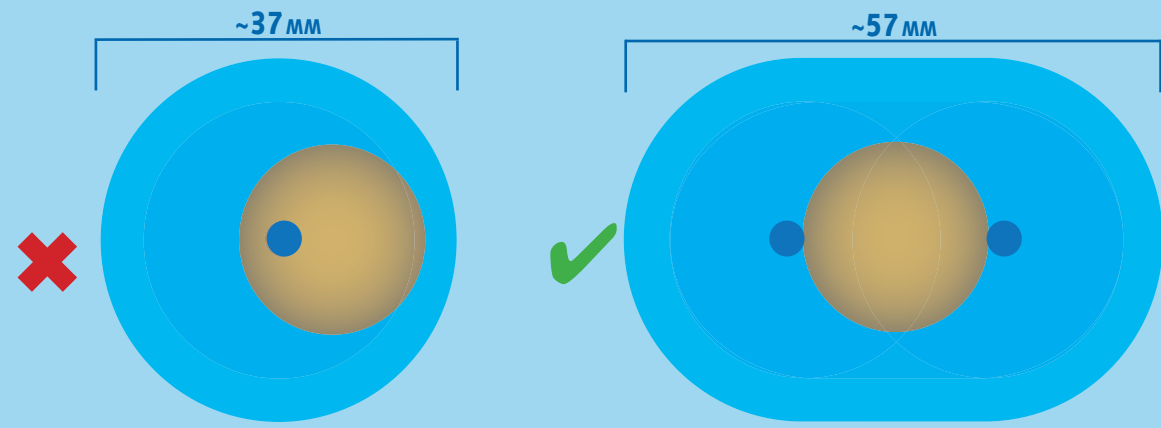


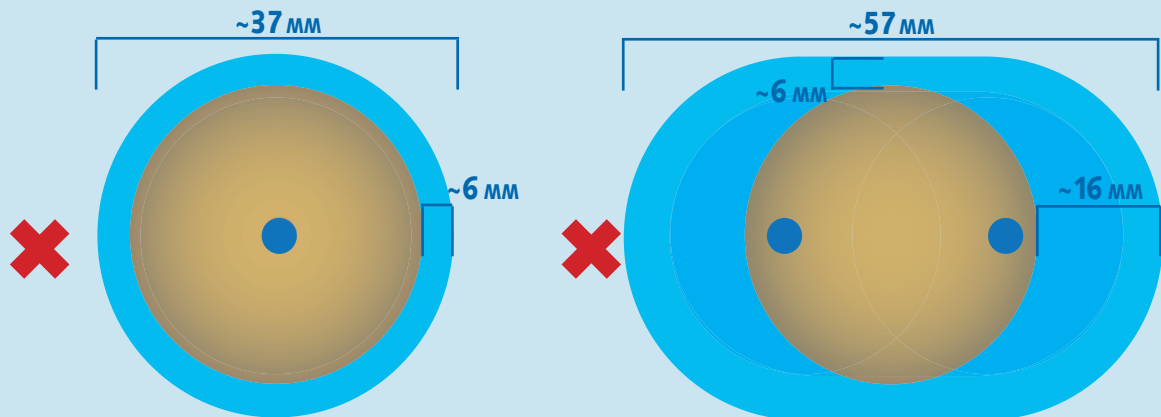
1.5 cm Tumor

PCS-24 0°C Ice Shown
Endpoint: ≥10 mm circumferential margin of ice beyond the tumor.



❌ Cryoprobe placement even a few mm off center in the tumor could cause an inadequate ablation zone by not subjecting the tumor to lethal temperatures.

