Synergy[Resection™] System

Resection Engineered With Biologics in Mind

Arthrex®

PowerPick™ Attachment

Excalibur Shaver Blade

Torpedo™ Shaver Blade

Bone Cutter Shaver Blade

PoweRasp™ Attachment

GraftNet™ Autologous Tissue Collector

The Synergy[Resection™] system offers a wide variety of shaver blades and specialty resection devices to perform a multitude of biological stimulating procedures. When connected to a Synergy[Resection] arthroscopic shaver, the GraftNet device may be used to collect bone, cartilage, or soft tissue from a surgical site. The GraftNet autologous tissue collector makes gaining access to autograft tissue as simple as resect and collect.

BioACL™ Technique

BioACL Technique
Animation

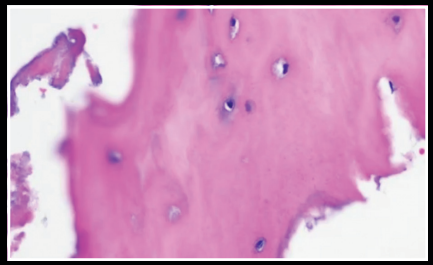
Bone Cutter Shaver Blade

Bone Collection During ACL Reconstruction

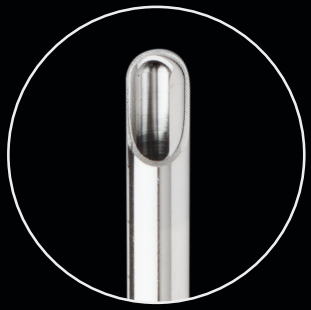
Resect: The Bone Cutter shaver blade is a dual-purpose blade designed for fast and aggressive ACL stump debridement when in oscillation mode and bone removal to prepare the notch when in forward or reverse.

Collect: When performing a notchplasty or drilling tibial and femoral tunnels, the GraftNet™ autologous tissue collector can be used to collect bone to backfill the BTB harvest site or to make a composite graft to prefill ACL tunnels for a BioACL™ procedure.

- Patella grafting decreases anterior knee pain, kneeling pain, and extension loss compared to nongrafted defects[1]



