

NanoNeedle Scope

Arthroscopy System



Arthrex®





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The Next Generation of Nano Arthroscopy Is Here

The state-of-the-art NanoNeedle Scope Operative Arthroscopy System uses high-quality, chip-on-tip, image-sensor technology to provide surgeons with a needle-sized, single-use camera system. Using the portable imaging system, the surgeon can choose minimally invasive arthroscopy in the operating room using the NanoScope™ system as the main camera or as an adjunct to a traditional camera in a treatment room or in the physician's office.

A pioneer in Nano arthroscopy, Arthrex has created the next generation of needle scope visualization systems.

Designed to be a significant improvement in surgical imaging ergonomics and visualization quality, the NanoNeedle Scope is an alternative to MRI imaging and second-look arthroscopy.

NanoNeedle Visualization System

The NanoNeedle Visualization System is a medical-grade, 3-in-1, chip-on-tip disposable camera system. With an intuitive tablet control unit, the system features the latest technologies in 1 mm imaging sensors, LED lighting, image management, and OR integration. A network-based system allows for bidirectional communication to your facility EHR, PACS, Synergy Surgeon™ app, and SurgeonVault® system.

NanoScope™ Console Specifications

- › Medical-grade camera control unit and camera card edge
- › 13", 3-in-1 camera control unit
- › Network capabilities to connect to facility's EHR, PACS, and Synergy Surgeon app
- › Built-in microphone for video dictation
- › HDMI output to extend the video signal to in-room displays and integration systems
- › Printing capabilities and brightness adjustment

Synergy Vision™ Console Specifications

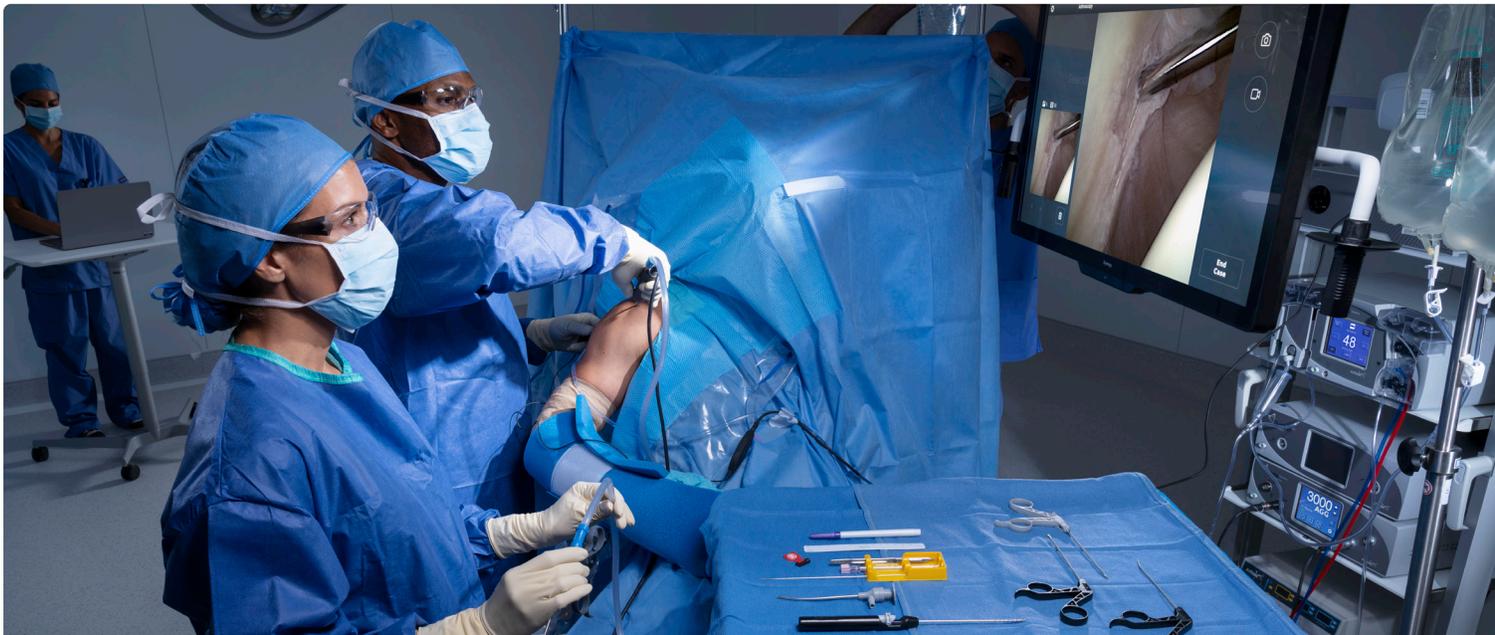
- › Medical-grade camera control unit and camera card edge
- › 32" HDR surgical display
- › Network capabilities to connect to facility's EHR, PACS, and Synergy Surgeon app

NanoNeedle Scope 1.0

- › 400 × 400 resolution with 120° field of view
- › 5 mm × 50 mm depth of field
- › 125 mm, 180 mm, and 250 mm lengths
- › Compatible with NanoScope console and Synergy Vision console

NanoNeedle Scope 2.0

- › 720 × 720 resolution with 120° field of view
- › 5 mm × 50 mm depth of field
- › 125 mm, 180 mm, and 250 mm lengths
- › Compatible with Synergy Vision console



Economic Impact

Nano arthroscopy is a cost-effective alternative to standard arthroscopy. A single-use camera component eliminates procedure delays due to equipment cleaning, processing, and sterilization without costly maintenance, repairs, or upgrades related to traditional video stacks.

The minimally invasive approach and unlimited access to joint spaces make the Nano Arthroscopy System the instrument of choice for less invasive arthroscopic procedures.



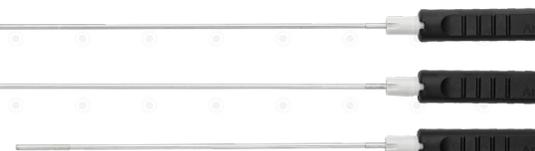
NanoScope™ Console Tablet Control

Unit Components (a)

- > 13 in HD monitor
- > Handpiece connector
- > Microphone
- > Ethernet, USB, and HDMI ports

NanoNeedle Scope Standard Lengths

- > 125 mm
- > 180 mm
- > 250 mm



(a)

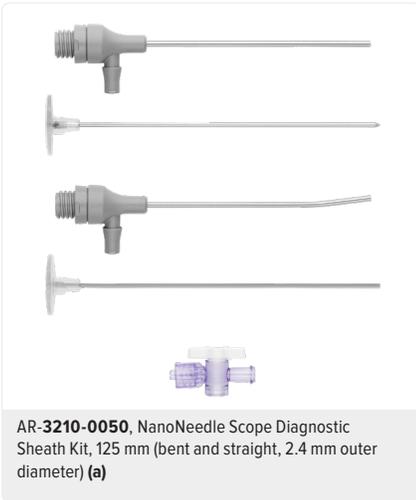
NanoScope Console Cart
(height adjustable with power supply and cable-management features)

Synergy Vision™ console	AR-3200-0026
Synergy Vision connect console	AR-3200-0027
NanoNeedle Scope, 125 mm, single use	AR-3210-0043
NanoNeedle Scope, 180 mm, single use	AR-3210-0044
NanoNeedle Scope, 250 mm, single use	AR-3210-0045
NanoNeedle Scope 2.0, 125 mm, single use	AR-3210-0070
NanoNeedle Scope 2.0, 180 mm, single use	AR-3210-0071
NanoNeedle Scope 2.0, 250 mm, single use	AR-3210-0072
NanoScope tablet control unit	AR-3200-0030
Mobile cart (a)	AR-3502-CRT
NanoScope console battery supply replacement	150-0012-00-A
Monitor secondary stand	TP.5121.999
Monitor shelf w/ hardware	NT.4100.991
27 in LG display for secondary cart	27HQ710S
NanoScope probe	AR-10100N
Graduated black probe, reusable, 2.5 mm tip	AR-5007

NanoNeedle Scope Sheath and Access Kits

Introducing the NanoNeedle Scope Sheath and Access Kits, available in both low- and high-flow sheath options and a variety of lengths based on the area of use and applications. These comprehensive kits integrate seamlessly with FiberTak® anchors and can be ordered separately from the NanoNeedle Scope.

