



NANOKNIFE SYSTEM PROCEDURE OVERVIEW QUICK REFERENCE GUIDE

SOFTWARE VERSION 3.0



NanoKnife 3.0
Irreversible Electroporation (IRE)

Aquilant
A HCS Group Company

oncology@hc21.group
01256 306506
healthcare21.eu

NANOKNIFE USER:

- Anesthesia Team
- Physician
- Nurse/Tech

BOLD NUMBERS:

Corresponds with a specific part of an image

Before the Patient Enters the Room

- 1 Gather NanoKnife Probes & NanoKnife Probe Spacers (Optional)
- 2 Plug in & Power ON the NanoKnife System & External Synchronization Device
- 3 Enter Procedure Setup information
Note: Complete NanoKnife System Self-Test prior to entering the information
- 4 With Physician, in-service Anesthesia Team on NanoKnife procedure guidelines referenced in the User Manual

After Intubation/Prior to Sterile Draping

- 5 Attach External Synchronization Device ECG leads to patient
- 6 Plug ECG cable into External Synchronization Device
- 7 Identify & select lead pair displaying the best ECG waveform

After Sterile Draping

- 8 Measure target tissue dimensions under image guidance and determine probe length and number of probes needed
- 9 Select the desired probe array
- 10 Using sterile techniques, open & pass off NanoKnife Probes and Spacers (optional) to sterile field
- 11 Adhere the provided sterile number labels to both ends of the cable attached to each NanoKnife Probe
- 12 Uncoil NanoKnife Probe cables & pass off to Nurse/Tech
- 13 Connect each NanoKnife Probe connector to the NanoKnife System's corresponding numbered output
- 14 Advance to Procedure Planning screen & enter the soft tissue dimensions in the Lesion Zone section
- 15 Select Probe Tip exposure & place
- 16 Measure inter-probe distance(s) using image guidance
- 17 Update the Probe Placement Grid with the Physician's inter-probe distance measurements
- 18 Modify default settings in Table as needed & enter Probe Exposure values with the Physician's preferences

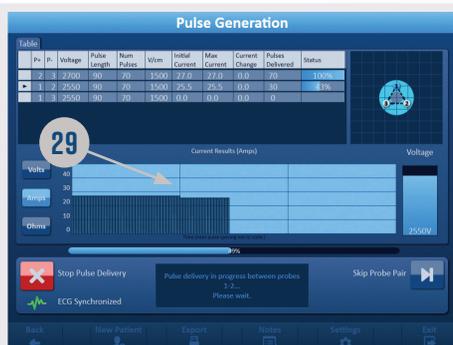
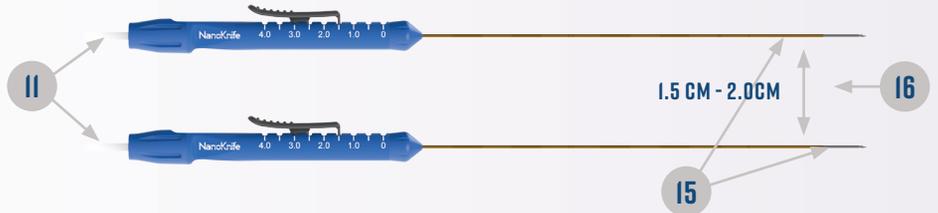
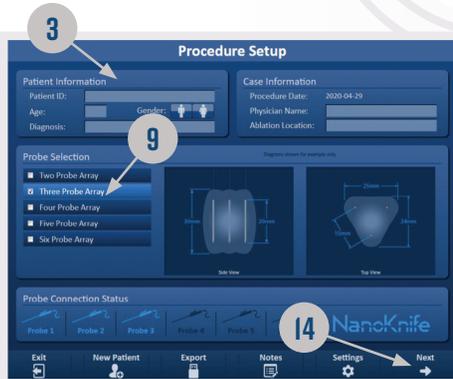
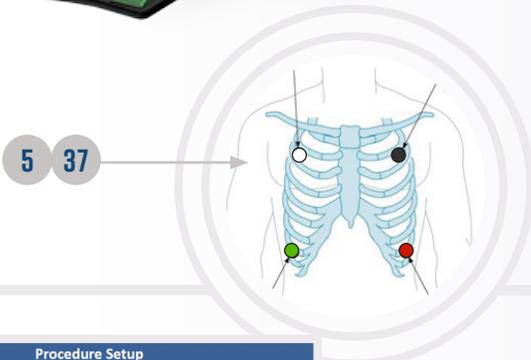
**NanoKnife Pulse Delivery**

