

Cryoablation of Large Rib Metastatic Bone Lesion

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PRESENTATION

- 57-year-old male with metastatic lung cancer (squamous carcinoma)
- Painful lesion of the fifth rib measuring 3.5cm x 4.0cm x 11.0cm, which had completely destroyed the rib itself (A) (B)
 - VAS pain score of 6/10 (treatment with opioids was not possible due to patient intolerance)
 - No further radiotherapy was possible (patient had received chest radiotherapy one year previously as part of treatment for lung tumour)



Presentation: CT scans in sagittal (left) and axial (right) views showing fifth rib lesion with complete destruction of the bone (arrows)



TREATMENT

- Six IceFORCE[™] 2.1 CX needles were used
- Two sets of three needles were positioned in a parallel fashion in the intercostal space where the rib had previously been CD
- Aim was to cover the lesion in length and sculpt an iceball to match the shape of the lesion old B
- Skin was protected by hydrodissection of the subcutaneous fat
- A double freeze protocol was used (100% freezing power on each needle)



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Cryoablation allowed ablation of a very large lesion with a high level of confidence due to the ability to control several needles simultaneously."



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Cryoablation: CT scan (axial view) showing position of three IceFORCE[™] 2.1 CX needles, each of which was placed parallel to a second needle



Cryoablation: CT scan (sagittal view) showing parallel placement of IceFORCE[™] 2.1 CX needles outlining the intercostal space where the rib had previously been



Cryoablation: CT scans in axial (left), sagittal (centre) and coronal (right) views showing hypodense iceball sculpted to match shape of lesion



OUTCOME

- The cryoablation procedure was well tolerated
- The patient's VAS pain score decreased from 6/10 before cryoablation to 3/10 five days after the treatment
- Unfortunately, the patient died one and a half months after the treatment because of rapid cancer progression



CONCLUSION

- Cryoablation allowed us to ablate a very large lesion due to the ability to control several needles simultaneously this would be very challenging with other ablation methods
- The previous radiation was not an issue
- Cryoablation offers a viable palliative treatment option for patients such as this where opioids are not effective or not tolerated



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CT: Computed tomography

VAS: Visual analogue scale

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