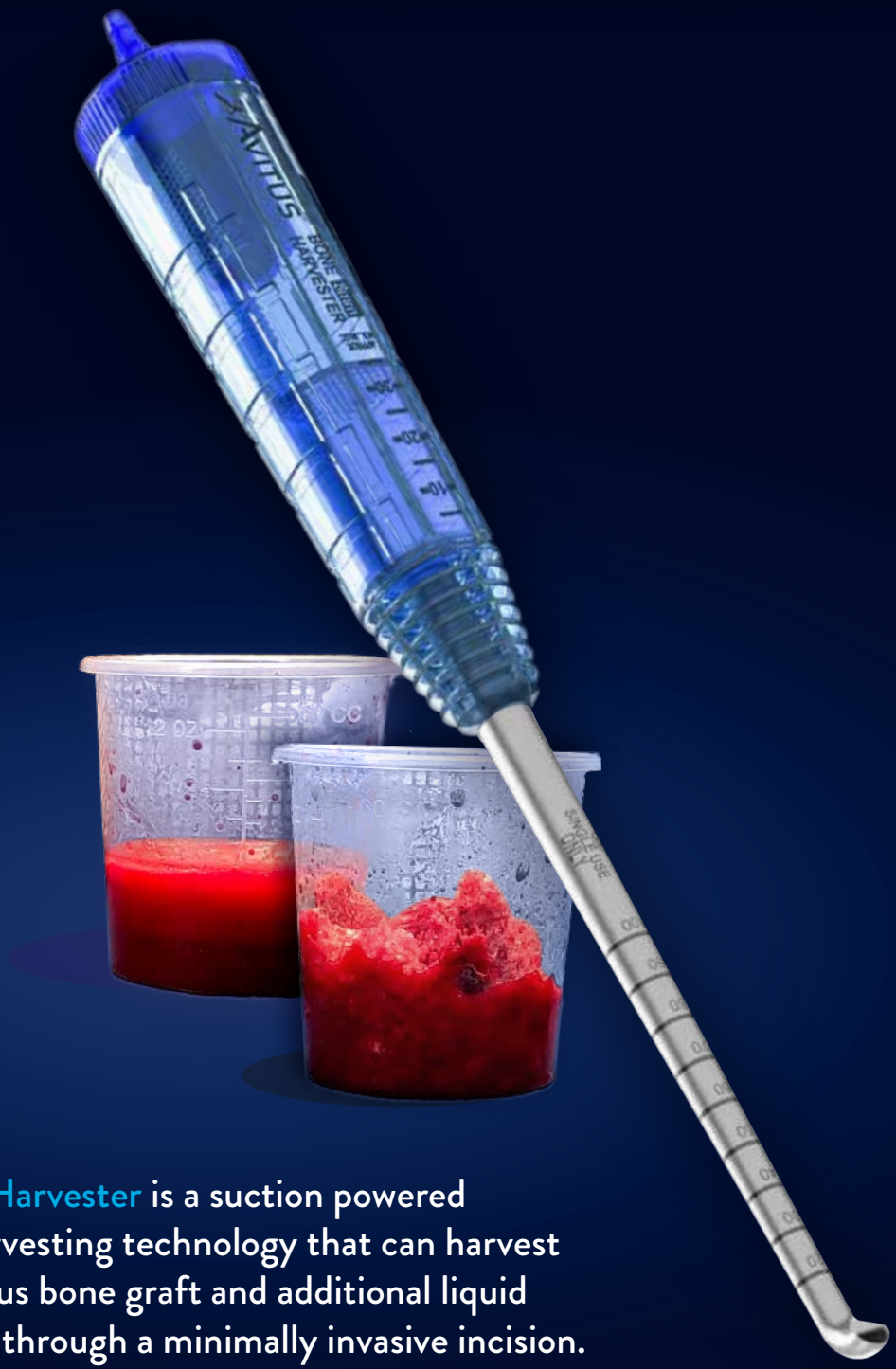
AVITUS® ORTHOPAEDICS
Minimum Access. Maximum Benefit.™

PRODUCT BROCHURE:
THE AVITUS® BONE HARVESTER



The Avitus® Bone Harvester is a suction powered bone & marrow harvesting technology that can harvest 5-45cc of cancellous bone graft and additional liquid marrow in minutes through a minimally invasive incision.