Autograft Bone Collected Using the GraftNet Device



5.5 mm Bone Cutter

GraftNet Autologous Tissue Collector

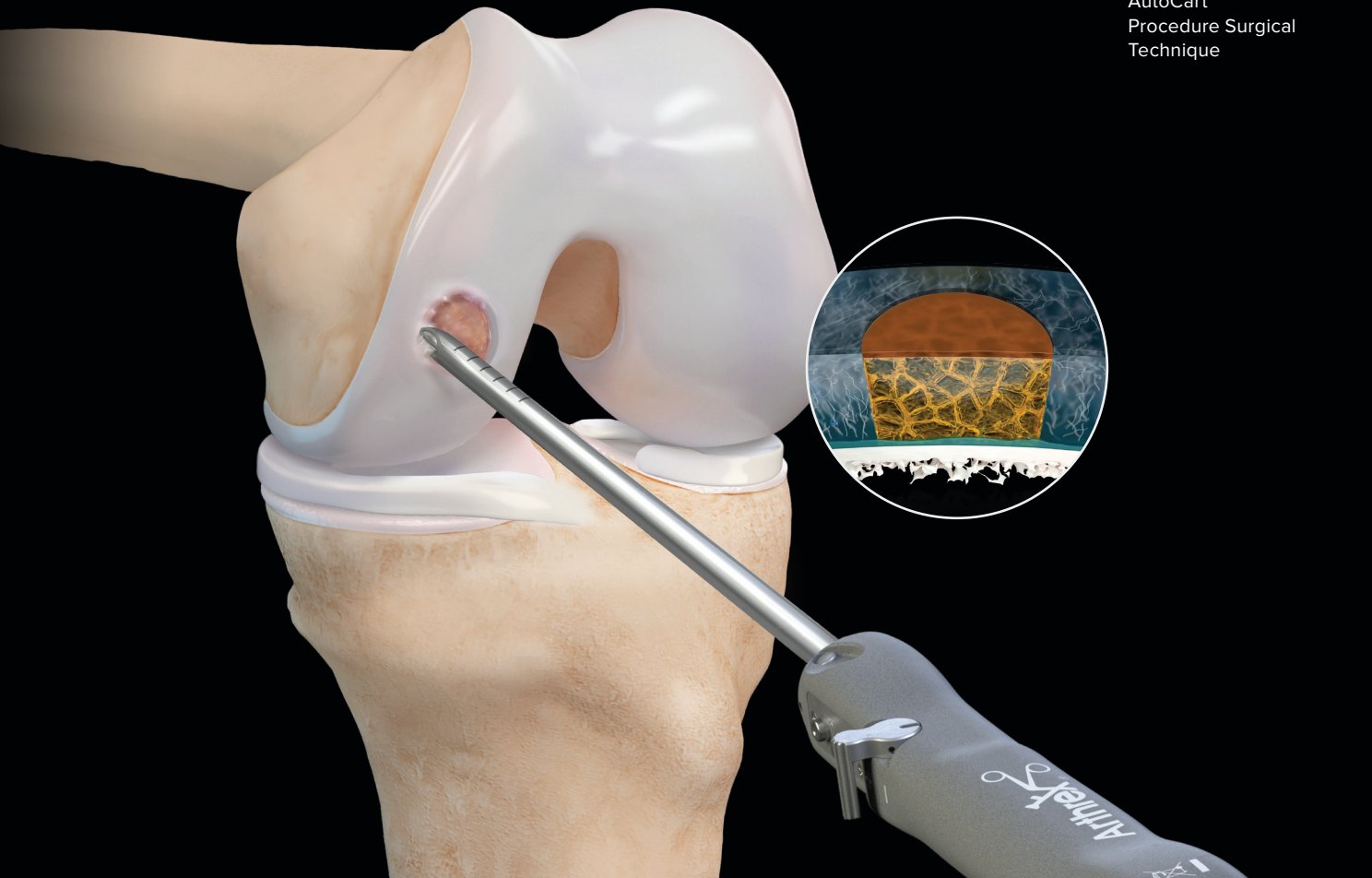
Harvested Bone

Reference

1. Lameire DL, Abdel Khalik H, Zakharia A, Kay J, Almasri M, de Sa D. Bone grafting the patellar defect after bone-patellar tendon-bone anterior cruciate ligament reconstruction decreases anterior knee morbidity: a systematic review. *Arthroscopy*. 2021;37(7):2361-2376.e1. doi:10.1016/j.arthro.2021.03.031.

Stabilizing and Harvesting Articular Cartilage

AutoCart™
Procedure Surgical
Technique



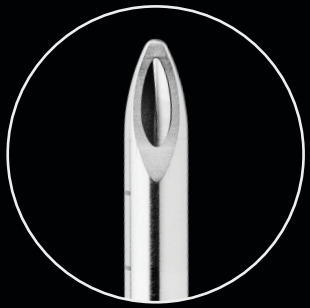
Torpedo™ and Bone Cutter Shaver Blades

Cartilage Repair

Thoroughly cleaning and preparing the cartilage defect is essential for optimum results. The Synergy[Resection™] system has resection attachments for arthroscopic cartilage debridement, harvesting articular cartilage, and marrow-stimulation procedures.

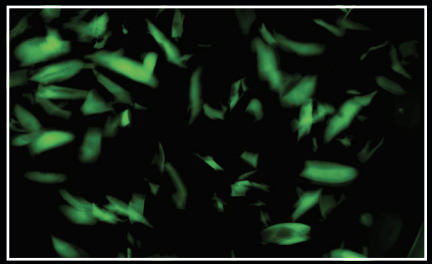
- The Torpedo shaver blade allows easy access into and around the joint space. The smooth window configuration assists in creating stable borders by leaving smooth, stable edges.
- The Bone Cutter's distal tip cuts efficiently, removing the calcified layer and creating a raw subchondral surface before applying microdrilling techniques.

