

CATHETER/VEIN SCALE

Chart for determining catheter size/length versus appropriate **vein diameter and depth** from ultrasound assessment

Peripheral vascular access devices

PICC Excellence, Inc.

FRENCH SIZE	2	2.5	3	3.5	4	4.5	5	5.5	6	7	8
CATHETER GAUGE SIZE	24	22	20	19	18	17	16	15	14		12
CATHETER MEASUREMENT mm	0.7	0.9	1.1	1.2	1.3	1.5	1.8	1.9	2.1	2.3	2.7
INCHES	0.022	0.026	0.0355	0.042	0.05	0.058	0.065	0.072	0.083	0.092	0.105
VESSEL SIZE needed 1:3=1/3 catheter vs 2/3 vein for optimal blood flow	2mm	3mm	3.6mm	3.8mm	4.3mm	4.5mm	5.5mm	5.8mm	6.5mm	7mm	8mm

RECOMMENDATION 1:3 (3.3) catheter/vein ratio & at least **2.75cm** catheter length in vein (Takahashi et.al, 2020; Tanabe et.al, 2016, Bahl et.al, 2020)

DEPTH to top of VEIN	0.25cm	0.5cm	.75cm	1.0cm	1.25cm	1.5cm	Consider Midline catheters for depth greater than 1.5cm (7cm=2.75") or for catheter length of more than 5cm 2.54cm=1 inch 3.25=1.3" 4cm=1.6" 5cm= 2" 6cm=2.4" 7cm=2.75" 8cm=3.15" www.piccexcellence.com
Catheter length needed to reach top of vein	.35cm	.71cm	1.06cm	1.41cm	1.77cm	2.12cm	
Vein Purchase min for Catheter Length +2.75cm in vein (Bahl 2020)	3.1cm	3.5cm	3.85cm	4.15cm	4.55cm	4.85cm	
CATHETER LENGTH needed for 45-degree	3.1cm	3.5cm	3.85cm	4.15cm	4.55cm	4.85cm	
CATHETER LENGTH needed for 30-degree	3.25cm	3.75cm	4.25cm	4.75cm	5.25cm	5.75cm	
CATHETER LENGTH needed for 15-degree	3.75cm	4.75cm	5.65cm	6.65cm	7.65cm	8.6cm	