

Diagnostic NanoNeedle Scope Arthroscopy Using Local Anesthesia

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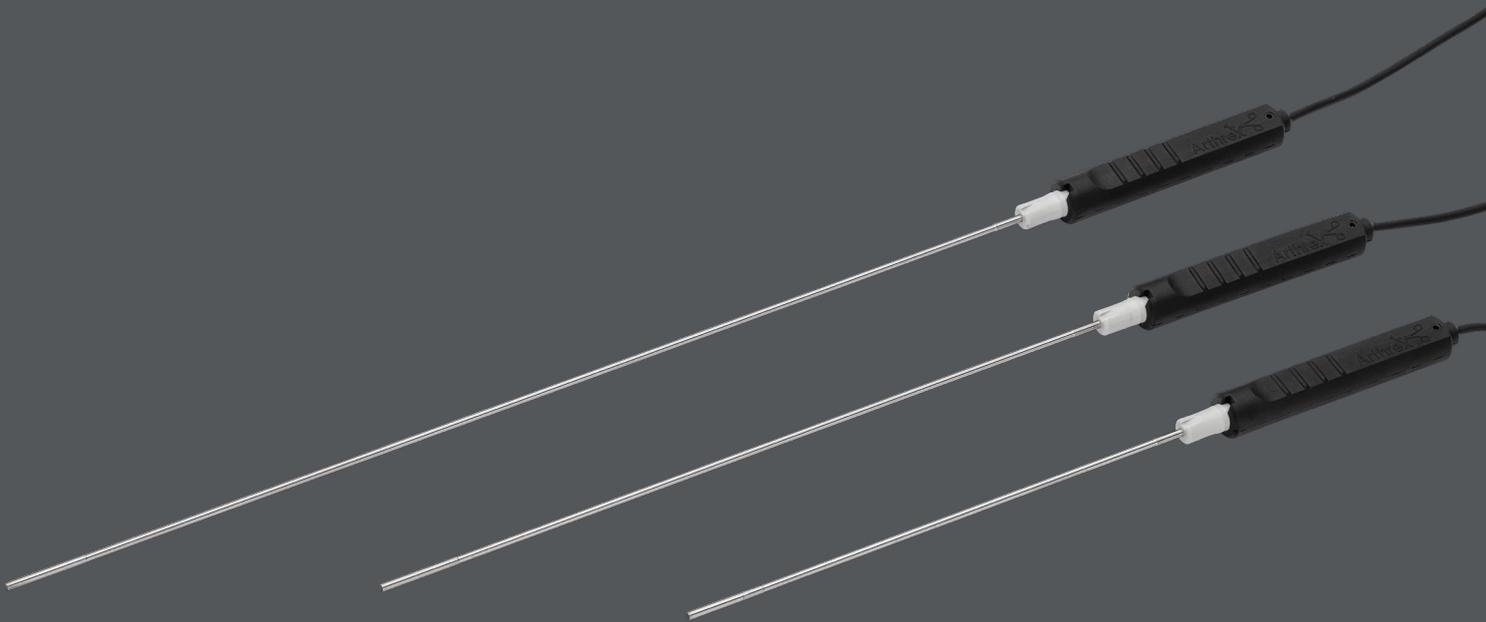


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Patient Instructions

- Wear shorts or change into clinic shorts
- Remove shoe and sock on the operative side
- Bring a book, phone, or tablet
- Anticipate 30 minutes for the procedure
- No restrictions after, but limit heavy activity

Medications

Preprocedure

- No medications are required
- Optional for anxiety: 2 mg PO diazepam 30 minutes prior; may repeat 1×

Postprocedure

- OTC acetaminophen 650 mg by mouth every 6 hours as needed for pain
- OTC anti-inflammatory (eg, ibuprofen) as instructed per package insert