Supports AutoCart™ cartilage repair technique: Both the 4 mm Torpedo and 4 mm Bone Cutter shaver blades harvest medium-sized cartilage particulate while maintaining high cell viability (>80%)[1]

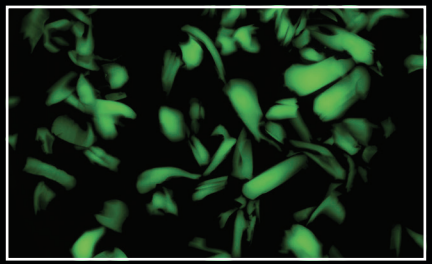


4 mm Torpedo Shaver

4 mm Bone Cutter



4 mm Torpedo Shaver Particulate



4 mm Bone Cutter Shaver Particulate

Reference

1. Arthrex, Inc. LA1-000143-en_US. Naples, FL; 2022.

Microdrilling Cartilage Defects

Microdrilling With the PowerPick™ Device

PowerPick™ XL Attachment

Cartilage Repair

Patient-reported outcomes were significantly improved for those treated with the PowerPick attachment vs conventional chondral picks[1]

Consistent 1.5 mm × 6 mm drill holes

- Additional 2 mm of drill depth compared to standard PowerPick attachments

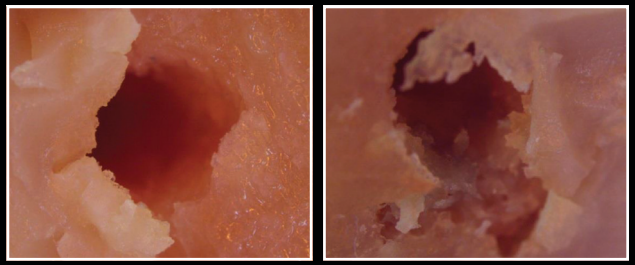
Single-handed technique

- Allows a single-handed technique that takes significantly less time than traditional chondral picks[2]

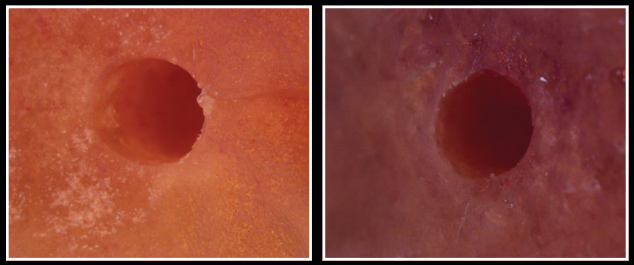
Improved bone marrow stimulation

- Drilling cleanly removes bone, allowing free access channels to the marrow space[3]