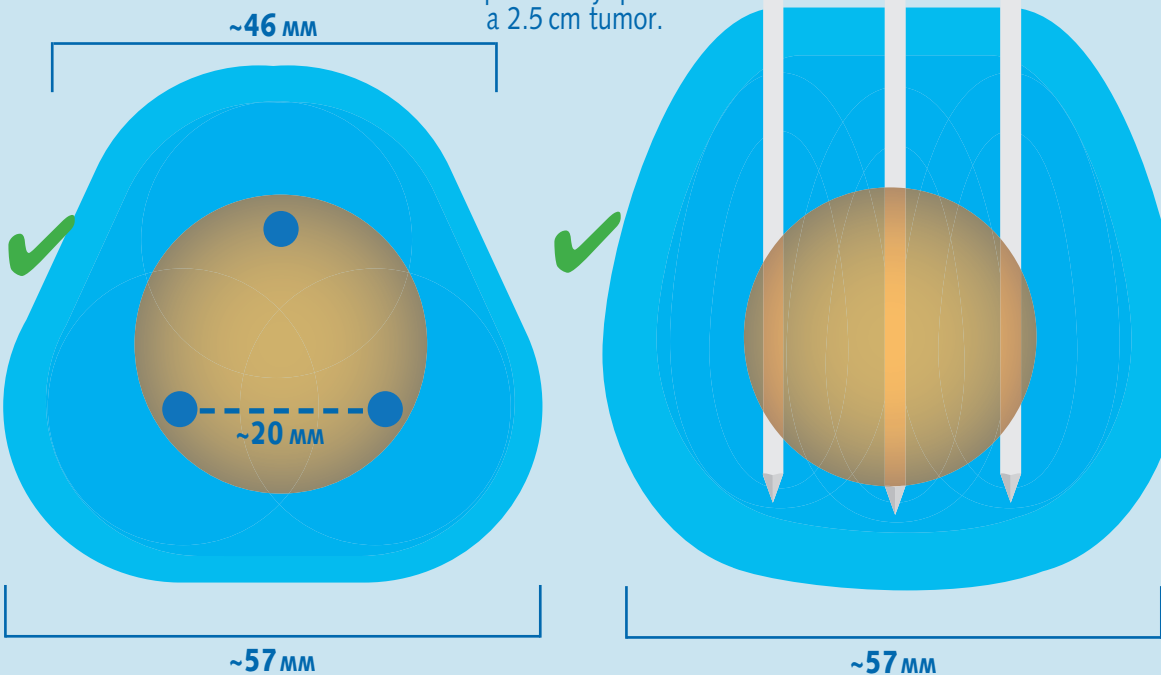
✅ Achieving the endpoint of 1 cm circumferential margin of ice requires 2 cryoprobes for a 1.5 cm tumor.



❌ A single PCS-24 cryoprobe cannot ablate this 2.5 cm renal tumor adequately.

❌ Although two PCS-24 cryoprobes look correct, the margin at the top and bottom is less than 10 mm.

Achieving the endpoint of 1 cm circumferential margin of ice requires 3 cryoprobes for a 2.5 cm tumor.



2.5 cm Tumor

PCS-24 0°C Ice Shown
Endpoint: ≥10 mm circumferential margin of ice beyond the tumor.

ESTIMATED NUMBER OF CRYOPROBES REQUIRED FOR VARIOUS LESION SIZES

Lesion Diameter	Required Ice Diameter	PCS-17 SlimLine™ Cryoprobes	PCS-24 SlimLine™ Cryoprobes
1 cm Spherical Lesion	≥3 cm Ice Image	1-2	1
1.5 cm Spherical Lesion	≥3.5 cm Ice Image	2-3	2
2 cm Spherical Lesion	≥4 cm Ice Image	3	2
2.5 cm Spherical Lesion	≥4.5 cm Ice Image	3-4	3
3 cm Spherical Lesion	≥5 cm Ice Image	3-4	3
3.5 cm Spherical Lesion	≥5.5 cm Ice Image	5	4
4 cm Spherical Lesion	≥6 cm Ice Image	5	4
4.5 cm Spherical Lesion	≥6.5 cm Ice Image	6	5
5 cm Spherical Lesion	≥7 cm Ice Image	6	5
6 cm Spherical Lesion	≥8 cm Ice Image	7	6

Note: The number of cryoprobes listed are for planning purposes only. Imaging must be used to ensure a 1 cm circumferential margin of ice around entire lesion.

This information is intended for health care professionals only. The decision to use Endocare, Inc. (or HealthTronics, Inc.) products should be made by a healthcare professional, in line with applicable local protocols. Endocare, Inc. (or HealthTronics, Inc.) products should always be used for the indications set out in the applicable instructions for use.



