

### Procedural Information

Date of procedure: March 2018  
Location: Strasbourg, France  
Hospital: University Hospital  
of Strasbourg  
Physician: Julien Garnon, MD

### Clinical Case Review 1

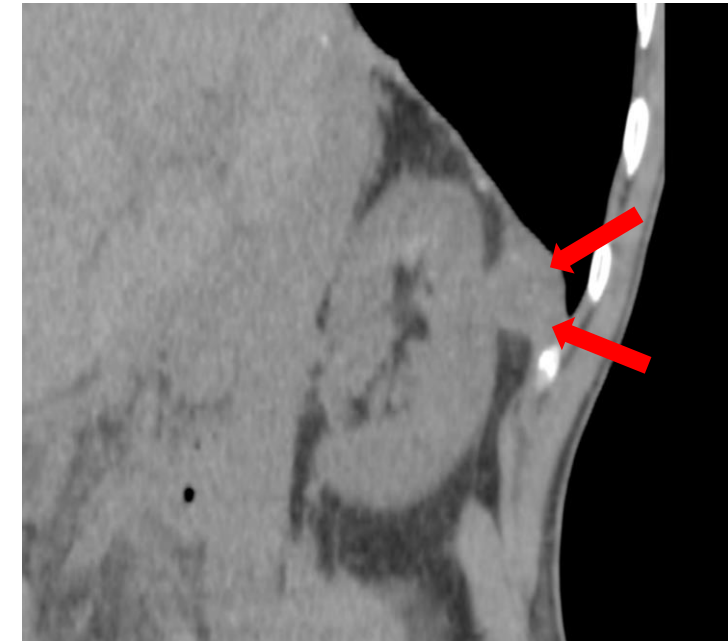
## Diaphragmatic cryoablation close to the kidney

### Case Description

33 years old man with a metastatic colon carcinoma was referred for cryoablation of a painful diaphragmatic met abutting the kidney. 3 cryoprobes were inserted in the tumor and a 12cm 17G Gangi-HydroGuard<sup>®</sup> was subsequently advanced in between the kidney, in order to perform hydrodissection and protect the kidney.



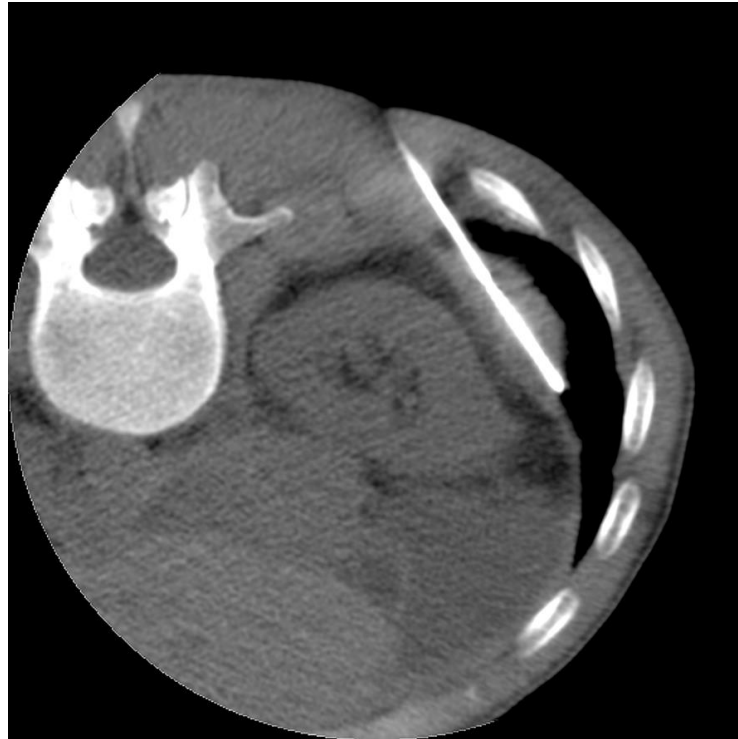
Axial CT view showing the diaphragmatic met (arrows)



