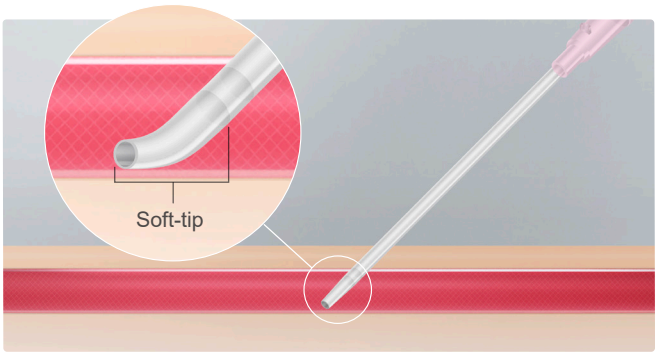
3D-Shin™

Reduce Risks and Workload
with All-In-One Midline Catheter

Simple Catheter Insertion

Guidewire-Free Insertion Enabled by Terumo's Proprietary Soft-Tip Design

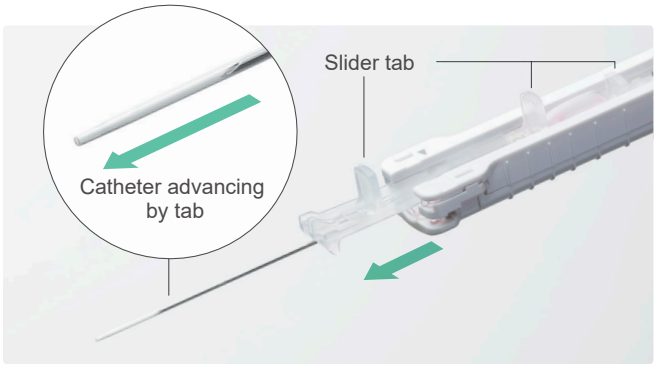
The catheter incorporates a soft tip design achieved through a unique manufacturing process that integrates two materials.
The flexibility and mechanical durability of the soft tip have been evaluated under repeated bending conditions representative of unsupported advancement.
These characteristics help support reliable catheter integrity without the use of a guidewire.



Image

Clean, Easy, and Secure Placement

With a simple push of the slider tab, the catheter can be inserted smoothly without direct contact with the catheter or needle.
This helps to reduce the risk of touch contamination during placement.
The design also allows clinicians to maintain a clear view of insertion progress, enabling safe and reliable catheter placement using just one hand.

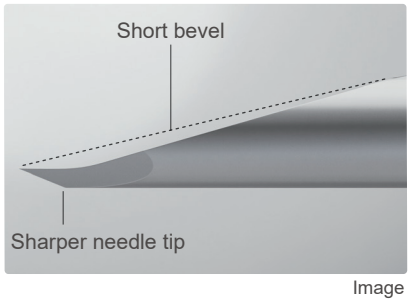


Stick the Intended Target Precisely

Terumo 3D-Shin, Capturing the Vessel Precisely

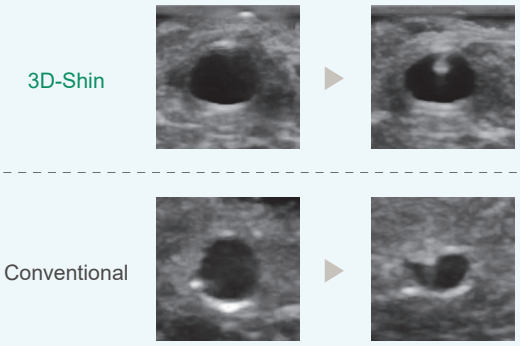
3D-Shin™

Realizing the short bevel and sharp cutting-edge angle needle tip required for upper-arm venipuncture, this design helps suppress vessel deformation and reduces the risk of posterior wall puncture.[1)]