PowerPick XL Attachment



Conventional Microfracture



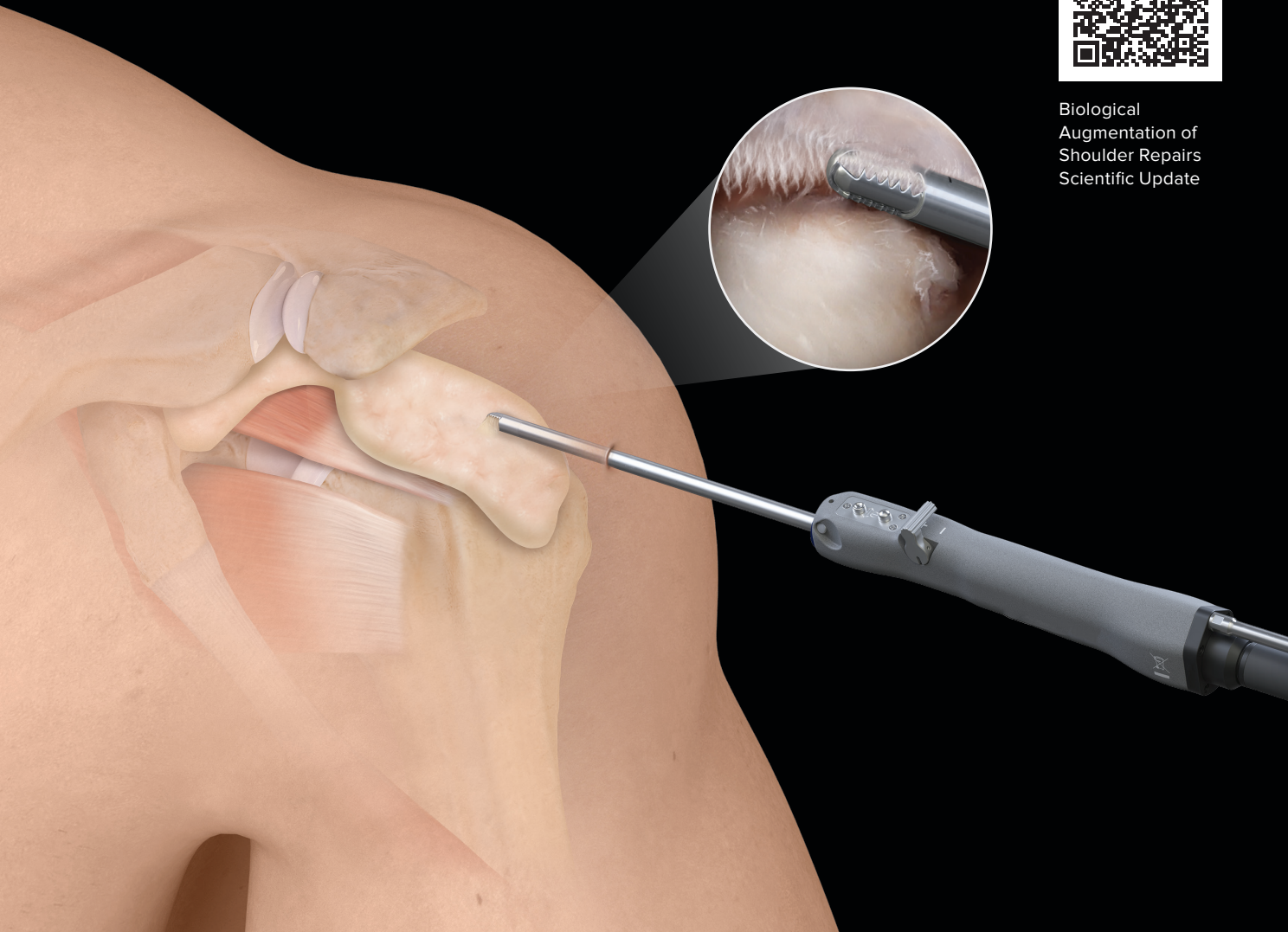
PowerPick Attachment Microdrilling

References

1. Beletsky A, Naveen NB, Tauro T, et al. Microdrilling demonstrates superior patient-reported outcomes and lower revision rates than traditional microfracture: a matched cohort analysis. *Arthrosc Sports Med Rehabil*. 2021;3(3):e629-e638. doi:10.1016/j.asmr.2020.10.006
2. Arthrex, Inc. LA1-00103-EN. Naples, FL; 2018.
3. Kraeutler MJ, Aliberti GM, Scillia AJ, McCarty EC, Mulcahey MK. Microfracture versus drilling of articular cartilage defects: a systematic review of the basic science evidence. *Orthop J Sports Med*. 2020;8(8):2325967120945313. doi:10.1177/2325967120945313

Biological Augmentation of RCR

Biological Augmentation of Shoulder Repairs Scientific Update



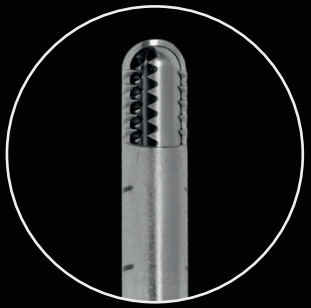
Excalibur Shaver Blade

Biological Augmentation of RCR

Subacromial bursa provides an easily accessed source of cellular tissue progenitor (CTP) cells when performing an arthroscopic RCR.