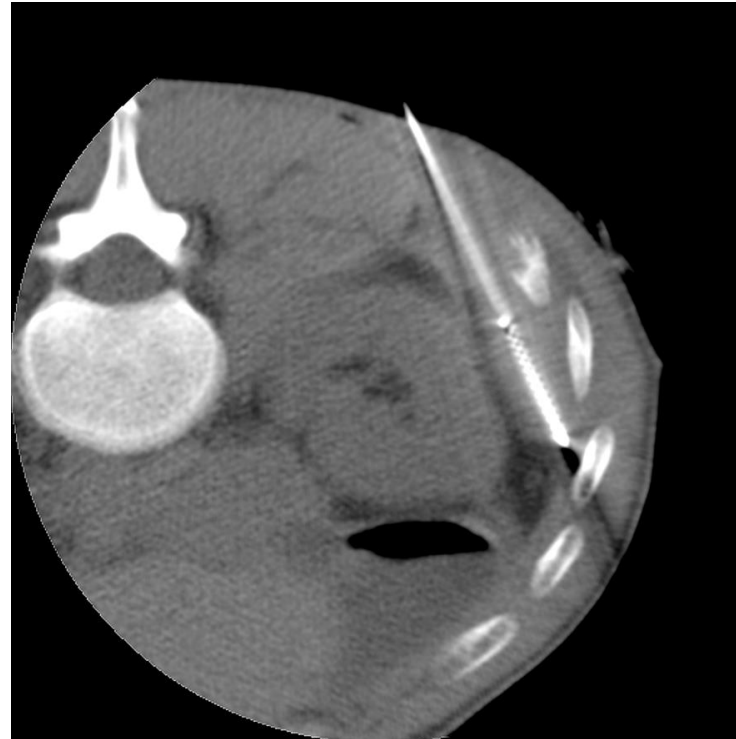
Coronal CT view

Coaxial Needle

## Diaphragmatic cryoablation close to the kidney



Insertion of cryoprobe#1

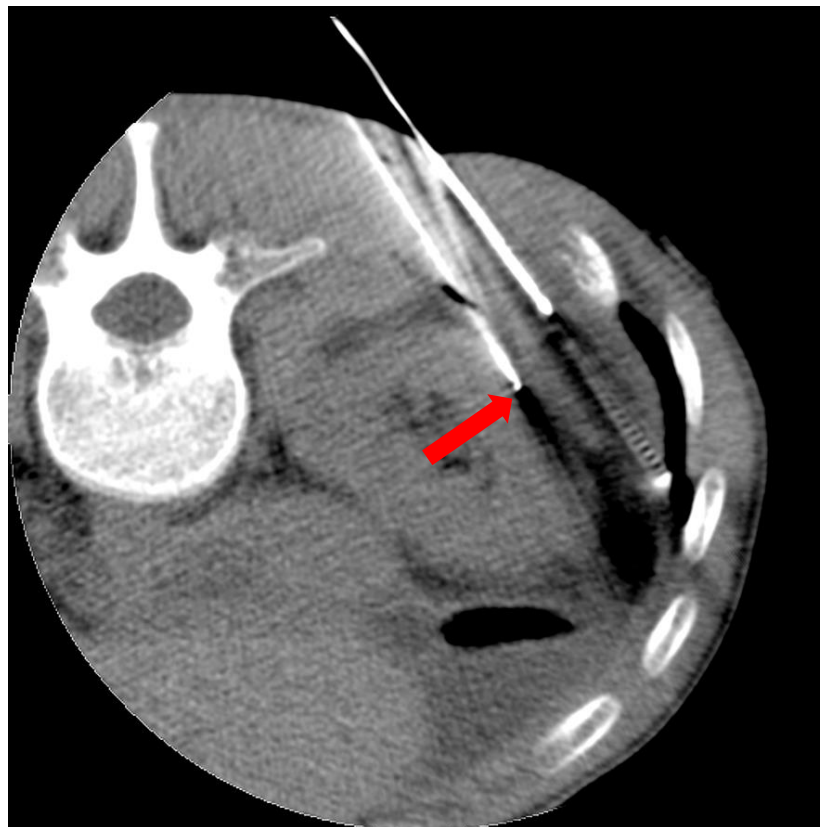
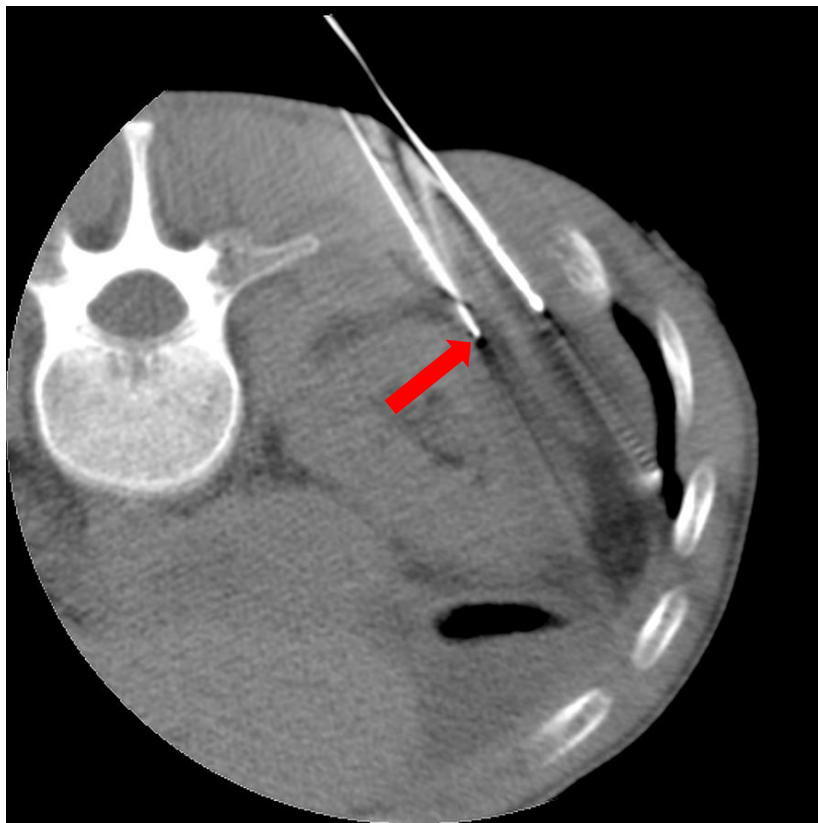


