

Closure Device Update*							
Company	Product	Type	Puncture Size (F)	Maximum Wire Compatibility	FDA Approved	CE Mark	Comments
Abbott Vascular	Perclose A-T	Suture	5 - 8	.038	Yes	Yes	Automated knot for vascular closure of 5- to 8-F access sites
	Perclose Closer S	Suture	5 - 8	.038	Yes	Yes	Allows operator to tie knot.
	Perclose ProGlide	Suture	5 - 8	.038	Yes	Yes	Monofilament suture. Automated knot tying.
	Perclose Prostar	Suture	6.5 - 10	.038	Yes	Yes	Prostar XL 10 designed to close up to 10-F access sites.
	StarClose	Nitinol clip	5, 6	.038	Yes	Yes	An extravascular nitinol clip that mechanically closes the arteriotomy to ensure rapid hemostasis.
AccessClosure, Inc.	Finale	Hydrogel sealant	5 - 7	Works through existing procedural sheath	No	No	Extravascular polyethylene sealant. Designed to achieve immediate hemostasis after diagnostic and interventional procedures while leaving no intravascular components behind. Resorbs completely within 30 days.
Cardiva Medical, Inc.	Boomerang ClosureWire	Arteriotomy tamponade	5, 6	Works through existing sheath	Yes	Yes	Easily deployed device minimizes vessel trauma and complications, leaves no implant materials in the patient, and allows earlier ambulation.
DataScope Interventional	On-Site	Precision closure device	5 - 6	n/a	Yes	Yes	New, easy to use, over the wire, closure device employs a temporary locator disc to ensure precise extravascular collagen plug placement. Advanced micropore collagen. Single-operator. Leaves no intra-arterial components behind.
	Elite	Advanced collagen plug	5 - 8	n/a	Yes	Yes	A one-size-fits-all, extravascular closure device indicated for use in interventional and diagnostic procedures in highly anticoagulated patients and those with PVD.
	VasoSeal Low Profile	Collagen plug	4, 5	n/a	Yes	No	Available in five kit sizes for angiography procedures.
	VasoSeal VHD	Collagen plug	8 or smaller	n/a	Yes	Yes	Extravascular closure. Available in seven kit sizes for interventional and diagnostic procedures.
	X-Site	Suture-mediated closure	6	.038	Yes	Yes	Suture-based closure without intra-arterial mechanical components. Low-profile design. Proven in highly anti-coagulated patients, including GP IIb/IIIa. The next generation X-Site device is currently under development and will be available in 2007.
Medtronic	AngioLink Vascular Closure System	Staple	6 - 8	.038	Yes	Yes	Extraluminal mechanical closure. Does not remodel vessel or impede blood flow at the access site. Inert and highly biocompatible titanium staple improves patient comfort and does not limit reaccess.
Rex Medical	Auto-Close	Low-profile nitinol clip	5 - 8	.038 or smaller	No	No	Low-profile nitinol clip technology with resorbable patch. US launch expected in Q3 2008; international launch expected in Q3 2007.
Sutura	SuperStitch	Polypropylene suture and knot	6 - 8	Works through existing sheath	Yes	Yes	True 6-F and 8-F suture delivery through the sheath. Does not enlarge arteriotomy. Mid-2006 expected release of 12/16-F and 18/24-F.
St. Jude Medical	Angio-Seal VIP, STS Plus and STS. Angio-Seal Millenium Platform (Japan Only)	Mechanical seal	6, 8	6 F = .035 8 F = .038	Yes	Yes	Suture, collagen, and anchor sandwich of the arteriotomy. All components reabsorb within 90 days. FDA labeling for immediate restick. Next-generation device: Angio-Seal VIP launched in March 2006.
Vascular Solutions	Duett Pro & Diagnostic Duett Pro	Thrombin and collagen pro-coagulant	5 - 9	Works through existing sheath	Yes	Yes	Utilizes the existing sheath, a balloon catheter, and a procoagulant to achieve hemostasis. Duett Pro is approved for use with GP IIb/IIIa inhibitors and ACT of less than 400.