The sharp-toothed Excalibur blade is our most efficient shaver for extensive soft-tissue debridement that maintains 87% CTP cell viability after harvest.[1]

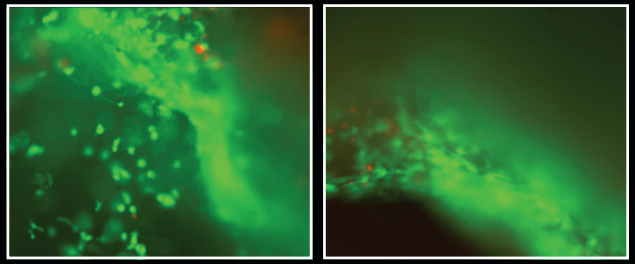
Rotator cuffs augmented with CTP cells from subacromial bursa have shown greater healing potential and lower retear rates compared to those treated without augmentation.[2]



4 mm Excalibur

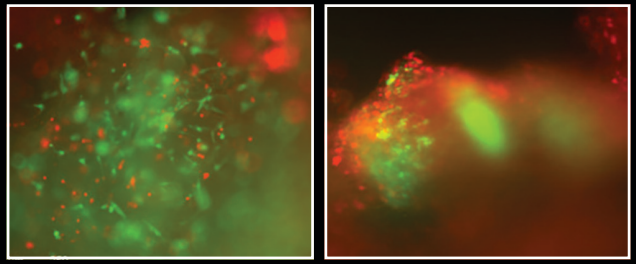
Live/Dead Cell Assay[1]

Excalibur



0 Hours | 3 Weeks

Competitor



0 Hours | 3 Weeks

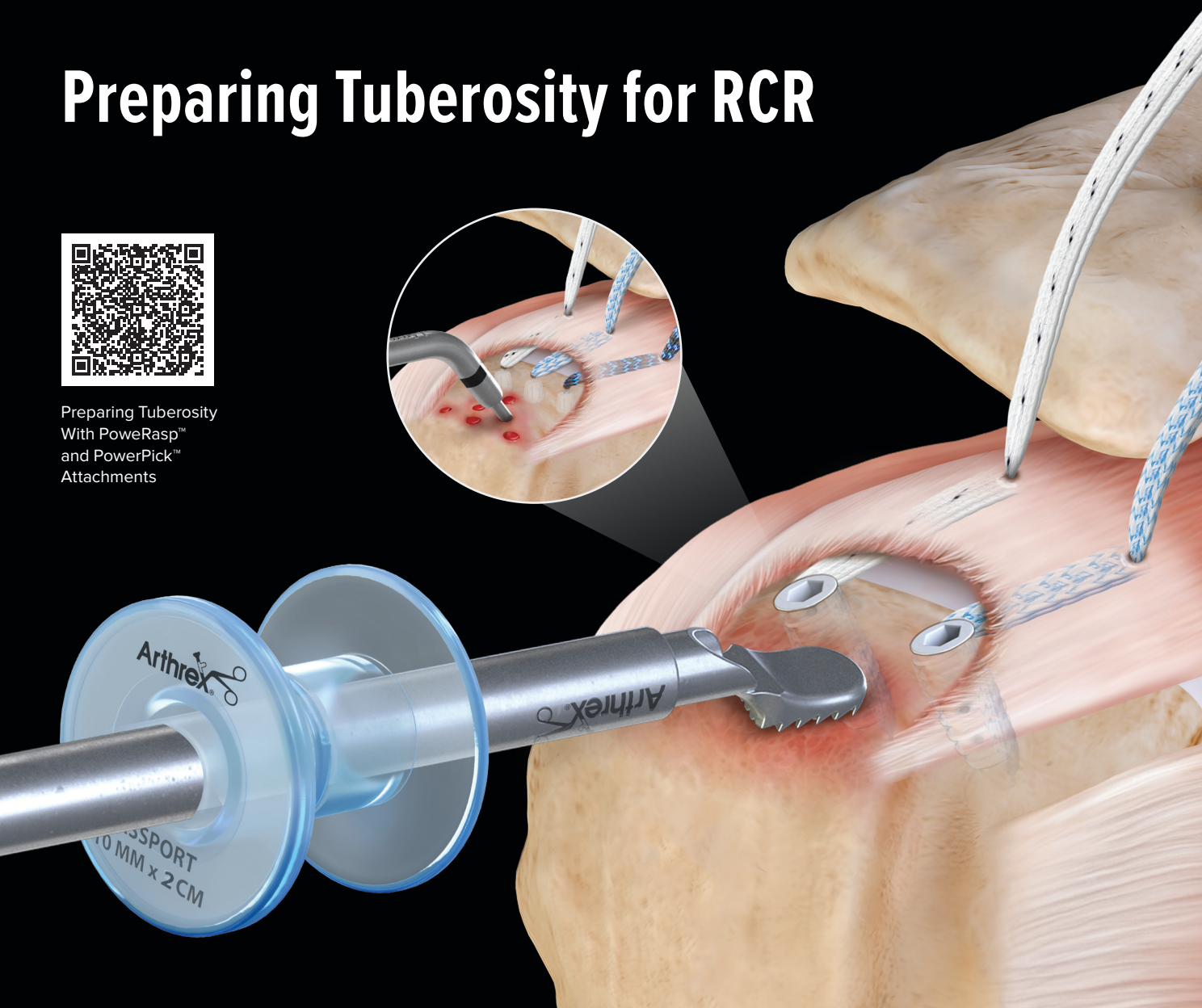
Living cells are labeled with green immunofluorescence while dead cells are labeled with red immunofluorescence.