Insertion of cryoprobe#2



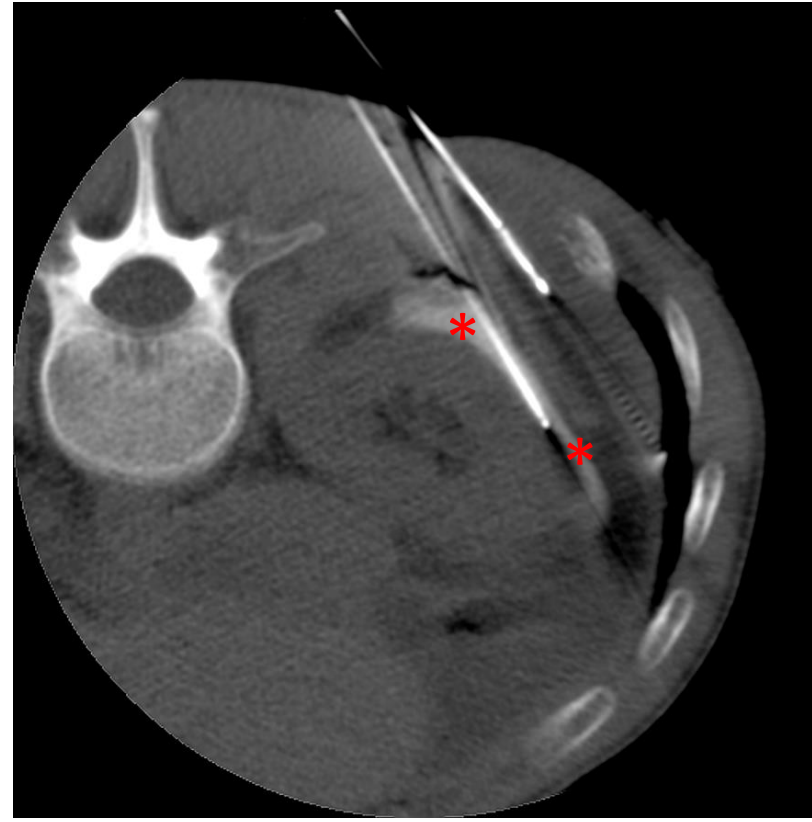
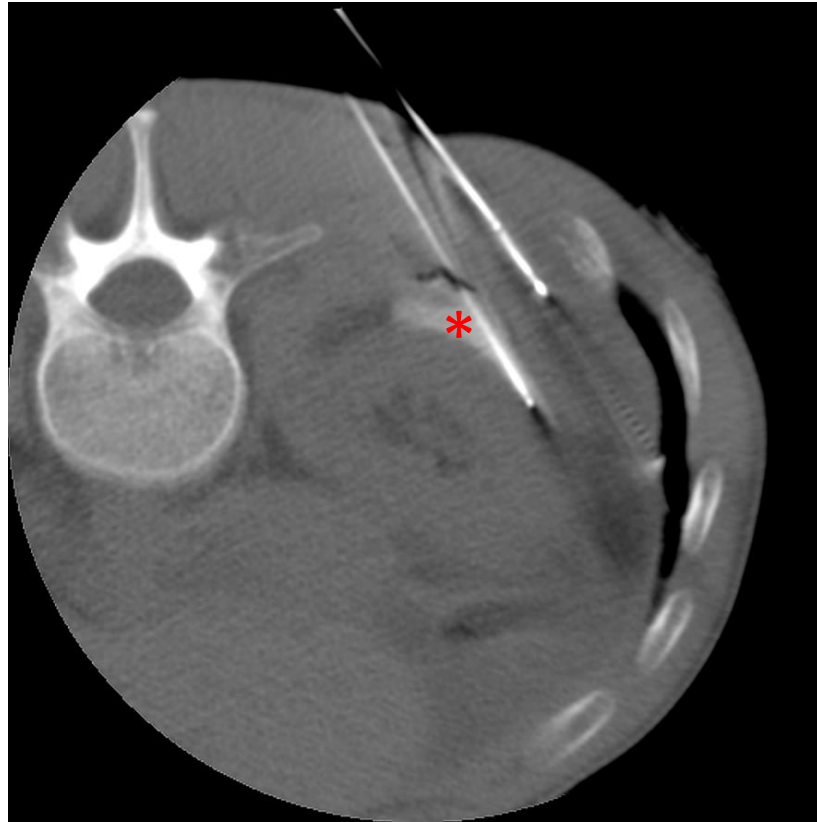
Insertion of cryoprobe#3