Assistant Tips and Pearls

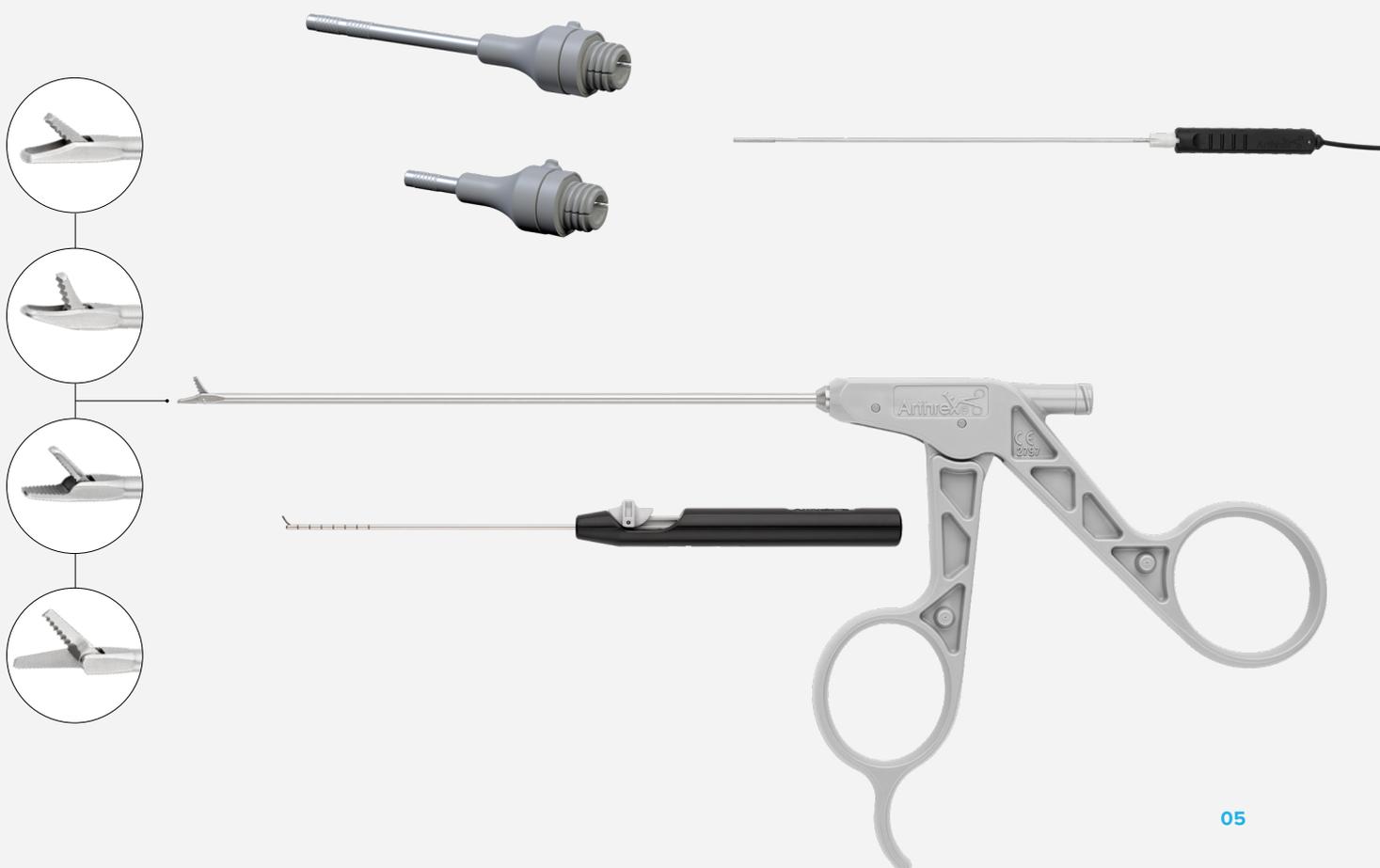
- Input the patient information in advance
- Explain what is happening to the patient and keep their attention
- Ensure the screen faces the surgeon; images will be shared with the patient when anatomy is in view or at the end of the procedure
- Plug in the camera in advance, but leave the handpiece sterile in the tray



Equipment

- Small ChloraPrep™ Stick
- Chux pad
 - ¾ drape for privacy (optional)
 - 2 large dressings
- 10 cc syringe with a mix
 - 5 mL: 1% lidocaine
 - 5 mL: 0.5% bupivacaine with epinephrine
- 20 cc syringe (hold)
 - 0.25% bupivacaine without epinephrine
- NanoNeedle kit and instruments
 - Probe
- Towel roll or bump
- Sterile gloves
- Assistant for manipulation of the limb
- Marker (optional)
- 3 × 10 mL preloaded sterile saline syringes
- Alcohol prep pads

NanoNeedle Kit and Instruments





Setup

1. Place a small table on the operative side
2. Open instruments and NanoNeedle kit **(a)**
3. Use inside of glove wrapper for the small sterile area for prep stick and local injections

Steps

1. Guide patient to the supine position on the table with hands resting on the abdomen
2. Confirm side and site
3. Prep portal sites with ChloraPrep stick
4. Place knee in position
 - a. 90° for notch and condyles
 - b. Knee off the side of the bed, bed height raised
 - c. 30° over towel bump covered in chux pad for meniscus and patella **(b)**
5. Mark patellar tendon or portal sites (*please review NanoNeedle Portal Locations and Cannula Insertion Technique Guide for detailed instructions*)
 - a. 2 cm below the inferior tip of patellar tendon near the middle of the tibial tuberosity
 - b. 1 cm from tendon borders for notch and condyle
 - c. 2 cm from tendon borders for meniscus
6. Using a 25 gauge or 28 gauge needle, inject 1 mL into the skin (c)
7. Using a 22 gauge needle, inject the remaining 8 mL through a fat pad in a line toward the anticipated area of pathology and make a wheal along the joint line to cover the compartment to be examined
8. Prepare the tablet while anesthesia sets in
 - a. Connect tablet
 - b. Input relevant information
 - c. Calibrate
 - d. Confirm the function of the camera
 - e. Lower lights to improve the view of the screen, if possible
9. After testing for skin analgesia using a sharp trocar, insert trocar into the lateral portal site, then direct toward notch
10. Insert camera and locate a dry view of the notch to obtain necessary images
11. Further exam is dictated by the pathology; please see Pathology by Portal table on page 6

