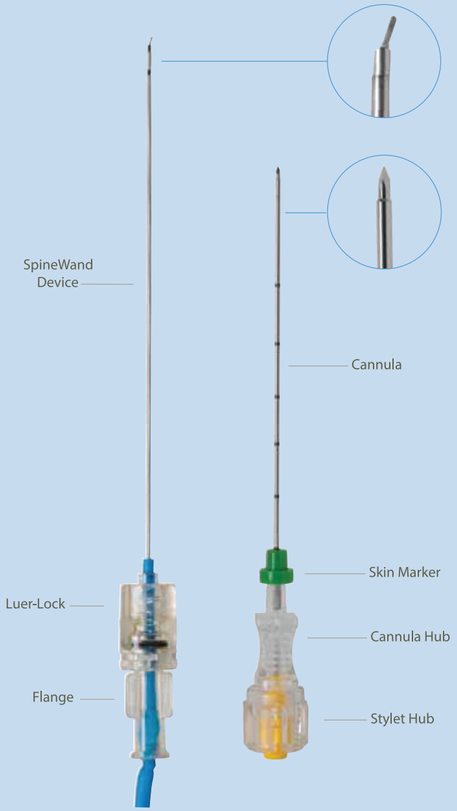


CIQ DC SpineWand
Surgical Device System

Not for distribution

ArthroCare® SPINE

DC SpineWand Surgical Device Technique Guide for use with Coblator IQ Controller System

Coblation ™ uses bipolar high frequency electrical energy to excite the electrolytes in a conductive medium, creating a precisely focused plasma field. The energized particles in the plasma have sufficient energy to break organic molecular bonds, excising or dissolving soft tissue at relatively low temperatures (typically 40°C to 70°C), thereby preserving the integrity of surrounding healthy tissue.

CIQ DC SpineWand
Surgical Device

Coblator IQ™

Preparation for Use

The operator should be experienced in general and electrosurgical spinal surgery. Additional training from a company representative for the use of the SpineWand device and the ArthroCare® Coblator IQ Controller is recommended.

Equipment Preparation

Materials Needed

- C-arm fluoroscope with image intensification
- ArthroCare Coblator IQ Controller with foot control
- DC SpineWand device and ArthroCare 19-gauge x 3" sterile introducer cannula with trocar tip stylet (recommended use is one cannula per spine level)

Setup

- Connect the power cord to the Controller and outlet
- Connect the foot pedal to the Controller
- Connect Wand cable connector to Coblator IQ Controller. Correct connection is indicated by illumination of the ablation and coagulation set point number.
- The Controller will present to default ablation and coagulation settings for each Wand. The ablation function may be adjusted within a defined range.

Coblator IQ Controller and Wand Features

- Audible beep tone is heard every 5 seconds after Wand is activated
- Ablation shut-off time is 10 seconds*

**If the power shuts off, the user must release ablation foot pedal and re-press to resume ablation (shut-off is not permanent)*

Patient Preparation

- Prepare the patient pre-operatively according to standard surgical procedures
- Refer to the DC SpineWand Surgical Device *Instructions For Use* for more information

SpineWand® SURGICAL DEVICE

DC SpineWand Surgical Device Technique Guide

System Set-Up

NOTE: ArthroCare recommends a dry run prior to a live case in order to familiarize oneself with the SpineWand device.

A Prior to actual procedure, the stylet should be removed and the Wand inserted.

B Advance the Wand to the the tip of the cannula. There should be only mild resistance upon insertion of the Wand.

C While holding the Wand stationary with one hand, pull the cannula back with the other hand exposing the tip and turning the cannula, securing it to the Wand's locking device. The active section of the Wand tip will be outside the edge of the cannula.

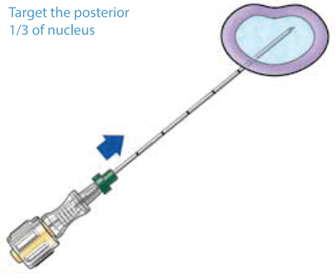
D Remove the Wand from the cannula and reinsert the stylet. You are now ready to begin the procedure.

Procedure

1 Surgical Approach

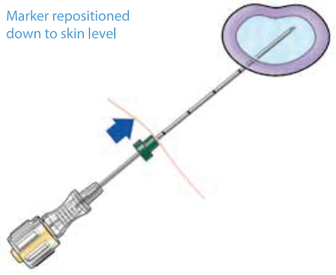
A Use a standard right anterior-lateral surgical approach. During insertion of the introducer cannula, target the tip of the stylet to the posterior 1/3 of the nucleus by confirming proper positioning (Illustration 1) using A/P and lateral fluoroscopic views.