the avitus® bone harvester

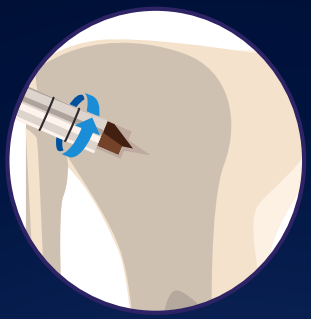
providing cost-savings while making the gold-standard *your* standard.

how it works

1

HOOK TO SUCTION

2



MAKE PILOT HOLE
Recommended Use: Avitus® Pilot Hole Creator provides MIS cortical entry.

3

HARVEST YOUR GRAFT & MARROW

4

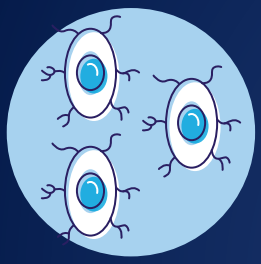
DRAIN YOUR MARROW

5

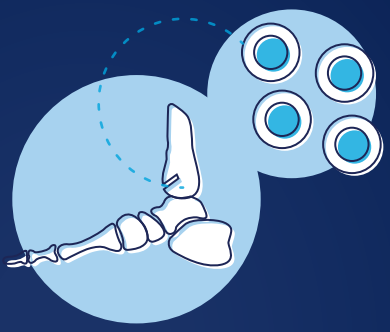
SLIDE OUT GRAFT
If additional volume is required, reassemble device and resume harvesting

why choose cancellous autograft?

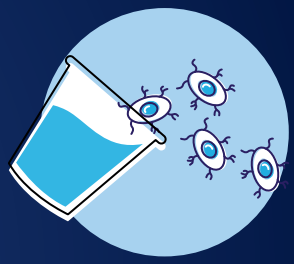
> “ the only stand-alone graft option that offers the three pillars to bone remodeling and healing.[1,2] ”



OSTEOCONDUCTIVE
Provides a three-dimensional framework enabling ingrowth required for new bone formation [1,3]



OSTEOINDUCTIVE
Recruits mesenchymal cells to differentiate into bone forming osetoblasts [1,3]



OSTEOGENIC
Living elements in the graft that synthesize new bone formation[1,3]

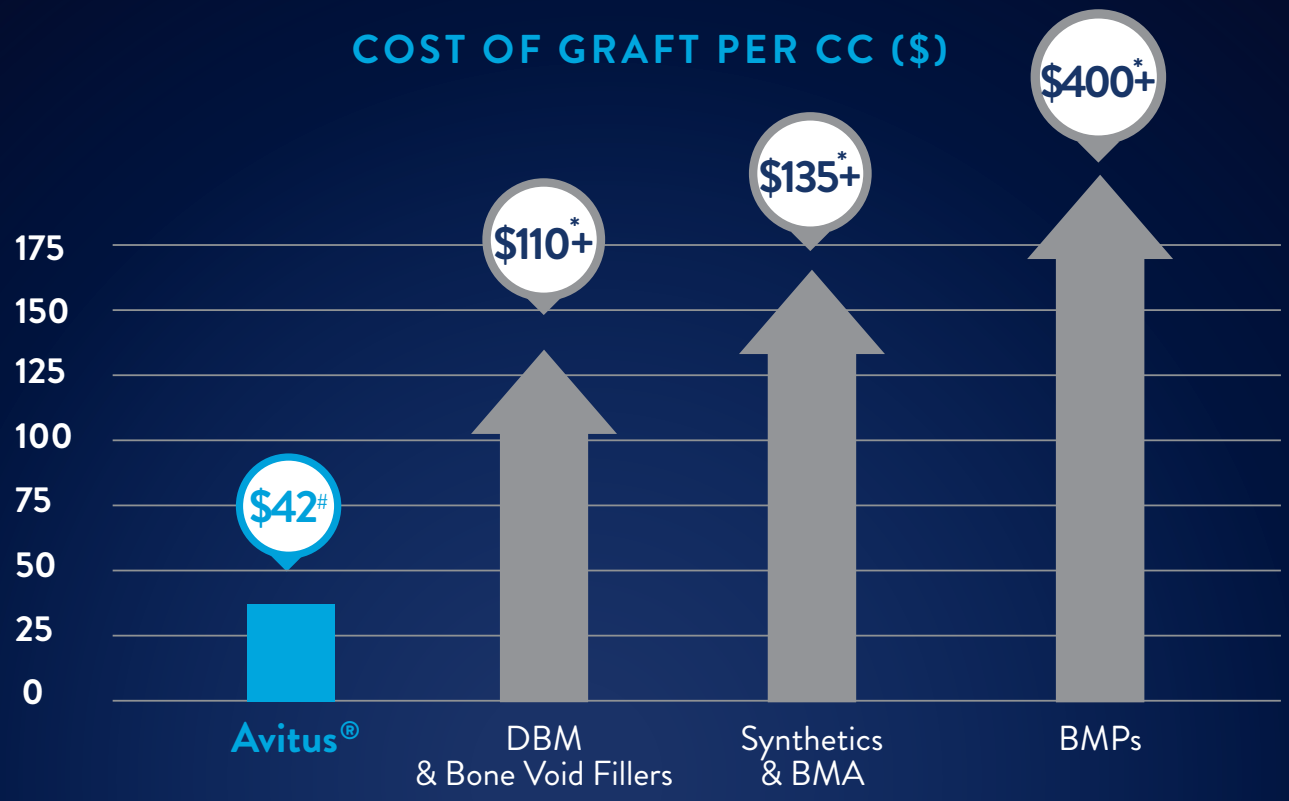
	Avitus® Bone Harvester: Cancellous Bone Autograft	Bone Marrow	Allografts	DBM
Osteoconductive	++++	-	+	+
Osteoinductive	++	+/-	+/-	-
Osteogenic	+++	++	-	-
Immunogenicity	-	-	++	-