Assisted-Compression Device Update							
Company	Product	Type	Puncture Size (F)	Max Wire Compatibility	FDA Approved	CE Mark	Comments
Abbott Vascular	Chito-Seal	Topical hemostasis pads/patches	All	n/a	Yes	Yes	Chito-Seal is coated with Abbott's proprietary Chitosan Gel, which consists of positively charged chitosan molecules that attract negatively charged red blood cells and platelets. When placed over the puncture site, Chito-Seal's cell binding ability expedites clot formation and accelerates hemostasis.
Datascope Interventional	Safeguard (12, 24 cm)	Pressure-assisted dressing	All	n/a	Yes	Yes	Assists manual compression and maintains hands-free pressure. Adjustable pressure is applied to wound and access sites via an inflatable bulb contained within an adhesive bandage, allowing visibility of the site. Available in two sizes for use anywhere pressure is required.
InterV	V+Pad	Topical hemostasis pads/patches	All	All	Yes	Yes	Promotes platelet aggregation to D-glucosamine enriched fibers and exposed collagen at puncture site. Platelet degranulation stimulates the body's natural clotting cascade in the intrinsic pathway forming a rapid platelet plug resulting in hemostasis.
Marine Polymer Technologies	Syvek Patch, SP, NT	Topical hemostasis pads/patches	All	All	Yes	Yes	Indicated for rapid hemostasis at the vascular access site, including patients on anticoagulation therapy.
RADI Medical Systems	FemoStop plus	Mechanical compression devices	All	All	Yes	Yes	Precise and consistent compression while allowing immediate reaccess to the femoral site
	FemoStop HD	Mechanical compression devices	All	All	Yes	No	Includes a sterile, hemostatic dressing impregnated with m*doc. Deep and topical hemostasis and immediate reaccess to the femoral site.
	RadiStop	Mechanical compression devices	All	All	Yes	Yes	Support plate provides comfortable and efficient positioning of the wrist and mechanical compression and stabilization of the radial artery.
Scion CV, distributed by Medtronic	Clo-Sur Plus PAD	Topical hemostasis pads/patches	All	All	Yes	Yes	High positive charge attracts negatively charged red blood cells. Water-soluble. Noninvasive PAD is only device FDA approved as an antimicrobial barrier PAD.
St. Jude Medical	StasysPatch	Topical hemostasis pads/patches	All	All	Yes	Yes	Microporous polysaccharide (MP) particles rapidly dehydrate blood and accelerate the clotting cascade. Provides safe and rapid hemostasis. Reduces manual compression time.
TZ Medical	Neptune	Topical hemostasis pads/patches	All	All	Yes	Yes	Calcium alginate wound dressing that facilitates hemostasis after catheterization. Available with Disc or standard 2x2 pad.
	Comfort Band	Compression strap	All	All	Yes	No	Radial/brachial strap. Comes sterile or nonsterile, with or without Neptune calcium alginate.
	QuicKlamp	Mechanical compression devices	All	All	Yes	No	To be used with the Neptune Disc or Disco Discs. Inexpensive alternative to holding manual pressure.
	EZ Hold	Compression devices	All	All	Yes	No	To be used with the Neptune Disc or Disco Discs. Weighted, T-shaped handle provides an alternative to manual pressure and eliminates the long-term effects associated with holding. Reusable.
	Disco Discs	Compression devices	All	All	Yes	No	Works with all clamp systems on the market. Inexpensive single-use item.
Vascular Solutions	D-Stat Dry	Thrombin-based topical hemostasis pad	All	n/a	Yes	Yes	A hemostatic pad with the clotting power of thrombin used as an adjunct to manual compression.
	D-Stat Radial	Mechanical device with thrombin	All	n/a	Yes	Yes	Adjustable radial compression band layered with a comfort pad and a thrombin pad.
	D-Stat Flowable	Thrombin and collagen topical hemostat	All	n/a	Yes	Yes	Thick yet flowable hemostat that can be used topically on sources of active bleeding. Kit includes two applicator tips.
	ThrombiGel	Topical hemostat with thrombin	All	n/a	Yes	No	Thrombin plus Gelfoam in a composite pad.
	D-Stat Clamp Accessory	Mechanical compression device accessory with thrombin	All	n/a	Yes	No	Thrombin-based hemostatic bandage configuration for attachment to many standard clamp devices.

*Prepared by the Editors of Endovascular Today in conjunction with the device manufacturers.