The Nano high-flow sheath kits have been designed to revolutionize saline usage compared to conventional scopes, ensuring optimal visualization and maneuverability with shavers and suction devices. A recent internal study found that it is possible to maintain pressure and enhance visualization with much less saline. This innovation has expanded the use of Nano arthroscopy in surgeries beyond diagnostics, reducing soft-tissue disruption and fluid distention and greatly improving patient outcomes.¹

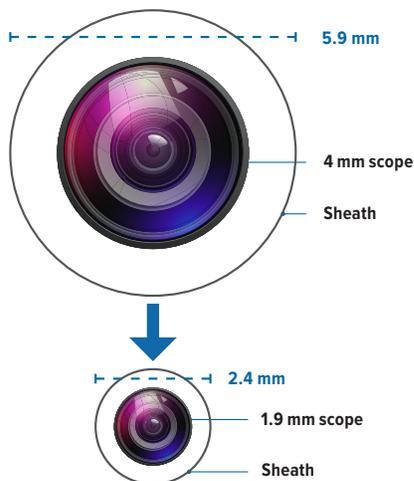


NanoNeedle Scope Diagnostic Sheath Kit, 125 mm (bent and straight, 2.4 mm outer diameter) (a)	AR-3210-0050
NanoNeedle Scope High-Flow Operative Sheath Kit, 125 mm (bent and straight, 3.3 mm outer diameter) (b)	AR-3210-0051
NanoNeedle Scope High-Flow Operative Sheath Kit (w/ crown tip and fenestration), 125 mm	AR-3210-0052
NanoNeedle Scope Sheath Kit (high-flow access kit w/ spinal needle and guidewire), 125 mm	AR-3210-0053
NanoNeedle Scope Diagnostic Sheath Kit, 180 mm (bent and straight, 2.4 mm outer diameter)	AR-3210-0054
NanoNeedle Scope High-Flow Operative Sheath Kit, 180 mm	AR-3210-0055
NanoNeedle Scope Sheath Kit (diagnostic hip access kit w/ spinal needle and guidewire), 180 mm	AR-3210-0056
NanoNeedle Scope Sheath Kit (high-flow hip access kit w/ spinal needle and guidewire), 180 mm	AR-3210-0057
NanoNeedle Scope High-Flow Operative Sheath Kit (w/ crown tip and fenestration), 180 mm	AR-3210-0058
NanoNeedle Scope working cannula, 5 cm (c)	AR-3210-0059
NanoNeedle Scope working cannula, 1.5 cm (d)	AR-3210-0063
Nano Arthroscopy Percutaneous Insertion Kit (includes calibrated spinal needle-stylet and 17 ga guidewire for direct cannula insertion)	AR-1090PK-1
Portal skid	AR-4505
PassPort Button Cannula, 8 mm ID × 3 cm, w/ auxiliary lumen, qty. 1	AR-6592-08-30A
PassPort Button Cannula, 8 mm ID × 4 cm, w/ auxiliary lumen, qty. 1	AR-6592-08-40A
PassPort Button Cannula, 8 mm ID × 5 cm, w/ auxiliary lumen, qty. 1	AR-6592-08-50A

Diameter Comparison

(considering diagnosis inflow of cannula/sheath)

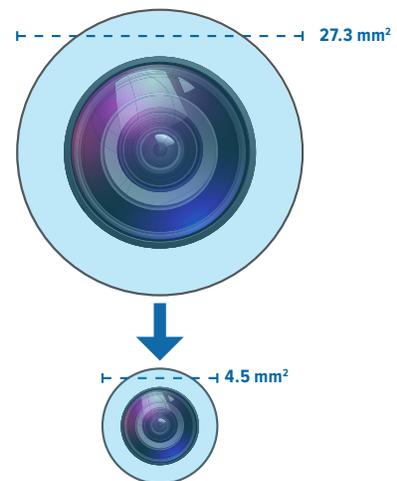
The diameter of the NanoNeedle Scope is 59% smaller than that of a conventional 4 mm arthroscope, taking the inflow cannula/sheath into account.



Invasive Area Comparison

(considering diagnosis inflow of cannula/sheath)

The diameter of the NanoNeedle Scope is 84% smaller than that of a conventional 4 mm arthroscope, taking the inflow cannula/sheath into account.





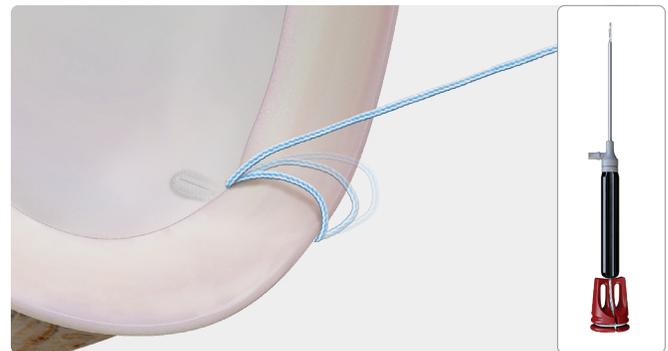
NanoNeedle Scope FiberTak® Anchor Integrated Sheath Guide

Explore the first fully specialized sheath from Arthrex, designed to offer direct visualization of anchor insertion and placement during arthroscopic procedures. Anchor insertion can be achieved using the Nano integrated sheath guides.

Arthrex offers two specialized guides—sized and calibrated to ensure an accurate depth stop for FiberTak anchor insertion—to accommodate distal extremity and shoulder procedures.