## Diaphragmatic cryoablation close to the kidney



12 cm 17G Gangi-HydroGuard<sup>®</sup> (arrow) is advanced in between the kidney and the mass with the blunt tip deployed

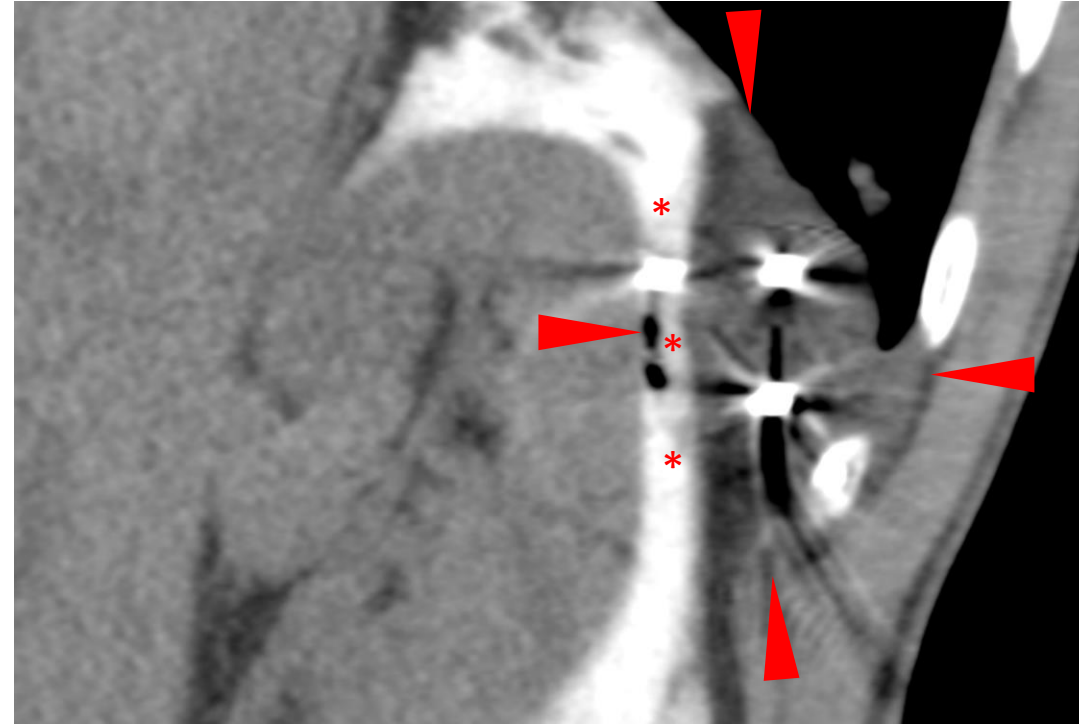
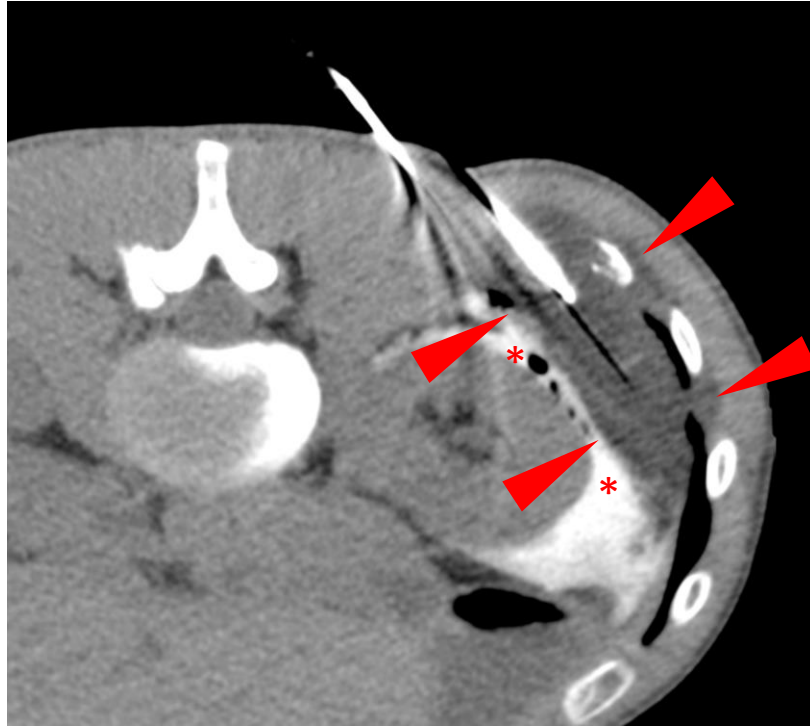
## Diaphragmatic cryoablation close to the kidney