For use of probe/instrumentation

12. Insert medial trocar under direct visualization with sharp trocar directed toward the expected pathology
13. Place 10 mL saline syringe on the medial sheath for lavage as needed
 - a. Use sheath as a probe or exchange for NanoProbe

Positioning

Medial compartment: valgus by an assistant at 30° over a bump

Lateral compartment: assistant moves the patient to position while the camera is in place **(c)**

Notch/condyles: knee remains at 90°

14. Obtain images
15. Remove camera
16. Aspirate any excess fluid
17. Remove sheaths
18. Clean sites with alcohol pads
19. Place dressings
20. Share images with patient
21. Upload images to PACS/SurgeonVault® system

Pathology by Portal

ACL: lateral portal

PCL: lateral portal

Medial meniscus, anterior horn and body: lateral portal

Medial meniscus, posterior horn and root: medial portal under valgus stress

Lateral meniscus, anterior horn and body: medial portal

Lateral meniscus, posterior horn and root: lateral portal

Medial condyle: lateral portal 30° to 90° of flexion

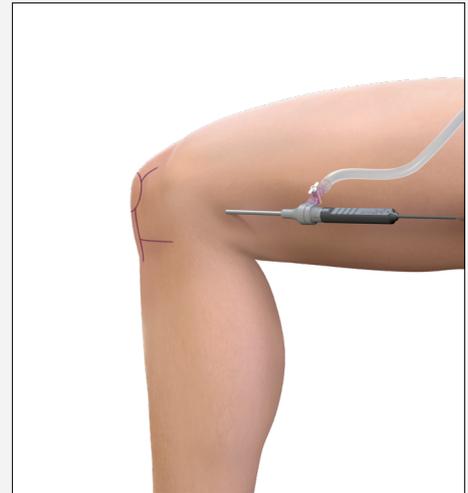
Lateral condyle: medial portal 30° to 90° of flexion

Patellofemoral: 30°, will require additional insufflation of the joint

Use 20 mL syringe of local anesthetic and additional saline up to 60 mL as needed

Aspirate excess fluid at the conclusion

(c)



Sample Dictation Template for Diagnostic Nano Arthroscopy

Diagnostic Needle Arthroscopy Procedure Note

Procedure:

Diagnostic arthroscopy of the [insert side] knee joint (29870)

Application:

Risk, benefits, alternatives, and consent were reviewed with the patient.

Preparation:

ChlorPrep solution was used to prep the area of interest after anatomic landmarks were marked. A mixture of 1% lidocaine and 0.5% bupivacaine with epinephrine were injected into the planned portal sites for anesthesia.

Procedure Note:

Used sterile technique, and then the camera was inserted. Performed diagnostic arthroscopy with a small amount of normal saline for visualization. Findings were [insert findings]. A bandage was applied.

Postprocedure:

The patient tolerated the procedure well.

Complications:

None.

Note:

This is a diagnostic procedure intended only to support further staged or related treatment at a separate setting during the global period. Therefore, the -58 modifier is applied as there is a planned secondary procedure.

If this procedure was performed on the same date as the E&M, determining the need for diagnostic needle arthroscopy, then the -25 applied is applicable for the above procedure.



Example 1: Lateral meniscus with probe in standard lateral portal viewing from standard medial portal



Example 2: Medial meniscus with probe in standard medial portal viewing from lateral portal; probe is touching the body of medial meniscus approaching the junction with posterior horn; includes a peripheral meniscal tear



Example 3: ACL as viewed from standard lateral portal

Postprocedure Instructions: Diagnostic Needle Arthroscopy

Activity

- You may perform all your regular daily activities. Avoid intensive or high-impact activities (eg, running or long, aggressive hikes) for 2 to 3 days.
- If you need a pair of crutches, please call the office.
- You may drive home from the procedure if you are not on other prescription pain medication.

Dressings and Incisions

- Keep your wound clean, dry, and covered with a dressing for 12 to 24 hours after your procedure. You may shower at any time.
- You may experience some localized swelling and bruising at the injection site. The swelling and bruising will take 3 to 7 days to resolve.