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- Hong, Kelvin, and Christos S. Georgiades, Percutaneous Tumor Ablation: Strategies and Techniques, p. 124, New York: Thieme (2011).
- Baust, John G., Andrew A. Gage, Anthony T. Robilotto, and John M. Baust, The Pathophysiology of Thermoablation: Optimizing Cryoablation, Current Opinion in Urology, Vol. 19, 127-132 (2009).

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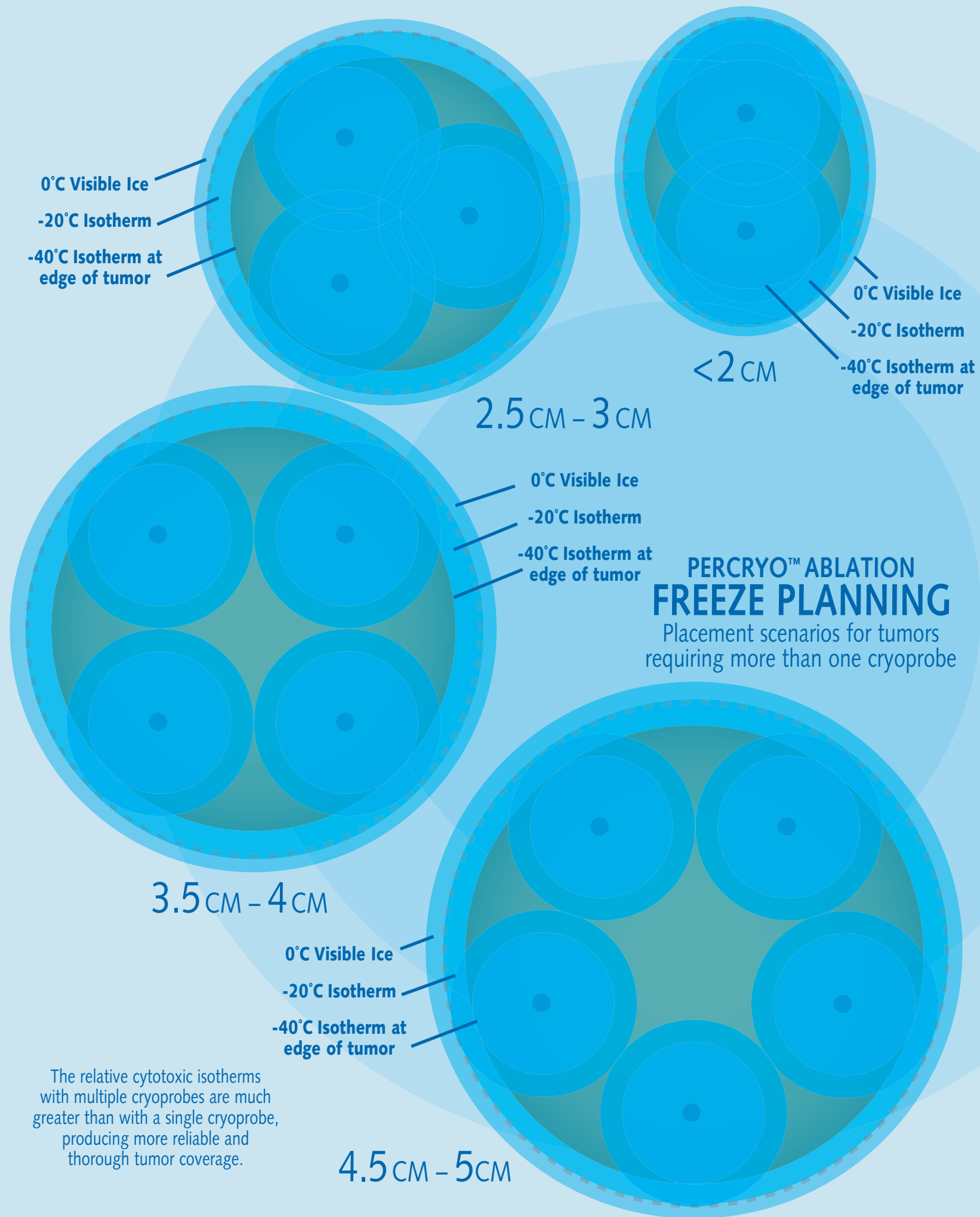
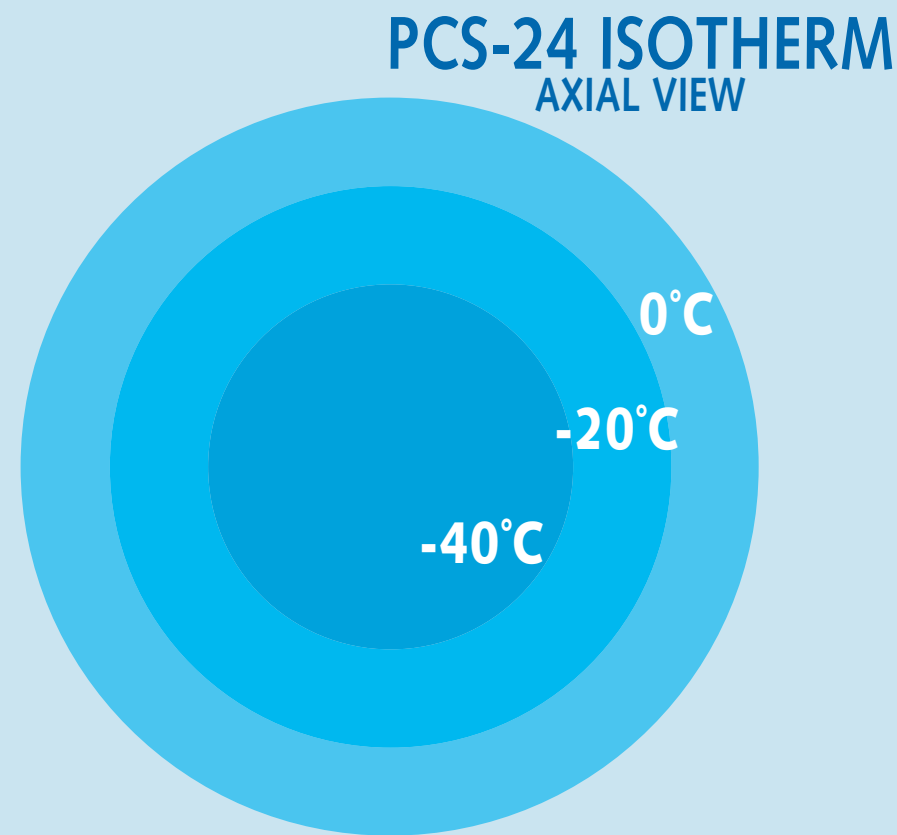
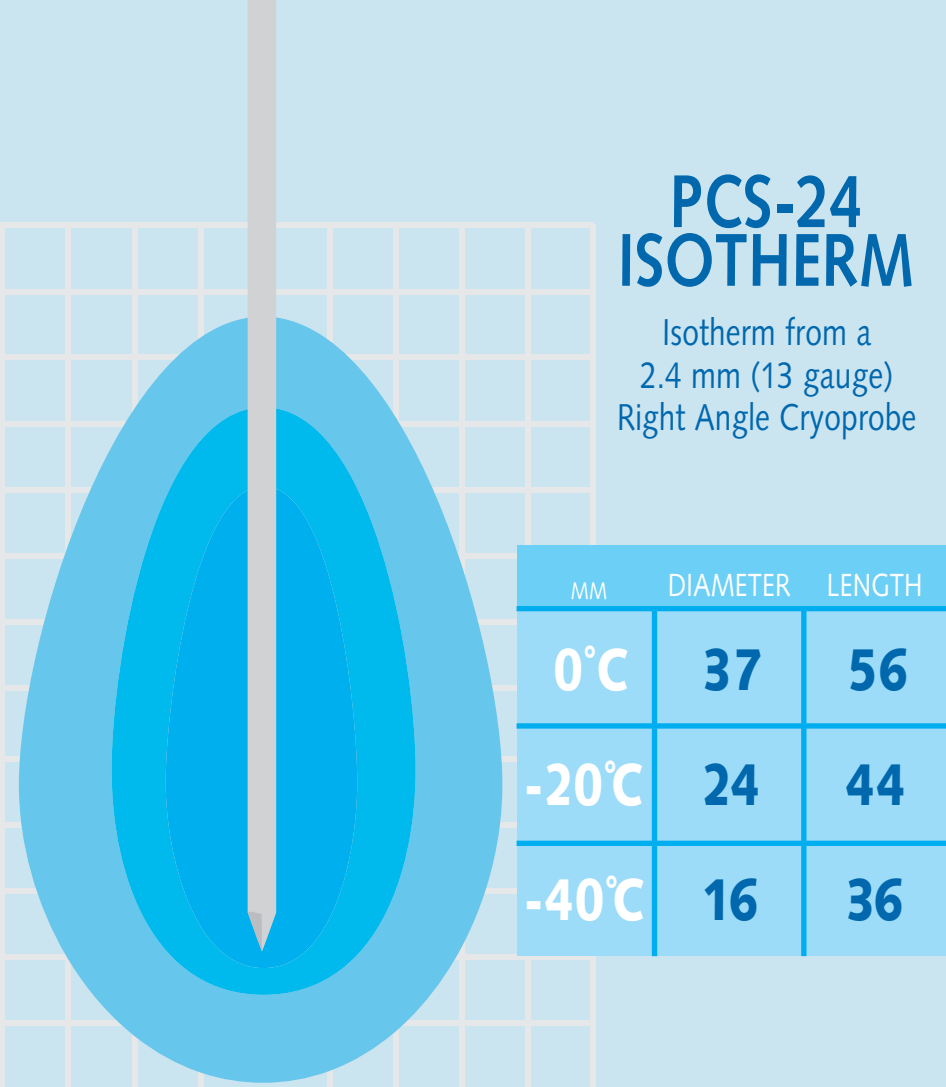
PERCRYO™ ABLATION PLANNING GUIDE