Hydrodissection: 100ml of a mixture of saline and contrast (ratio saline-contrast: 50-1) is injected through the Gangi-HydroGuard<sup>®</sup> (asterisk),

Thereby allowing to physically separate the kidney from the mass (axial views)

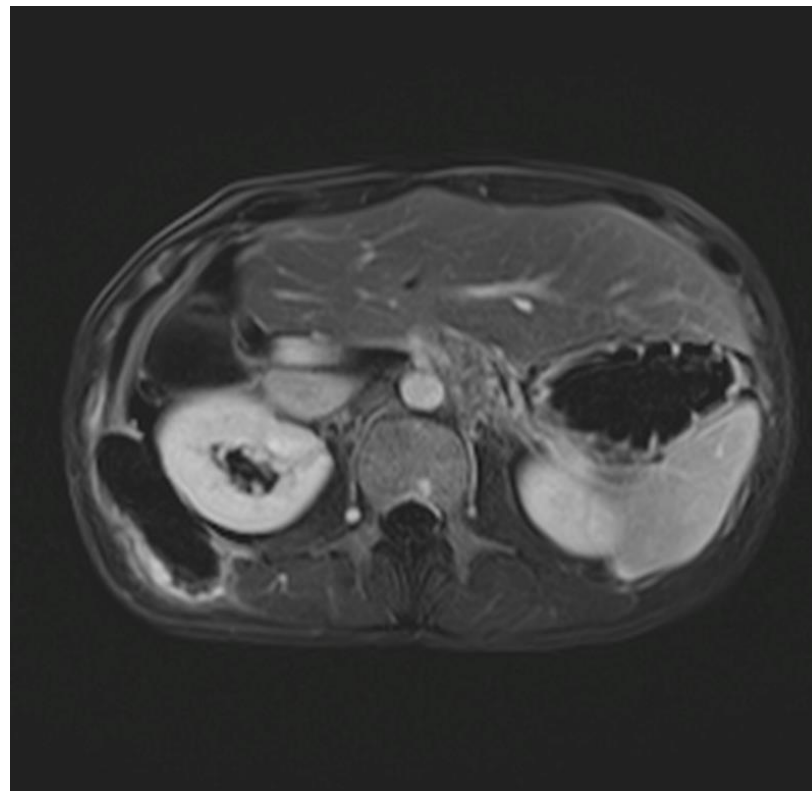
## Diaphragmatic cryoablation close to the kidney



Axial (left image) and coronal (right image) shows complete coverage of the mass by the iceball (arrows) without any unintended ablation of the kidney thanks to hydrodissection (asterisk)



## Diaphragmatic cryoablation close to the kidney



One month follow-up contrast enhanced MRI shows good necrosis of the lesion without any damage to the kidney

Case and image courtesy of Julien Garnon, MD, University Hospital of Strasbourg, Strasbourg, France