Nano FiberTak Handle for DEX

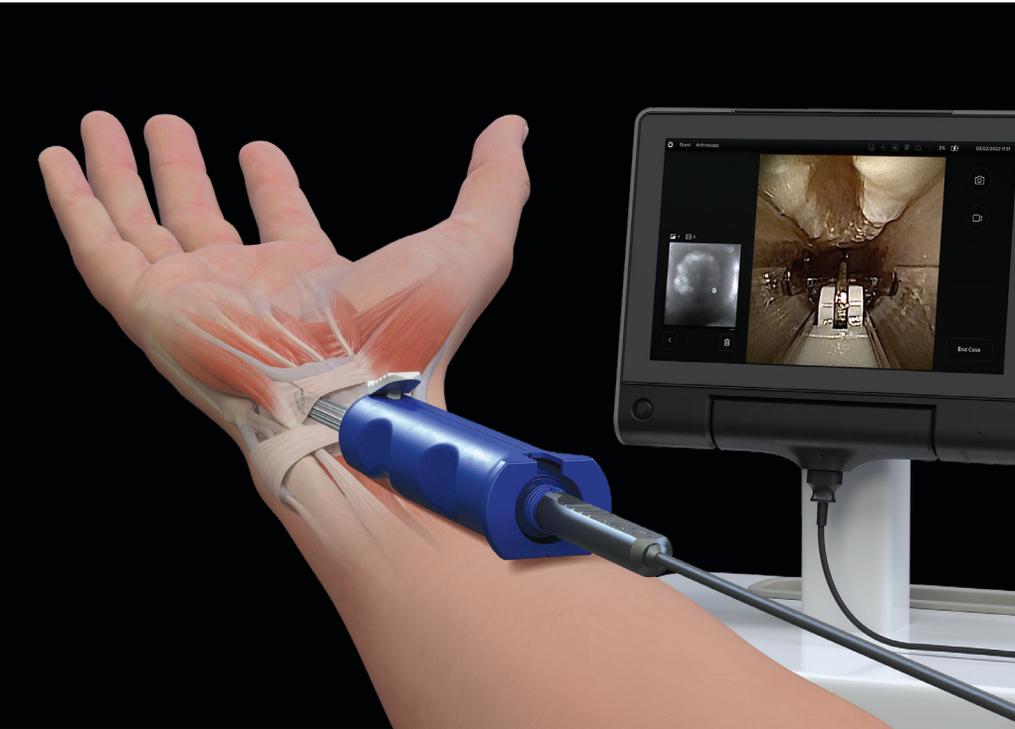


Nano FiberTak Handle for Shoulder

DX Knotless FiberTak anchor	AR-8991
Shoulder FiberTak anchor	AR-3636
NanoNeedle Scope High-Flow Operative Sheath Kit (w/ crown tip and fenestration), 125 mm	AR-3210-0052
Nano 1.8 FiberTak handle, shoulder	AR-3210-0060
Nano 1.8 FiberTak handle, DEX	AR-3210-0061

NanoScopic™ Carpal Tunnel Release System

A simplified, all-in-one system, the NanoScopic carpal tunnel release system streamlines ECTR procedures. Designed for precision and efficiency, this disposable system facilitates a straightforward, single-handed, pull-blade technique that enables a quick and exact procedure, while offering an ergonomic design for maximized comfort and an enhanced feel and function during the procedure.



Revolutionizing Arthroscopy

From the operating room to the procedure room, experience the latest innovation in carpal tunnel release with the NanoScopic system.

This revolutionary system promotes a faster procedural experience with ease, convenience, and mobility. Key highlights of the system include:

- > No trays and sterilization
- > No light guide
- > No coupler
- > No heat
- > No fogging

Increase your case volume with the mobility of the NanoScopic disposable release system.



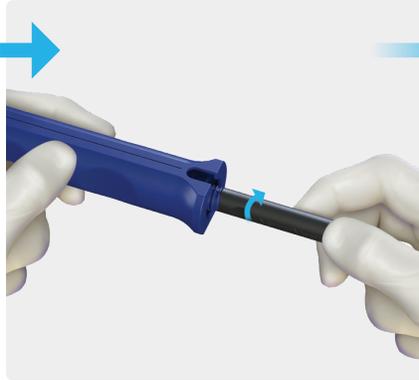
(a)



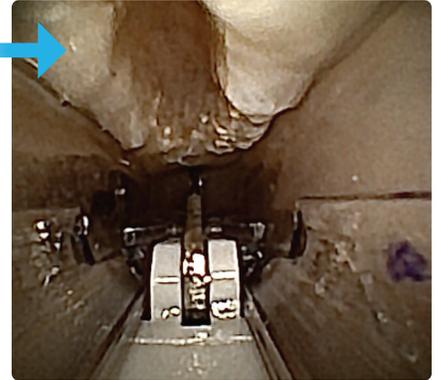
Load



Latch



Release



NanoScopic™ carpal tunnel release kit (a)

AR-8850DS

Bender

AR-4585

Nano Arthroscopy 2 mm Instrumentation

Harnessing 20 years of engineering excellence in designing arthroscopic hand instrumentation, Arthrex has produced the next generation of tissue resection and extraction instruments that are sharp and strong enough to resect and remove meniscal tissue.

Additionally, Arthrex engineered the smallest-diameter arthroscopic instrumentation for meniscal resection at just 2 mm in diameter. Nano instrumentation provides greater access for treating the most challenging pathology without sacrificing resection efficiency.

Knee, Hip, and Shoulder Nano Instrumentation, 130 mm Shaft Length, Single-Use Sterile Pack and Reusable Pack

NanoGrasper, straight, 130 mm, disposable (single pack)	AR-10913D-1
NanoScissor, straight, 130 mm, disposable (single pack)	AR-10915D-1
NanoBiter, straight, 130 mm, disposable (single pack)	AR-10911D-1
NanoBiter, 15° up, 130 mm, disposable (single pack)	AR-10922D-1
NanoBiter straight tip, 130 mm straight shaft, bendable, w/ FlushPort (reusable) (a)	AR-10911F-1
NanoGrasper straight tip, 130 mm straight shaft, bendable, w/ FlushPort (reusable) (b)	AR-10913F-1
NanoRetriever tip, 130 mm straight shaft, bendable, w/ FlushPort (reusable) (c)	AR-10914F-1
NanoScissor tip, 130 mm straight shaft, bendable, w/ FlushPort (reusable) (d)	AR-10915F-1
Nano BirdBeak® retriever tip, 130 mm straight shaft, bendable, w/ FlushPort (reusable) (e)	AR-10916F-1
Nano BirdBeak grasper tip, 130 mm straight shaft, bendable, w/ FlushPort (reusable) (f)	AR-10917F-1
NanoBiter straight tip, 130 mm straight shaft, bendable, w/ FlushPort (5-pack, reusable)	AR-10911F
NanoGrasper straight tip, 130 mm straight shaft, bendable, w/ FlushPort (5-pack, reusable)	AR-10913F
NanoRetriever tip, 130 mm straight shaft, bendable, w/ FlushPort (5-pack, reusable)	AR-10914F
NanoScissor tip, 130 mm straight shaft, bendable, w/ FlushPort (5-pack, reusable)	AR-10915F
Nano BirdBeak retriever tip, 130 mm straight shaft, bendable, w/ FlushPort (5-pack, reusable)	AR-10916F
Nano BirdBeak grasper tip, 130 mm straight shaft, bendable, w/ FlushPort (5-pack, reusable)	AR-10917F
Nano arthroscopy SafeCut™ blade (5-pack) (g)	AR-6527-07N
Nano arthroscopy SafeCut blade (single pack)	AR-6527-07N-1
Bending tool	AR-10900



