



## CASE STUDY: LUNG CYROABLATION

### Cryoablation of 32 mm Soft Tissue Sarcoma Lung Metastasis Abutting the Pleura

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#### PRESENTATION

- 63-year-old female
  - Previously diagnosed with two soft-tissue sarcoma lung metastases that were treated by thoracoscopic wedge resection
- Lung CT scan showed right lower lobe 32 mm metastasis abutting the pleura **A**



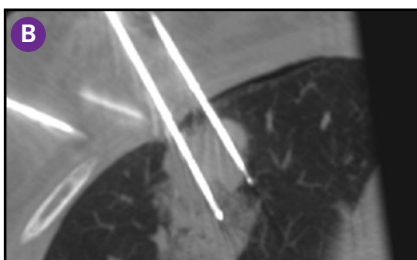
**Presentation:** CT scan showing 32 mm metastasis abutting the pleura

#### TREATMENT PLAN

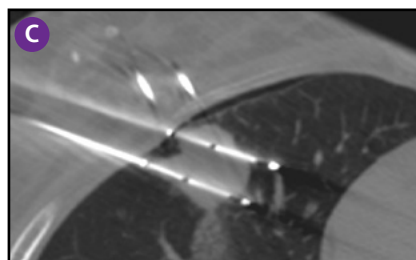
- Tumor board decided on thermal ablation
- Cryotherapy was selected due to the relatively large size of the tumor and the possible need for simultaneous overlapping ablations. In addition, the proximity of the pleura might have rendered radiofrequency or microwave therapies too painful

#### TREATMENT

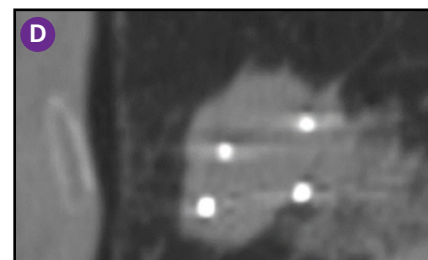
- Cryotherapy was performed under general anaesthesia with CT guidance
- Four IceRod™ 1.5 PLUS needles were inserted in parallel pairs at the level of the tumor **B C D**
- The geometry of probe positioning can be evaluated in a 2 cm slice thickness axial reconstruction **E** and volume imaging **F**
- Freeze and thaw cycles were completed per lung protocol



**Cryoablation:** CT scan showing one pair of the IceRod™ 1.5 PLUS needles



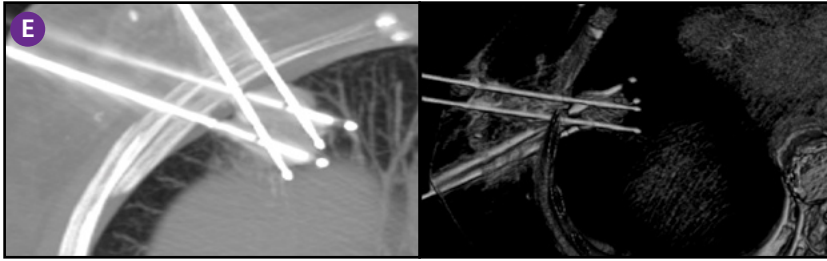
**Cryoablation:** CT scan showing the second pair of IceRod™ 1.5 PLUS needles



**Cryoablation:** Reconstruction perpendicular to the needles axis demonstrates the spacing between them

# Cryoablation of 32 mm Soft Tissue Sarcoma Lung Metastasis Abutting the Pleura

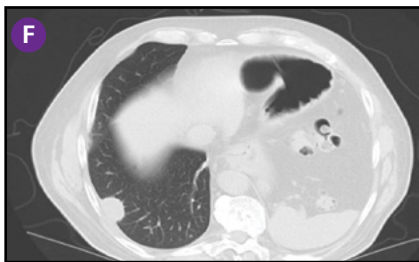
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**Cryoablation:** Geometry of IceRod™ 1.5 PLUS needles visible on 2 cm slice thickness axial reconstruction (left) and volume imaging (right)