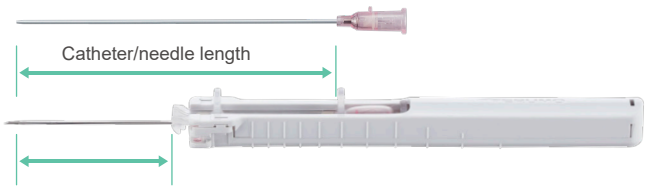
Image

Compared with conventional and competitor needles, this design demonstrated less vessel compression and reduced needle displacement.[1)]
(Data from an internal ex-vivo model study conducted)



A Precise Long Needle Insertion

By incorporating a unique structure that suppresses needle deflection and deformation, and by the same needle protrusion length of PIVCs, the 8 cm and 10 cm catheters can be advanced straight into the intended target vessel precisely.

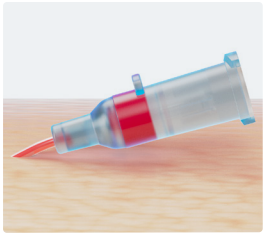


Catheter/needle protrusion length

Minimize the Risk

Reduce the Risk of Blood Exposure

The valve helps prevent blood return during insertion, reducing the risk of blood exposure for clinicians.[2] This design also minimizes the need for additional hemostasis procedures, helping clinicians to reliably connect infusion sets and other accessories.



Prevent Needlestick Injuries

When the needle is withdrawn, a passive safety cover automatically engages over the needle tip. This mechanism helps prevent needlestick injuries and contributes to infection prevention.

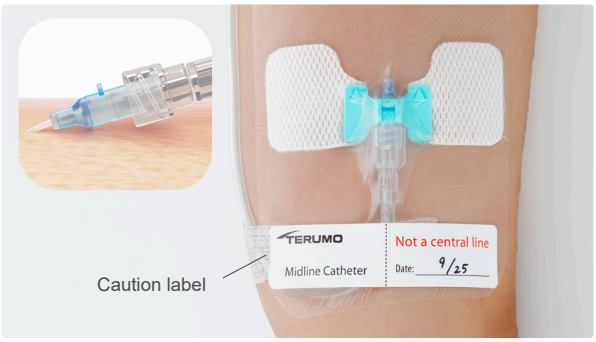
Reduce Dislodgement and Movement

The device can be attached to the catheter hub with a simple one-touch action. It keeps the catheter securely in place on the upper arm, helping prevent dislodgement and movement.

Additionally, the structure minimizes contact between the skin and the lock connector, helping to reduce skin irritation.

Distinguish From CVC Line

To avoid confusion with CVC lines, the device incorporates a hub shape similar to PIVCs. This ensures that clinicians can readily identify the catheter as a midline at a glance, supporting safe medication administration and reducing the risk of misidentification-related incidents.



Clinical Study Outcomes

In clinical studies, nurses trained in upper-arm vascular access using ultrasound-guided placed SURFLO MIDELA. During the indwelling period, no adverse events were observed.*1 [3]
Additionally, compared with PIVCs, the rate of catheter failure with this device was significantly lower.*2 [4]

<Safety Evaluation>

Study	Result
Feasibility Study (8 cases)	Adverse events → 0 Case (7-day dwell period)

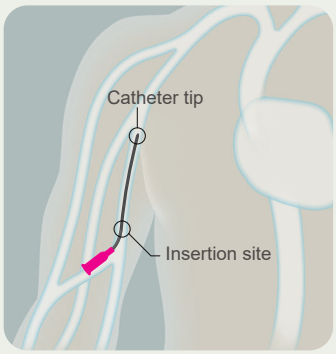
<Efficacy Evaluation>

Study	Result
Randomized Controlled Trial (46 cases)	Midline CF rate → 0 % (0/22) PIVC CF rate → 29 % (7/24) (7-day dwell period)

*1: Possible complications include nerve injury, arterial puncture, vasovagal reactions, skin irritation caused by ultrasound gel, hematoma formation due to deep vascular injury, catheter-related bloodstream infection, and venous thrombosis.
*2: Within seven days, symptoms such as redness, swelling, pain, induration, or occlusion around the insertion site may occur, which can make continued catheter placement difficult and lead to unplanned catheter removal.