NanoBiter Straight Tip **(a,h)**



NanoGrasper Straight Tip **(b,i)**



NanoRetriever Tip **(c,j)**



NanoScissor Tip **(d,k)**



Nano BirdBeak Retriever Tip **(e,l)**



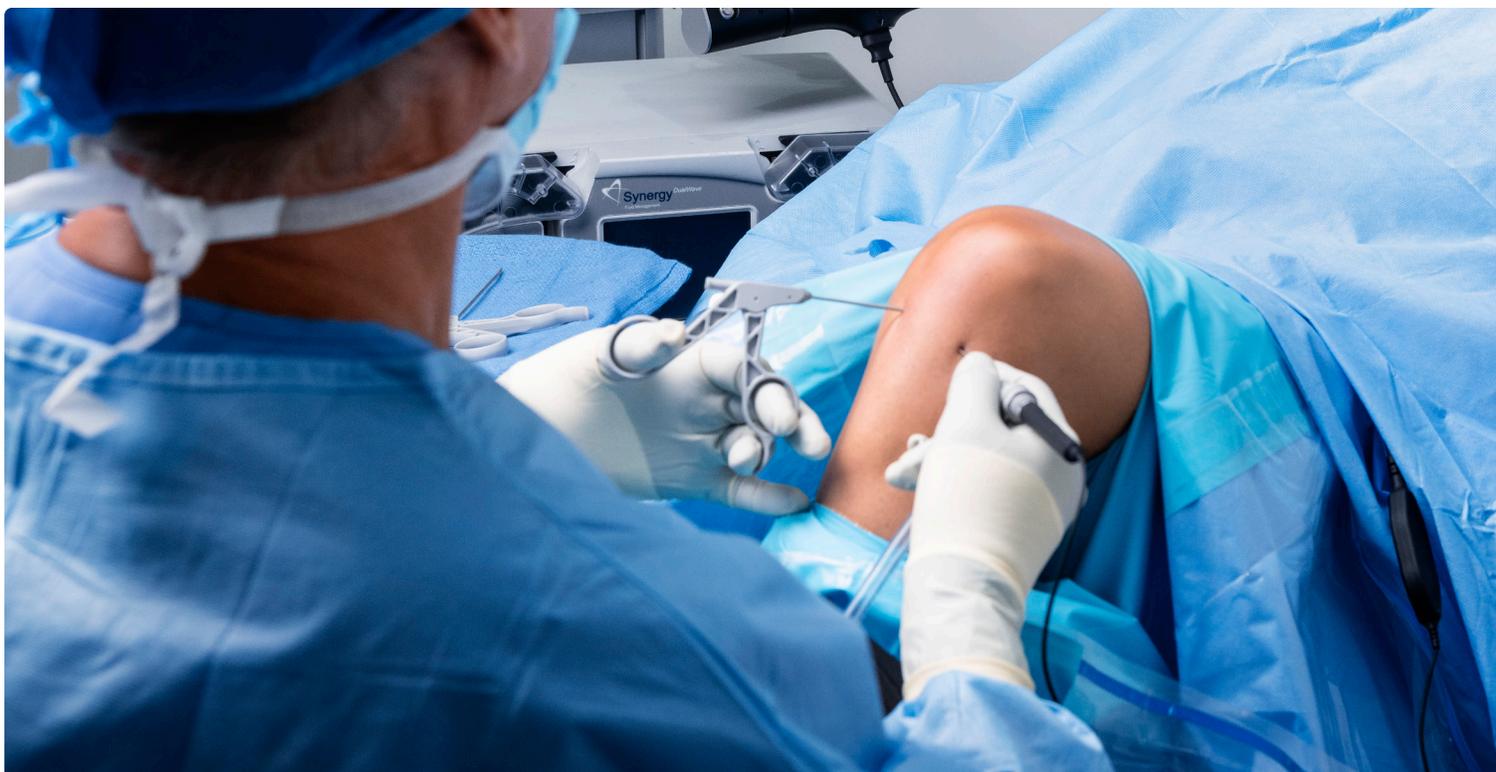
Nano BirdBeak Grasper Tip **(f,m)**



Nano arthroscopy SafeCut blade **(g)**

Small Joint Nano Instrumentation, 70 mm Shaft Length, Single-Use Sterile Pack and Reusable Pack

NanoBiter, straight, 70 mm, disposable (single pack)	AR-10901D-1
NanoBiter, 15° up, 70 mm, disposable (single pack)	AR-10902D-1
NanoGrasper, straight, 70 mm, disposable (single pack)	AR-10903D-1
NanoScissor, straight, 70 mm, disposable (single pack)	AR-10905D-1
NanoBiter straight tip, 70 mm straight shaft, bendable, w/ FlushPort (reusable) (h)	AR-10901F-1
NanoGrasper straight tip, 70 mm straight shaft, bendable, w/ FlushPort (reusable) (i)	AR-10903F-1
NanoRetriever tip, 70 mm straight shaft, bendable, w/ FlushPort (reusable) (j)	AR-10904F-1
NanoScissor tip, 70 mm straight shaft, bendable, w/ FlushPort (reusable) (k)	AR-10905F-1
Nano BirdBeak® retriever tip, 70 mm straight shaft, bendable, w/ FlushPort (reusable) (l)	AR-10906F-1
Nano BirdBeak grasper tip, 70 mm straight shaft, bendable, w/ FlushPort (reusable) (m)	AR-10907F-1
NanoBiter straight tip, 70 mm straight shaft, bendable, w/ FlushPort (reusable), 5-pack	AR-10901F
NanoGrasper straight tip, 70 mm straight shaft, bendable, w/ FlushPort (reusable), 5-pack	AR-10903F
NanoRetriever tip, 70 mm straight shaft, bendable, w/ FlushPort (reusable), 5-pack	AR-10904F
NanoScissor tip, 70 mm straight shaft, bendable, w/ FlushPort (reusable), 5-pack	AR-10905F
Nano BirdBeak retriever tip, 70 mm straight shaft, bendable, w/ FlushPort (reusable), 5-pack	AR-10906F
Nano BirdBeak grasper tip, 70 mm straight shaft, bendable, w/ FlushPort (reusable), 5-pack	AR-10907F
Bending tool	AR-10900



2.8 mm Nano Suction Punches

Ideal for Nano arthroscopy, the Nano suction punch allows surgeons to achieve optimal resection and aspiration. Available in 2 sizes with 3 different cutting window configurations, this device can rotate 360° for up, side, or down window resection.

Reusable and autoclavable, the Nano suction punch can accommodate all joints, from shoulder to wrist applications. Moreover, the Nano suction punch integrates with the GraftNet™ device to collect aspirated tissue, making it ideal for tissue biopsies, AutoCart™ procedures, and autograft biologic augmentation.



Flat Tip (a, d)



Scoop Tip (b, e)



Bullet Tip (c, f)

Nano suction punch, 70 mm flat tip (a)	AR-10920F-1
Nano suction punch, 70 mm scoop tip (b)	AR-10921F-1
Nano suction punch, 70 mm bullet tip (c)	AR-10922F-1
Nano suction punch, 130 mm flat tip (d)	AR-10930F-1
Nano suction punch, 130 mm scoop tip (e)	AR-10931F-1
Nano suction punch, 130 mm bullet tip (f)	AR-10932F-1

Nano Bone Prep Instrumentation

With the bone prep instrumentation line, surgeons have the instrumentation necessary to complete efficient and effective microfracture and small bony work. Nano arthroscopy, a line that will continue to expand, can help surgeons grow their minimally invasive practices.