## OUTCOME

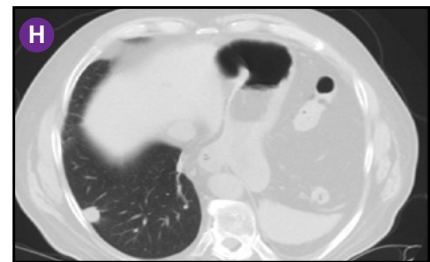
- Follow-up CT scans were performed at one month, three months and six months. **F G H**  
The scans showed a decrease in size of the ablation zone with excellent local disease control



Post cryoablation: One-month follow-up CT scan



Post cryoablation: Three-month follow-up CT scan



Post cryoablation: Six-month follow-up CT scan

## CONCLUSION

- This case demonstrates how cryoablation zones can be simultaneously overlapped to control a tumor > 3 cm and the excellent tolerability of lung cryoablation close to the pleurae

**CRYOABLATION NEEDLES (IceSeed 1.5, IceSphere 1.5, IceSphere 1.5 CX, IceRod 1.5, IceRod 1.5 PLUS, IceRod 1.5 i-Thaw, IceRod 1.5 CX, IcePearl 2.1 CX and IceForce 2.1 CX) and ICEFX and VISUAL ICE CRYOABLATION SYSTEMS**

**INDICATIONS:** The Galil Medical Cryoablation Needles and Systems are intended for cryoablative destruction of tissue during surgical procedures. The Cryoablation Needles, used with a Galil Medical Cryoablation System, are indicated for use as a cryosurgical tool in the fields of general surgery, dermatology, neurology (including cryoanalgesia), thoracic surgery (with the exception of cardiac tissue), ENT, gynecology, oncology, proctology, and urology. Galil Medical Cryoablation Systems are designed to destroy tissue (including prostate and kidney tissue, liver metastases, tumors and skin lesions) by the application of extremely cold temperatures. A full list of specific indications can be found in the respective Galil Medical Cryoablation System User Manuals.

**CONTRAINDICATIONS:** There are no known contraindications specific to use of a Galil Medical Cryoablation Needle. **POTENTIAL ADVERSE EVENTS:** There are no known adverse events related to the specific use of the Cryoablation Needles. There are, however, potential adverse events associated with any surgical procedure. Potential adverse events which may be associated with the use of cryoablation may be organ specific or general and may include, but are not limited to abscess, adjacent organ injury, allergic/anaphylactoid reaction, angina/coronary ischemia, arrhythmia, atelectasis, bladder neck contracture, bladder spasms, bleeding/hemorrhage, creation of false urethral passage, creatinine elevation, cystitis, diarrhea, death, delayed/non healing, disseminated intravascular coagulation (DIC), deep vein thrombosis (DVT), ecchymosis, edema/swelling, ejaculatory dysfunction, erectile dysfunction (organic impotence), fever, fistula, genitourinary perforation, glomerular filtration rate elevation, hematoma, hematuria, hypertension, hypotension, hypothermia, idiosyncratic reaction, ileus, impotence, infection, injection site reaction, myocardial infarction, nausea, neuropathy, obstruction, organ failure, pain, pelvic pain, pelvic vein thrombosis, penile tingling/numbness, perirenal fluid collection, pleural effusion, pneumothorax, probe site paresthesia, prolonged chest tube drainage, prolonged intubation, pulmonary embolism, pulmonary insufficiency / failure, rectal pain, renal artery/renal vein injury, renal capsule fracture, renal failure, renal hemorrhage, renal infarct, renal obstruction, renal vein thrombosis, rectourethral fistula, scrotal edema, sepsis, skin burn/frostbite, stricture of the collection system or ureters, stroke, thrombosis/thrombus/embolism, transient ischemic attack, tumor seeding, UPJ obstruction/injury, urethral sloughing, urethral stricture, urinary fistula, urinary frequency/urgency, urinary incontinence, urinary leak, urinary renal leakage, urinary retention/oliguria, urinary tract infection, vagal reaction, voiding complication including irritative voiding symptoms, vomiting, wound complication, and wound infection. **PI-719210-AA**

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