Pain and Inflammation

- If you start getting very sore within a few hours after the injection, please begin using acetaminophen. It is much easier to stay ahead of pain rather than trying to go without medication and then catch up. Being proactive with pain medication allows you to use less over time. You may use acetaminophen or ibuprofen as needed for discomfort.

Ordering Information

Imaging System

Product Description	Information	Item Number
NanoScope Console	13" HD Medical-Grade Imaging Console	AR-3200-0030
NanoScope Handpiece Kit, single use	1 Camera, sterile packaged	AR-3210-0040
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 High-Flow Sheath Kit	1 Straight and 1 Bent Sheath, sterile packaged	AR-3210-0041
NanoGrip	1 Grip, sterile packaged	AR-1090NH-1

Fluid Management Tube Set Options

Product Description	Information	Item Number
Synergy MSK™ Ultrasound Cart	Mobile Cart	AR-3502-CRT
NanoNeedle Console Mount	MSK Cart NanoNeedle Conversion Kit	ATX-2601
NanoNeedle Console Mount for AR-6481 Cart	Conversion Kit	5010-1500
DualWave™ Pump Cart	Mobile Cart	AR-6481

Nano Arthroscopy 2 mm Instrumentation (130 mm Shaft Length)

Product Description	Item Number
NanoBiter Straight Tip, 130 mm straight shaft, bendable w/ FlushPort	AR-10911F-1
NanoGrasper Straight Tip, 130 mm straight shaft, bendable w/ FlushPort	AR-10313F-1
NanoRetriever Tip, 130 mm straight shaft, bendable w/ FlushPort	AR-10914F-1
NanoScissor Tip, 130 mm straight shaft, bendable w/ FlushPort	AR-10915F-1
Nano BirdBeak® Retriever Tip, 130 mm straight shaft, bendable w/ Flushport	AR-10916F-1
Nano BirdBeak Grasper Tip, 130 mm straight shaft, bendable w/ Flushport	AR-10917F-1
Bending Tool	AR-10900

Nano Arthroscopy 2 mm Instrumentation (70 mm Shaft Length)

Product Description	Item Number
NanoBiter Straight Tip, 70 mm straight shaft, bendable w/ FlushPort	AR-10901F-1
NanoGrasper Straight Tip, 70 mm straight shaft, bendable w/ FlushPort	AR-10903F-1
NanoRetriever Tip, 70 mm straight shaft, bendable w/ FlushPort	AR-10904F-1
NanoScissor Tip, 70 mm straight shaft, bendable, w/ FlushPort	AR-10905F-1
Nano BirdBeak Retriever Tip, 70 mm straight shaft, bendable w/ Flushport	AR-10906F-1
Nano BirdBeak Grasper Tip, 70 mm straight shaft, bendable w/ Flushport	AR-10907F-1
Bending Tool	AR-10900

Patient Prep Kit

Product Description	Information	Item Number
NanoNeedle Arthroscopy Prep Kit	Disposable, sterile packaged	74312-01M

Tissue and Fluid Outflow Cannula

Product Description	Information	Item Number
Outflow Cannula, Nano arthroscopy	Disposable, sterile packaged	AR-1090S-10
Outflow Cannula, Nano arthroscopy	Disposable, sterile packaged	AR-1090S-70

Ordering Information

Fluid Management Tube Set Options

Product Description	Information	Item Number
Gravity Tube Set	Disposable, sterile packaged	AR-6412
Extension Tube Set	Disposable, sterile packaged	AR-6220

Nano Arthroscopy 2.7 mm-Diameter NanoCannula and Insertion Kits

Product Description	Information	Item Number
2.7 mm Cannula and Cannulated Obturator, 1.5 cm length	Disposable, sterile packaged, single pack	AR-1090C-15-1
2.7 mm Cannula and Cannulated Obturator, 3 cm length	Disposable, sterile packaged, single pack	AR-1090C-30-1
2.7 mm Cannula and Cannulated Obturator, 4 cm length	Disposable, sterile packaged, single pack	AR-1090C-40-1
2.7 mm Cannula and Cannulated Obturator, 5 cm length	Disposable, sterile packaged, single pack	AR-1090C-50-1
2.7 mm Cannula and Cannulated Obturator, 7 cm length	Disposable, sterile packaged, single pack	AR-1090C-70-1
Nano Arthroscopy Percutaneous Insertion Kit	Disposable, sterile packaged, single pack	AR-1090PK-1
NanoNeedle Scope Working Cannula	1.5 cm	AR-3210-0059
NanoNeedle Scope Working Cannula	5 cm	AR-3210-0063



This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience, and should conduct a thorough review of pertinent medical literature and the product's directions for use. Postoperative management is patient-specific and dependent on the treating professional's assessment. Individual results will vary and not all patients will experience the same postoperative activity level and/or outcomes.

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