Key Features and Benefits

- › **Bendability:** Contour with the Nano reusable bending tool
- › **Sharpness:** Single-use instruments will always be sharp and precise
- › **Size:** 2 lengths (7 cm and 10 cm) ergonomically designed for expanded applications

Technical Pearls

- › **Compatibility:** Low-profile tools pair with AutoCart™ surgical technique for chondrocyte transplantation
- › **Efficiency:** Compatible with the Nano Sabre shaver (AR-9280NSR) and GraftNet™ device with BioCartilage® allograft

Nano Bone Prep Instrumentation (7 cm or 10 cm), Single-Use Sterile Pack

30° chondral pick, 7 cm	AR-1091CP-70-1
30° chondral pick, 10 cm	AR-1091CP-100-1
30° chondral pick, 7 cm (5-pack)	AR-1091CP-70
30° chondral pick, 10 cm (5-pack) (a)	AR-1091CP-100
Cup curette, 7 cm	AR-1091CC-70-1
Cup curette, 10 cm (b)	AR-1091CC-100-1
Cup curette, 7 cm (5-pack)	AR-1091CC-70
Cup curette, 10 cm (5-pack)	AR-1091CC-100
Ring curette, 7 cm	AR-1091RC-70-1
Ring curette, 10 cm (c)	AR-1091RC-100-1
Elevator, 7 cm	AR-1091E-70-1
Elevator, 10 cm (d)	AR-1091E-100-1



30° chondral pick, 10 cm **(a)**



Cup curette, 10 cm **(b)**



Ring curette, 10 cm **(c)**



Elevator, 10 cm **(d)**

NanoResection™ Small-Hub Shaver Handpiece Blade and Burr Options

NanoResection small-hub shaver handpiece, blades, and burrs allow for efficient minimally invasive tissue resection and debridement. Low-profile tips facilitate safe introduction into most tight joint spaces without a limb holder.

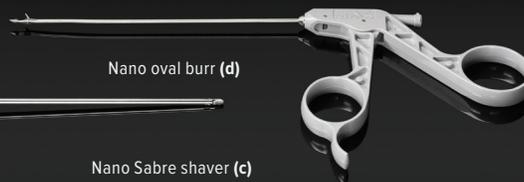
The foot-control shaver handpiece is a high-speed, high-torque accessory, and the small diameter and light weight of the handpiece and blades make the Synergy^{Resection™} system one of the most versatile resection tools available.



NanoBiter retriever tip, 70 mm bendable straight shaft w/ FlushPort



NanoBiter grasper tip, 130 mm bendable straight shaft w/ FlushPort



Nano oval burr (d)



Nano Sabre shaver (c)



NanoResection small-hub shaver handpiece (b)



Apollo^{RF} SJ50 probe (h)



NanoNeedle Scope, 125 mm



Synergy ^{Resection™} console (a)	AR-8305
NanoResection™ small-hub shaver handpiece (b)	AR-8330SJ
Nano Sabre shaver (c)	AR-9280NSR
Nano oval burr (d)	AR-9280NOT
ASP II footswitch, standard	AR-8310
Synergy ^{Resection} wireless footswitch kit (e)	AR-8315W
Corded gas pedal footswitch	AR-8315C
Synergy ^{RF™} console (f)	AR-9800
Synergy ^{RF} foot pedal (g)	AR-9800-F
Apollo ^{RF®} SJ50 probe (h)	AR-9845
Large-hub shaver handpiece, hand control	AR-8332H
3.5 mm dissector blade	AR-8350DS



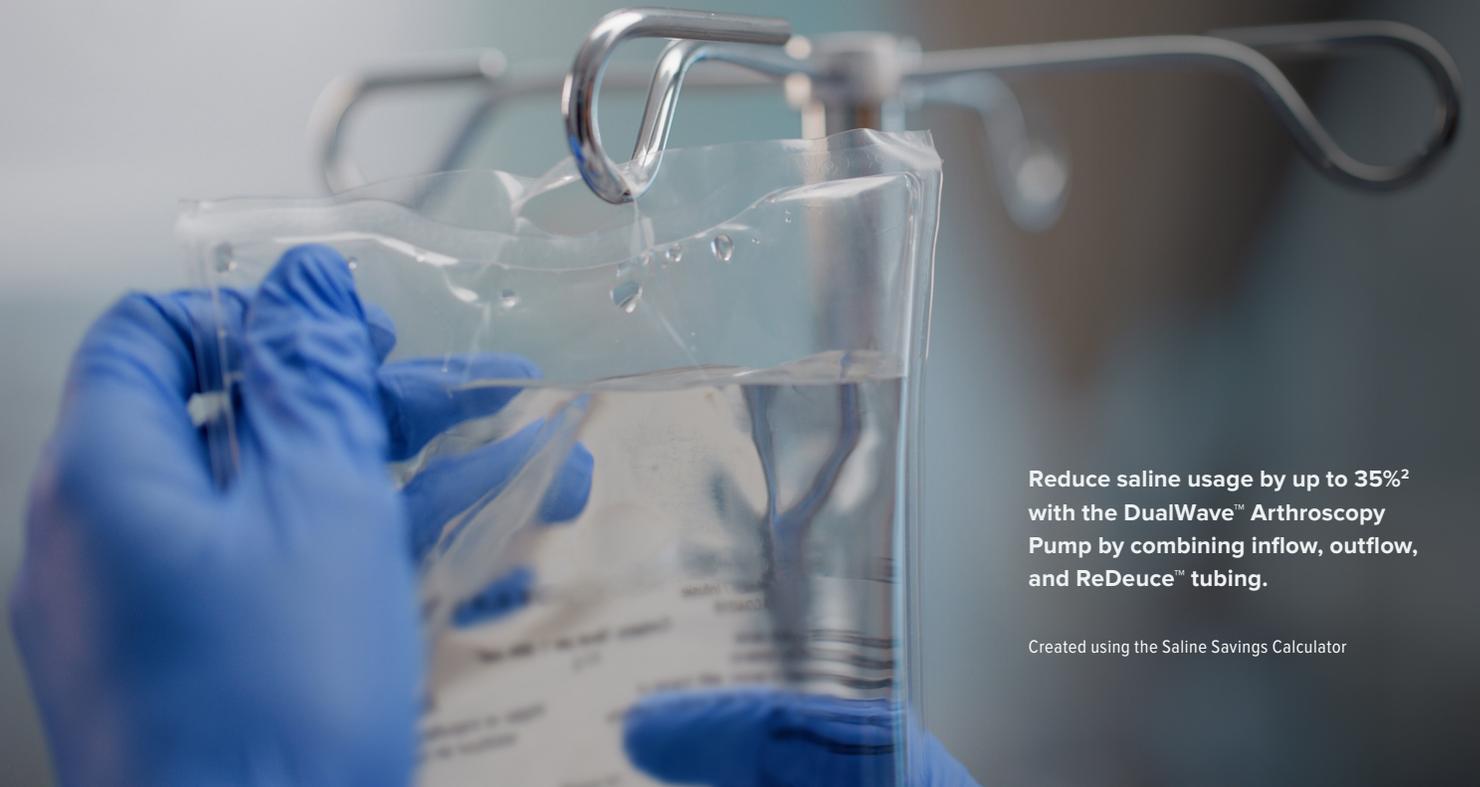
Fluid Management

Arthrex has a comprehensive portfolio of powered resection and fluid management products with options for all procedure types and settings. From controlling distention during complex arthroscopic procedures to providing simple gravity flow during office procedures, Arthrex is dedicated to offering unique solutions for safe and reliable joint distention, tissue resection, and small-profile visualization with Nano arthroscopy in the OR or treatment room.