Abbreviations: ++++= strongest positive role; +++ = strong positive role; ++ = more positive role; + = weak positive role; - = no role; +/- = may play a role

Table adapted from Zipfel et al. [4]

The Avitus® Bone Harvester equips you with cancellous bone autograft & bone marrow for your patients.

cost savings

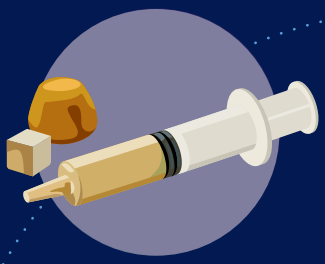


Based on list price and potential harvest volume of cancellous bone by the Avitus® Bone Harvester.

* Based on average cost of 10cc pack of bone graft substitute + average cost of standard jamshidi needle for BMA draw.

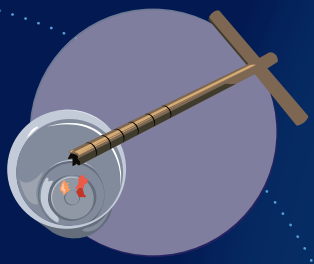
Volume of Biologics Replaced:	With the Avitus® You Save:	Savings Over 10 Cases:	Savings Over 100 Cases:
5cc	$1,050+	$10,500+	$105,000+
10cc	$2,300+	$23,000+	$230,000+
20cc	$5,800+	$58,000+	$580,000+
30cc	$9,300+	$93,000+	$930,000+

your current options aren't cutting it



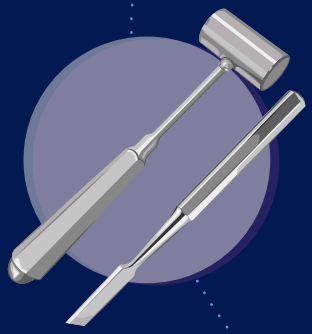
BIOLOGICS

Cost prohibitive
Not autologous bone
No CPT/RVU codes



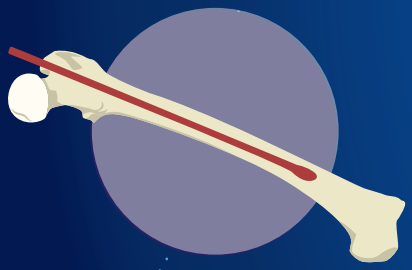
CORING REAMER / TREPHINE

Limited harvest volume of 5cc[5,6]
Services only low volume graft procedures
Cancellous bone harvesting only (cannot replace BMAC)
Additional cost for bone substitutes to extend limited volume