What Is an All-In-One Midline Catheter?

The All-in-One Midline Catheter is a midline catheter in which the needle and catheter are integrated into a single unit. A midline catheter is inserted through the basilic, cephalic, or brachial vein in the upper arm and positioned so that the catheter tip resides near the axilla (proximal upper arm).[5] It is placed between the PIVCs and CVC lines in terms of tip location, allowing clinicians to choose the most appropriate device based on a patient's needs.



Insertion site: Upper arm Catheter tip: Near axilla

Point 1 Compared with PIVCs, midline catheters have a lower incidence of phlebitis.[6] Compared with PICCs, they reduce risk of serious complications such as bloodstream infection and thrombosis.[7]

Point 2 Midline catheters with an effective length of 10 cm or less present an extremely low risk of infusion-related issues, making X-ray confirmation of the catheter tip generally unnecessary.[8]

Point 3 All-In-One Midline catheter placement does not require maximal barrier precautions.[9]

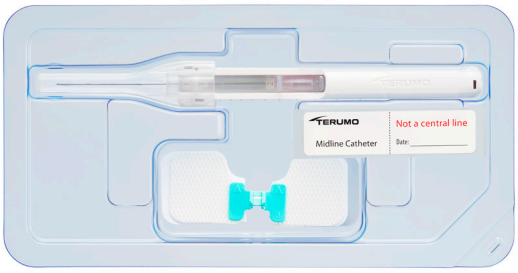
Product image

10 cm length

8 cm length

Basic Tray Components

Catheter(1) Securement device(1) Caution label(1)



Product range

Product Name	Product code	Catheter				Flow Rate /Min	Needle Guage	Max. Pressure	Lumen	Units/Box
		Guage	Length	O.D.	I.D.					
SURFLO MIDELA™ Midline catheter	MCS1808D01F	18G	8cm	1.30mm	0.95mm	76ml	20G	325psi	Single	5
	MCS1810D01F		10cm							
	MCS2008D01F	20G	8cm	1.10mm	0.80mm	43ml	22G			
	MCS2010D01F		10cm							
	MCS2208D01F	22G	8cm	0.85mm	0.60mm	25ml	24G			

References

1) Hidenori T., et al. Effect of a thin-tipped short bevel needle for peripheral intravenous access on the compressive deformation and displacement of the vein: A preclinical study, 2022 June 30
2)Rudy O., et al. Evaluation of a new safety peripheral IV catheter designed to reduce mucocutaneous blood exposure, 2011 Jul;27(7):1339-46
3)Murayama R., et al. Safety verification of a new peripheral intravenous catheter placed in the upper arm vein for administration of drugs with high irritant potential. Drug Discov Ther. 2022 Jul 20;16(3):128–134.
4)Murayama R., et al. Verification study on the catheterization of an upper arm vein using the new long peripheral intravenous catheter to reduce catheter failure incidence: A randomized controlled trial. Drug Discov Ther. 2023 Mar 11;17(1):52–59.
5)Japan VAD Consortium (Ed.): Practical Standards for Infusion Catheter Management, 2025 Edition | Revised 2nd Edition, Nanzando, 2025, p.6
6)Marsh N., Larsen E.N., O'Brien C., et al. Safety and efficacy of midline catheters versus peripheral intravenous catheters: A pilot randomized controlled trial. Int J Nurs Pract. 2023 Apr;29(2):e13110
7)Swaminathan L., et al. Safety and Outcomes of Midline Catheters vs Peripherally Inserted Central Catheters for Patients With Short-term Indications: A Multicenter Study. JAMA Intern Med. 2022;182(1):50–58.
8)Nakayama, Kento: Easy-to-Understand! 46 Questions About Midline Catheters, Nanzando, 2025, p.38
9)Infusion Nursing Society: Infusion Therapy Standards of Practice 2024, S108, S253

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