References

1. Wellington IJ, Hawthorne BC, Messina JC, et al. Efficacy of arthroscopic shavers for the retrieval and processing of connective tissue progenitor cells from subacromial bursal tissue. *J Clin Med.* 2022;11(5):1272. doi:10.3390/jcm11051272
2. Hernigou P, Flouzat Lachaniette CH, Delambre J, et al. Biologic augmentation of rotator cuff repair with mesenchymal stem cells during arthroscopy improves healing and prevents further tears: a case-controlled study. *Int Orthop.* 2014;38(9):1811-1818. doi:10.1007/s00264-014-2391-1

Preparing Tuberosity for RCR

Preparing Tuberosity With PoweRasp™ and PowerPick™ Attachments



PoweRasp™ Attachment for Decortication

Preparing Tuberosity for RCR

With 1.5 mm reciprocating motions, easily prepare the greater tuberosity and superior glenoid for RCR or superior capsule reconstruction.

- Removes osteophytes
- Creates bleeding bone surface to accelerate tendon-to-bone healing
- 1.5 mm reciprocating motion prevents wrapping of healthy soft tissue

PoweRasp Attachment

PowerPick™ Attachment for Microdrilling

Crimson Duvet Procedure

- Bone marrow stimulation decreases retear rate after primary arthroscopic RCR[1]
- Maximizes vascular channels by removing bone rather than compacting
- All-suture, anchor-friendly marrow stimulation technique leaves cortical layer intact

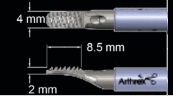
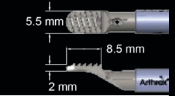
PowerPick Attachment

Reference

1. Ajrawat P, Dwyer T, Almasri M, et al. Bone marrow stimulation decreases retear rates after primary arthroscopic rotator cuff repair: a systematic review and meta-analysis. *J Shoulder Elbow Surg*. 2019;28(4):782-791. doi:10.1016/j.jse.2018.11.049