- 19 **IMPORTANT:** Check with Anesthesia Team to ensure adequate paralysis (0/4 twitches)
- 20 Use the twitch monitor to ensure adequate paralysis (0/4 twitches)
- 21 Advance to Pulse Generation screen & place double foot pedal in a location for the Physician to access

Note: Please be prepared for significant changes in blood pressure
- 22 Physician to deliver tissue conductivity test sequence
- 23 Inform the Physician of the conductivity test results
- 24 Under Physician instruction, select the Proceed button
- 25 Activate NanoKnife pulse delivery using double foot pedal sequence (Arm then Pulse)
- 26 Monitor External Synchronization Device & NanoKnife System to ensure proper synchronization, change lead pairs as needed
- 27 Monitor target ablation zone site & NanoKnife Probe placements under direct visualization
- 28 Inform the Physician and NanoKnife User of any significant BP or HR changes
- 29 During and after completion of pulse delivery, view Current Results graph
- 30 Analyze Results graphs, evaluate ablation site using image guidance, & remove from target ablation zone
- 31 Export procedure files to USB storage device (optional)

End of Nanoknife Procedure

- 32 Disconnect all NanoKnife Probes from the NanoKnife System and dispose of accordingly
- 33 Click the Exit button from the Navigation Bar on the Pulse Generation or Procedure Setup screens
- 34 Wait for System to finish the shutdown sequence, then power OFF & unplug the NanoKnife System and External Synchronization Device
 - Note: System will ask to confirm shutdown through two pop-ups
- 35 Wrap NanoKnife System power cable neatly around back handle
- 36 Unplug ECG cable from External Synchronization Device
- 37 Detach External Synchronization Device ECG leads from patient; **DO NOT THROW AWAY ECG CABLE/LEADS**
- 38 Clean ECG cable/leads with disinfectant wipes, neatly coil leads, & wrap around the back handle of the NanoKnife System
- 39 Neatly coil double foot pedal cable and store in side pocket of NanoKnife System
- 40 Carefully transport NanoKnife System to proper storage location



Aquilant
A HC21 Group Company

oncology@hc21.group
01256 306506
healthcare21.eu

Important Risk Information

Indication For Use

US: The NanoKnife System with six outputs is indicated for surgical ablation of soft tissue.

CE: The NanoKnife System is a medical device for cell membrane electroporation. Electroporation is a phenomenon that occurs in cell membranes as cells are exposed to an electrical field of sufficiently high intensity. The electric field acts as a physical stimulus, bringing about alterations in cell membranes that result in increased permeability.

Contraindications

Ablation procedures using the NanoKnife System are contraindicated in the following cases: • Ablation of lesions in the thoracic area in the presence of implanted cardiac pacemakers or defibrillators • Ablation of lesions in the vicinity of implanted electronic devices or implanted devices with metal parts • Ablation of lesions of the eyes, including the eyelids • Patient history of Epilepsy or Cardiac Arrhythmia • Recent history of Myocardial Infarction

Potential Adverse Effects

Adverse effects that may be associated with the use of the NanoKnife System include, but are not limited to, the following: • Arrhythmia • Atrial fibrillation or flutter • Bigeminy • Bradycardia • Heart block or atrioventricular block • Paroxysmal supraventricular tachycardia • Tachycardia • Reflex tachycardia • Ventricular tachycardia • Ventricular fibrillation • Damage to critical anatomical structure (nerve, vessel, and/or duct) • Fistula formation • Hematoma • Hemorrhage • Hemothorax • Infection • Pneumothorax • Reflex Hypertension • Unintended mechanical perforation • Vagal Stimulation, asystole • Venous Thrombosis

Refer to Directions for Use and/or User Manual provided with the product for complete Instructions, Warnings, Precautions, Possible Adverse Effects, and Contraindications. Observe all instructions for use prior to use. Failure to do so may result in patient complications. CAUTION: Federal Law (USA) restricts this device to sale by or on the order of a physician.

AngioDynamics, the AngioDynamics logo, NanoKnife, and the NanoKnife logo are trademarks and/or registered trademarks of AngioDynamics, Inc., an affiliate, or a subsidiary.