DualWave Outflow Tubing (b)

DualWave™ Arthroscopy Pump (a)

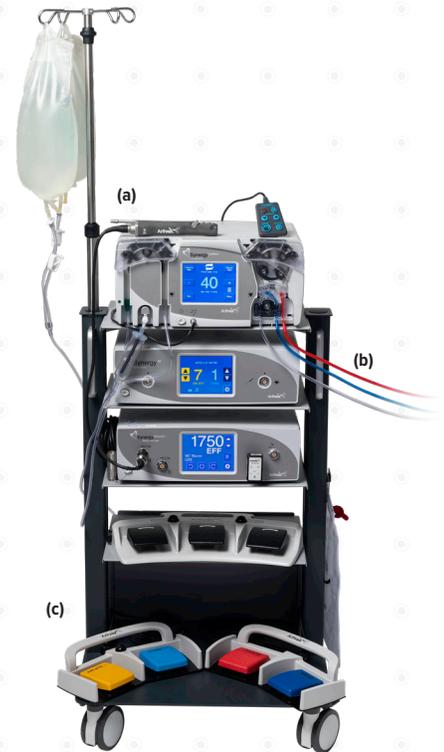


Reduce saline usage by up to 35%² with the DualWave™ Arthroscopy Pump by combining inflow, outflow, and ReDeuce™ tubing.

Created using the Saline Savings Calculator



DualWave™ arthroscopy pump (a)	AR-6480
Main pump tubing	AR-6410
DualWave outflow tubing (b)	AR-6430
DualWave inflow and outflow tubing	AR-6436
Arthroscopy “Y” tubing adapter	AR-6215
ReDeuce™ pump tubing	AR-6411
ReDeuce patient tubing	AR-6421
DualWave outflow tube set w/ ReDeuce tubing system	AR-6435
Extension tubing	AR-6220
Continuous Wave™ 4 arthroscopy pump	AR-6485
Continuous Wave 4 inflow tubing	AR-6413
Gravity tubing, 2 spike	AR-6412
Gravity tubing, 4 spike	AR-6414
DualWave remote	AR-6482
DualWave foot pedal	AR-6483
DualWave pump cart (c)	AR-6481
Outflow power strip	002313-00
Monitor secondary stand	TP.5121.999
Monitor shelf w/ hardware	NT.4100.991





Synergy Vision™ Imaging System

Experience the Synergy Vision imaging system, an all-in-one product featuring high dynamic range (HDR), 4K visualization with ultrawide imaging via the Pano™ scope, Nano Vision™ functionality to support the NanoNeedle Scope, fluorescence imaging, and video integration.

Key Features and Benefits

The Synergy Vision imaging system was designed with the latest technology to deliver optimal and revolutionary results.

Pano™ Scope

Quickly and easily switch between traditional scope views and an ultrawide view (encompassing most of 30° and 70° views) at the touch of a button, allowing surgeons to visualize more anatomy on a single screen while minimizing the need for additional portals or scopes.

Nano Vision™ Functionality

The NanoNeedle Scope integrates directly to the Synergy Vision console as either a primary or secondary view and offers a simultaneous 4K and Nano visualization on the same screen.

Synergy Vision Connect™ Console

Allowing for 6 inputs and 4 outputs, the Synergy Vision Connect system offers built-in OR integration capabilities for in-room switching and routing.

High Dynamic Range

The Synergy Vision imaging system offers HDR for enhanced contrast of surgical anatomy and ideal visualization.

Fluorescence Imaging

Switch to fluorescence 4K imaging with the touch of a button.

Nano Vision™ Functionality

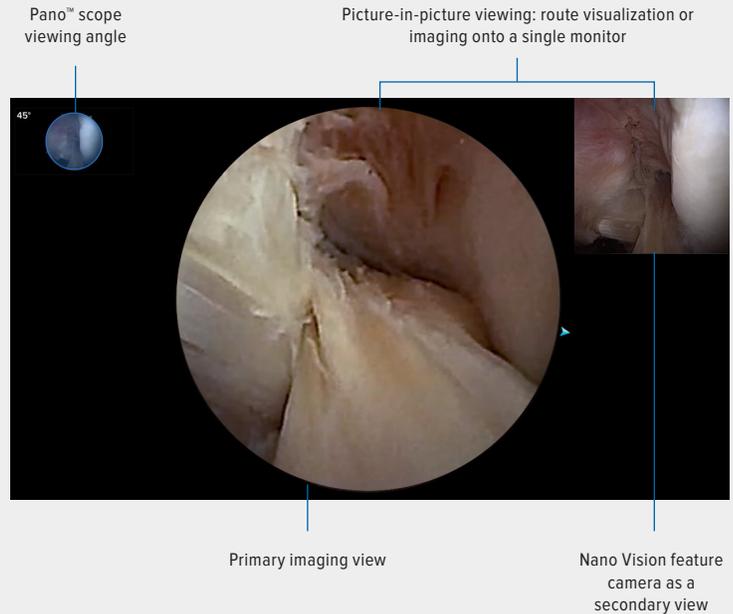
With a built-in port to connect a NanoNeedle Scope, the Synergy Vision™ imaging system supports Nano Vision functionality, which features simultaneous use of 4K and Nano visualization, giving surgeons access to additional views and allowing them to see more of the anatomy than with a traditional single-camera view.

Key Features and Benefits

Nano arthroscopy offers a variety of benefits, including:

- › Customized anesthetic options (eg, light sedation vs general anesthetic)
- › Appropriate for a variety of settings, including procedure rooms, hospitals, surgery centers, etc*
- › Same-day diagnostic and surgical treatment options
- › Potential to reduce facility costs
- › Opportunity to redirect or increase cases in underused treatment and procedure rooms
- › Proven, improved outcomes/satisfaction scores regarding patient-surgeon interactions^{3,4}
- › Ancillary surgical views not seen with a single 4K camera

*Please refer to the Coding and Reimbursement Guide for the NanoScope™ Operative Arthroscopy System (OF1-000119) for additional information.