Illustration 1
Target the posterior 1/3 of nucleus



B If desired, reposition the green marker on the cannula shaft down to skin level (Illustration 2).

Illustration 2
Marker repositioned down to skin level



2 Insert the SpineWand Surgical Device

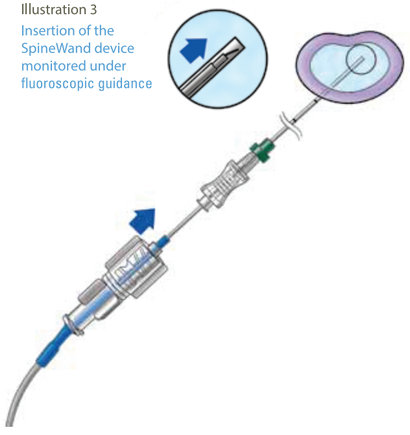
CAUTION: Do not use blunt dissection through tissue with the SpineWand device tip.

CAUTION: To avoid ablating too deeply into the tissue or against vertebral body endplates, observe the SpineWand **device tip through clear fluoroscopic imaging.**

A Withdraw stylet from cannula and insert the Wand under fluoroscopic guidance.

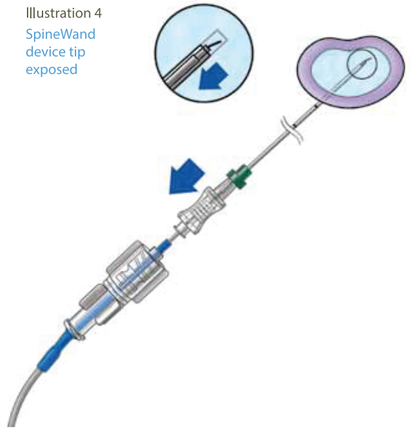
B Monitor the insertion of the Wand to the tip of the cannula using lateral fluoroscopy (Illustration 3).

Illustration 3
Insertion of the SpineWand device monitored under fluoroscopic guidance



C Once in position, keep the Wand stationary with one hand and pull back the cannula with the other hand to expose the tip of the Wand. The tip extends 7mm beyond the edge of the cannula (Illustration 4).

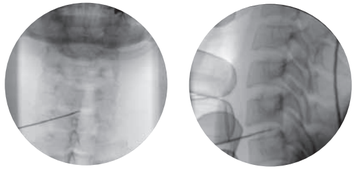
Illustration 4
SpineWand device tip exposed



D Secure the cannula hub on the luer lock by rotating the cannula onto the device while keeping the device stationary.

E Monitor the deployment of the device beyond the edge of the cannula in lateral fluoroscopy.

F Confirm the position of the Wand tip using fluoroscopic A/P and lateral views (below).



Fluoroscopic Images

3 Verify Proper Tip Placement

A Verify the proper Wand tip placement.

B Set the Controller at power level 2.

C Depress COAG pedal (pedal on far right) on the foot controller for one-half second to confirm tip placement.

D If neural stimulation is observed, stop and reposition the tip.

4 Ablation

CAUTION: If nerve root or spinal cord come into direct contact with the tip of the SpineWand device during ablation, then serious nerve injury may result.

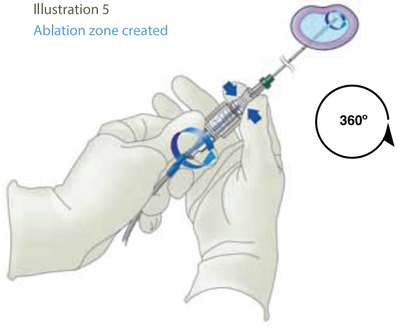
A Hold the cannula hub securely with one hand.

B Grasp the Wand flange (proximal to the luer lock) with the other hand.

C Depress ABLATION pedal (pedal on far left) on the foot controller while rotating the flange in a single, slow and steady 360 degree rotation for 2-3 seconds (Illustration 5).

NOTE: When the Wand is activated, control symbol light on front of Controller will illuminate and an audible monotone will be emitted.

Illustration 5
Ablation zone created



5 Additional Ablation (if desired)

A Retract cannula and Wand 2mm, using fluoroscopic guidance to confirm correct Wand deployment.

B Confirm new position of the Wand tip using A/P and lateral views.

C Repeat steps 4a-4c.

6 Remove the SpineWand Device and Cannula

CAUTION: Do not withdraw the SpineWand device while it is activated.

A After the ablation zone has been created, withdraw the Wand from the cannula, reinsert the stylet, then withdraw the cannula from the patient. Discard SpineWand device and cannula.

B Follow standard postoperative procedure and shut down system per the *Instructions For Use*.