Ordering Information

PowerPick™ and PoweRasp™ Attachments

	Description	3.5 (Drill depth, mm)	4 (Drill depth, mm)	6 (Drill depth, mm)
	**PowerPick Attachment** Initially designed to make quick work of microfracture procedures by using the shaver handpiece to power the Ø1.5 mm drill tip, the 30° and 45° angled shafts facilitate use in a variety of other applications, including ACL femoral tunnel location and crimson duvet techniques in the shoulder		AR-**8150PP-30** (30°) AR-**8150PP-45** (45°)	AR-**8150PX-45** (45°)
	**PoweRasp Attachment** Use for acromioplasties, distal clavicle resections, preparing the greater tuberosity, notchplasties, osteophyte resection, and other bony work	AR-**8350PR** 	AR-**8400PR** 	AR-**8550PR** 

Large Hub Options: Fit Large Shaver Handpieces

	Description	3.5 (Ø mm)	3.8 (Ø mm)	4 (Ø mm)	4.2 (Ø mm)	5 (Ø mm)	5.5 (Ø mm)
	**Excalibur** Sharp-toothed blade makes this the most aggressive shaver for extensive soft-tissue debridement		AR-**8380EX**	AR-**8400EX** AR-**8400CEX** (curved)	AR-**6420EX** AR-**6420CEX**[1]	AR-**8500EX**	AR-**8550EX**
	**Torpedo™ Blade** Tapered tip and scissor-like cutting action allow easy access into joint space and rapid soft-tissue resection; outer oval window to limit tissue size and help reduce clogging	AR-**7350TD**[2]		AR-**7400TD** AR-**8400TD** AR-**8400CTD** (curved)	AR-**6420TD** AR-**6420CTD**[1]	AR-**8500TD**	
	**Bone Cutter** Dual-purpose blade designed for fast and aggressive tissue debridement when in oscillation mode and for bone removal when run in the forward or reverse direction		AR-**8380BC**	AR-**8400BC** AR-**8400CBC** (curved)	AR-**6420BC** AR-**6420CBC**[1]	AR-**8500BC**	AR-**8550BC**

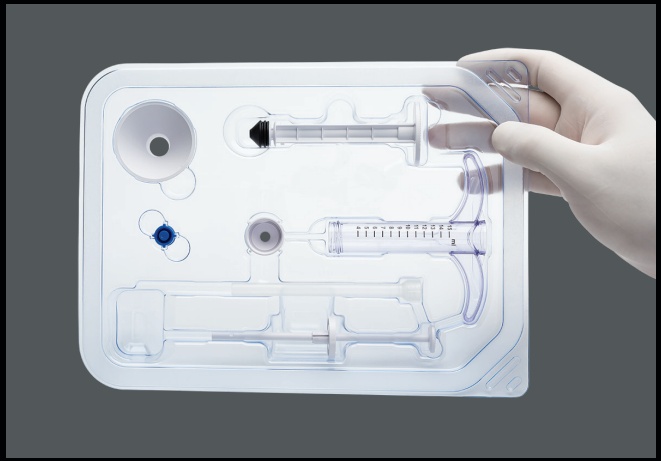
1. Hip length (19 cm), curved
2. Small joint length (7 cm), large hub

GraftNet™ Autologous Tissue Collector

Product Description	Item Number
GraftNet autologous tissue collector	ABS-**1050**

Optional Accessories

Product Description	Item Number
Mixing and delivery kit, large joint	ABS-**1000-L**
Mixing and delivery kit, small joint	ABS-**1000-S**
Mixing and delivery kit, hip joint	ABS-**1000-H**



BioXpress™ Graft Delivery Device

Product Description	Item Number
Blunt-tip cannula, 10 cm	ABS-**10053-10**
Angled-tip cannula, 10 cm	ABS-**10053-10-45**
Blunt-tip cannula, 15 cm	ABS-**10053-15**
Angled-tip cannula, 15 cm	ABS-**10053-15-45**

arthrex.com

Arthrex®