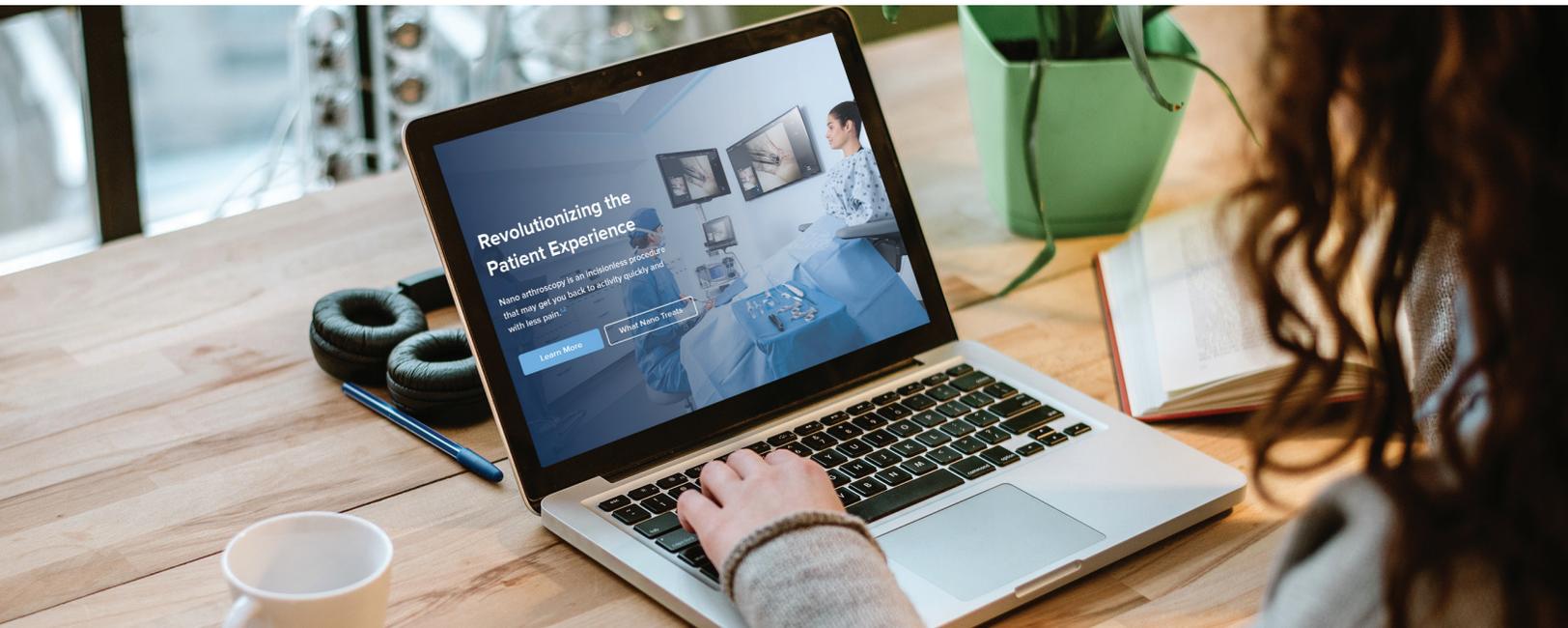
The Nano Experience for Patients

TheNanoExperience.com is your **patients' educational resource** for learning more about the benefits of Nano arthroscopy. Easily share this open-access tool with your patients and colleagues who would benefit from learning more about how smaller scopes and less invasive procedures are revolutionizing the patient experience. Find answers to frequently asked questions, including:

- › What is Nano arthroscopy?
- › What can the Nano instrumentation help treat? How can I benefit from Nano arthroscopy?
- › Where can I find a surgeon who performs Nano arthroscopy?



The ultimate patient resource to learn more about Nano arthroscopy: TheNanoExperience.com



Proven Technology Combined With a Positive Patient Experience

35,000+

procedures performed⁵
(as of September 2023)

94%

of patients would get this
procedure again³

At

2 weeks

patients reported higher
quality of life than with
traditional surgery⁶

96%

of patients return to activity
within 4 weeks of an
ankle procedure³



The Nano Experience for Surgeons

Visit Nano.Arthrex.com to discover the Nano experience. Offer your patients the Nano Experience, which combines high-quality visualization, flexible treatment facility options, and multiple customization opportunities for a personalized treatment that expands your practice's diagnostic and treatment offerings. Nano arthroscopy offers a number of operative and patient benefits, including:

Operative Benefits

- › Ideal for joint access and visualization
- › Perform Nano procedures outside the traditional operating room (OR) setting
- › Combines the latest imaging sensors, LED lighting, image management, and OR integration with an intuitive tablet control
- › Scopes, cameras, and other products can be used with existing visualization equipment

Patient Benefits

- › Fast recovery and return to activity and work³
 - › Less pain,⁶ fewer surgical complications,⁷ and low risk of infection⁶
 - › May require less narcotic medication⁸
 - › Multiple anesthesia options for customization based on surgeon preference and patient comfort and needs
 - › Can be performed in an outpatient or ASC setting (treatment) or even a practice office (diagnostic)
 - › May help reduce number of required appointments and/or need for MRI⁹⁻¹²
- Expand your diagnostic and treatment offerings with the Nano Experience, which combines patient comfort with leading-edge, extremely minimally invasive technology for improved patient outcomes.³

Visit Nano.Arthrex.com to learn more about Nano arthroscopy, view Nano resources, and sign up to attend a course.

The ultimate HCP resource to learn more about Nano arthroscopy and the Nano Experience: Nano.Arthrex.com



What Does Nano Treat?

Foot and Ankle

- › Peroneal tendons: diagnosis, platelet-rich plasma (PRP) injection, debridement of partial tear, excision of low-lying muscles
- › Peroneal tendon groove deepening
- › Peroneal tubercle excision
- › Posterior ankle and subtalar scope
- › FHL tendoscopy, decompression, and tendon harvest
- › Plantar fasciotomy with calcaneus osteotomy
- › 1st MTP scope debridement
- › Chondral debridement

Hand and Wrist

Arthroscopy

- › Radiocarpal and midcarpal
- › Thumb CMC
- › DRUJ
- › Finger MCP and PIPJ
- › Dry arthroscopy

Other

- › Injections (eg, joint vs anesthesia catheters)
- › Carpal tunnel
- › Cubital tunnel
- › Needle aponeurotomy for Dupuytren contracture
- › De Quervain's release

Knee

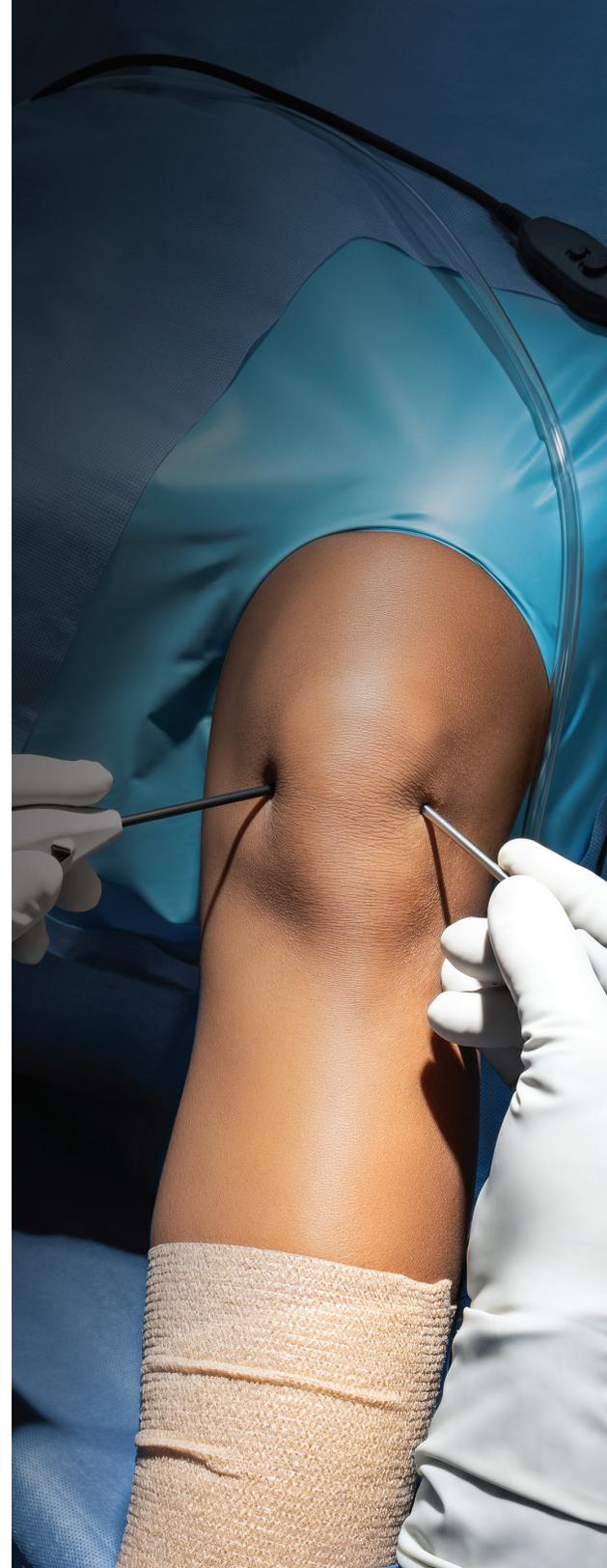
- › Chondroplasty
 - › Meniscal debridement
 - › Meniscal repair
 - › ACL repair
 - › PCL dual-view repairs
 - › Directed injections
- ### Shoulder
- › Biceps tenotomy
 - › Tenodesis
 - › Preplanning for arthroplasty
 - › Second look/biopsy
 - › Adjunct dual-view optics