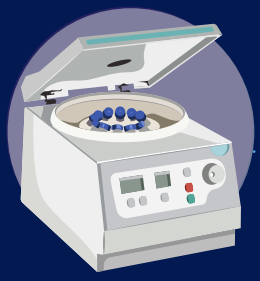
OPEN HARVESTING

Patient Morbidity[10-14]
Increased OR Time - ~35 min[14,15]
Secondary Invasive Incision[10-14]



INTRAMEDULLARY REAMER

Time consuming harvest - ~30 min[7]
Requires irrigation, potentially reducing biologic activity[8]
Services only high volume graft procedures
Lacks liquid marrow component



BMAC & SCAFFOLD

Requires additional cost for scaffold
Inferior to autologous cancellous bone[9]
Leaves the sterile field
Requires additional technician to spin marrow

the avitus® bone harvester

the **only** complete minimally invasive autograft harvesting system

Harvest up to 45cc of autogenous cancellous bone and additional non-diluted bone marrow in 5 minutes or less

Service all procedural applications from large to small

Replace bone substitutes, biologics and associated costs

1.5 cm incision

CONTACT US

sales@avitusortho.com

references

1. Roberts TT et al. (2012). Bone grafts, bone substitutes and orthobiologics: the bridge between basic science and clinical advancements in fracture healing, Osteogenesis, 8(5), 114-124.

2. Hatch, D. (2019). Bone Grafting. Retrieved from https://www.orthobullets.com/basic-science/9011/bone-grafting

3. Greenwald AS et al. (2003). Bone-graft substitutes: Facts, fictions & applications. Presented at the meeting of the American Academy of Orthopaedic Surgeons, February 5-9, 2003.

4. Zipfel GJ et al. (2003). Bone grafting, Neurosurgical Focus FOC, 14(2), 1-8.

5. Caminiti MF et al. (1999). Quantification of Bone Harvested from the Iliac Crest Using a Power-Driven Trephine. Journal of Oral and Maxillofacial Surgery, 57(7), 801–805.

6. Saleh M. (1991). Bone graft harvesting: a percutaneous technique. Journal of Bone and Joint Surgery, 73-B(5), 867-868.

7. Dawson J et al. (2014). The reamer-irrigator-aspirator as a device for harvesting bone graft compared with iliac crest bone graft: union rates and complications. Journal of Orthopaedic Trauma, 28(10), 584-90.

8. Masquelet AC et al. (2012). Harvest of cortico-cancellous intramedullary femoral bone graft using the reamer-irrigator-aspirator (RIA). Orthopaedics & Traumatology Surgery & Research, 98(2), 227-32.

9. Jones E et al. (2010). Large-scale extraction and characterization of CD271+ multipotential stromal cells from trabecular bone in health and osteoarthritis: implications for bone regeneration strategies based on uncultured or minimally cultured multipotential stromal cells. Arthritis Rheum, 62(7), 1944-54.

10. Huang YC et al. (2018). Comparing morbidities of bone graft harvesting from the anterior iliac crest and proximal tibia: a retrospective study. J Orthop Surg Res, 13(1), 115.

11. Dimitriou R et al. (2011). Complications following autologous bone graft harvesting from the iliac crest and using the RIA: a systematic review. Injury, 42(Suppl 2), S3-15.

12. Kurz LT, et al. (1989). Harvesting autogenous iliac bone grafts: A review of complications and techniques. Spine, 14(12), 1324-1331.

13. Kim DH, et al. (2009). Prospective study of iliac crest bone graft harvest site pain and morbidity. Spine, 9(11), 886-892.

14. Conway JD. (2010) Autograft and Nonunions: Morbidity with Intramedullary Bone Graft versus Iliac Crest Bone Graft. Orthopedic Clinics of North America, 41(1), 75–84.

15. Kessler P, et al. (2005). Harvesting of Bone from the Iliac Crest—Comparison of the Anterior and Posterior Sites. British Journal of Oral and Maxillofacial Surgery, 43(1), 51–56.