Trauma

- › Assessment of syndesmotic injury prior to reduction
- › Evaluation of reduction vs fluoroscopy
- › Tibial plateau fracture
- › Distal radius fracture
- › Calcaneus fracture
- › Talus fracture
- › Ankle fracture

Additional Indications

- › Pediatric orthopedics
- › Pediatric laparoscopy
- › Thoracic procedures
- › Sinusoscopic procedures



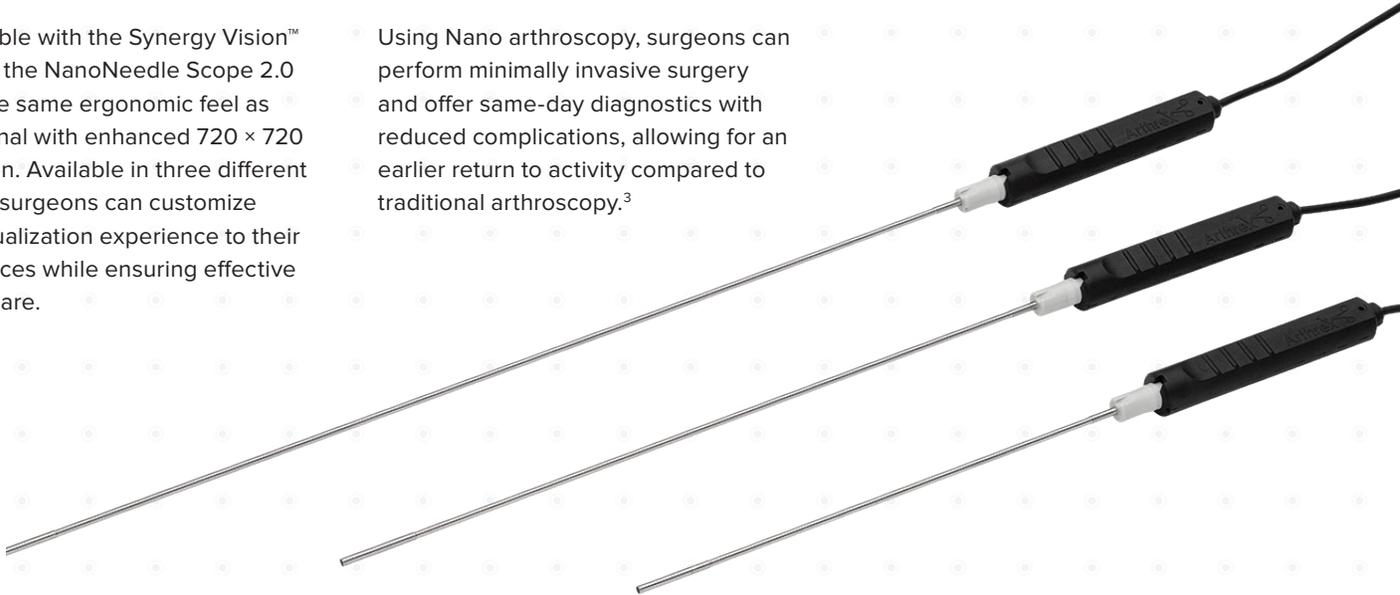
NanoNeedle 2.0

NanoNeedle Scope

Introducing the latest technology in Nano arthroscopy, the NanoNeedle Scope 2.0

Compatible with the Synergy Vision™ console, the NanoNeedle Scope 2.0 offers the same ergonomic feel as the original with enhanced 720 × 720 resolution. Available in three different lengths, surgeons can customize their visualization experience to their preferences while ensuring effective patient care.

Using Nano arthroscopy, surgeons can perform minimally invasive surgery and offer same-day diagnostics with reduced complications, allowing for an earlier return to activity compared to traditional arthroscopy.³



References

1. Ford E, Pontes M, Chayes D, McMillan S. Arthroscopic partial meniscectomy using a needle arthroscope for visualization resulted in greater retention of postoperative quadriceps muscle strength compared to traditional arthroscopy. *Surg Technol Int*. Published online November 18, 2024.
2. Arthrex, Inc. Data on file (IR1-000391-en-US_A). Naples, FL; 2020.
3. Colasanti CA, Mercer NP, Garcia JV, Kerkhoffs GMMJ, Kennedy JG. In-office needle arthroscopy for the treatment of anterior ankle impingement yields high patient satisfaction with high rates of return to work and sport. *Arthroscopy*. 2022;38(4):1302-1311. doi:10.1016/j.arthro.2021.09.016
4. Murawski CD, Kennedy JG. Anteromedial impingement in the ankle joint: outcomes following arthroscopy. *Am J Sports Med*. 2010;38(10):2017-2024. doi:10.1177/0363546510369335
5. Arthrex, Inc. Internal data on file. Naples, FL; 2023.
6. Schaver AL, Lash JG, MacAskill ML. Partial meniscectomy using needle arthroscopy associated with significantly less pain and improved patient reported outcomes at two weeks after surgery: a comparison to standard knee arthroscopy. *J Orthop*. 2023;41(41):63-66. doi:10.1016/j.jor.2023.06.003
7. McMillan S, Chhabra A, Hassebrock JD, Ford E, Amin NH. Risks and complications associated with intra-articular arthroscopy of the knee and shoulder in an office setting. *Orthop J Sports Med*. 2019;7(9):2325967119869846. doi:10.1177/2325967119869846
8. Bradsell H, Lencioni A, Shinsako K, Frank RM. In-office diagnostic needle arthroscopy using the NanoScope™ arthroscopy system. *Arthrosc Tech*. 2022;11(11):e1923-e1927. doi:10.1016/j.eats.2022.07.006
9. Munn D, Burt J, Gee CW, McLaren CK, Clarke JV, Hall AJ. Moving orthopaedic procedures out of the operating theatre: outpatient needle arthroscopy can reduce cost and waste, and increase inpatient capacity compared to conventional knee arthroscopy. *Knee*. 2023;42:143-152. doi:10.1016/j.knee.2023.03.009
10. McMillan S, Saini S, Alyea E, Ford E. Office-based needle arthroscopy: a standardized diagnostic approach to the knee. *Arthrosc Tech*. 2017;6(4):e1119-e1124. doi:10.1016/j.eats.2017.03.031
11. Voigt JD, Mosier M, Huber B. Diagnostic needle arthroscopy and the economics of improved diagnostic accuracy: a cost analysis. *Appl Health Econ Health Policy*. 2014;12(5):523-535. doi:10.1007/s40258-014-0109-6
12. Gill TJ, Safran M, Mandelbaum B, Huber B, Gambardella R, Xerogeanes J. A prospective, blinded, multicenter clinical trial to compare the efficacy, accuracy, and safety of in-office diagnostic arthroscopy with magnetic resonance imaging and surgical diagnostic arthroscopy. *Arthroscopy*. 2018;34(8):2429-2435. doi:10.1016/j.arthro.2018.03.010



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Arthrex manufacturer, authorized representative, and importer information (Arthrex eIFUs)



US patent information