PERCRYO™ ABLATION FREEZE PLANNING & PLACEMENT

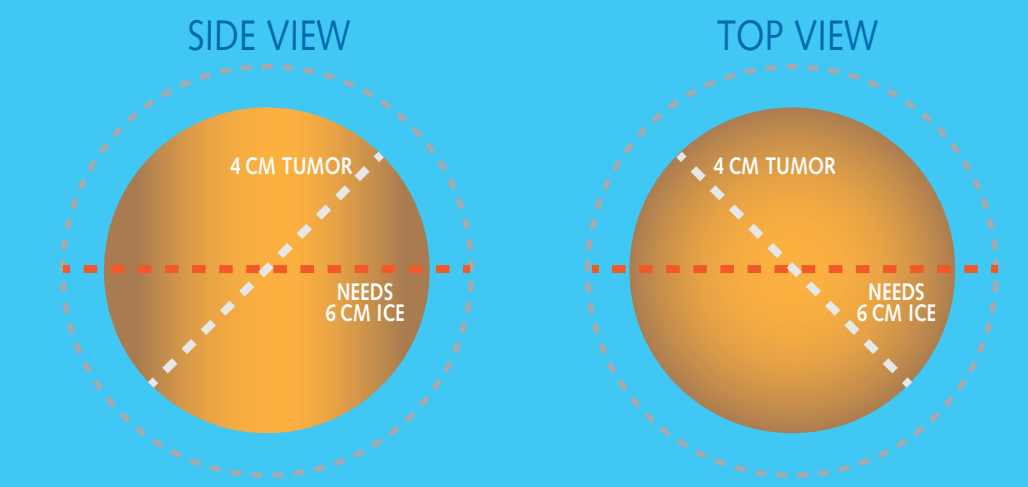
To ensure temperatures adequate for freezing a lesion, Endocare recommends that the 0°C edge of the cryoablation extend 1cm beyond the lesion. Clinical publications note that a 0.5cm margin is thought to be adequate in kidneys to ensure that the target tumor reaches a lethal temperature of -20°C.¹ In other tissues, however, the lethal temperature has been shown to be -40°C.² Thus, a 1cm margin helps to ensure adequate ablation in all tissues.

This Planning & Placement Guide is provided to assist clinicians with placement of cryoprobes in order to obtain a 1cm margin. It is important to note, however, that intraoperative imaging is the only way to ensure adequate margins.

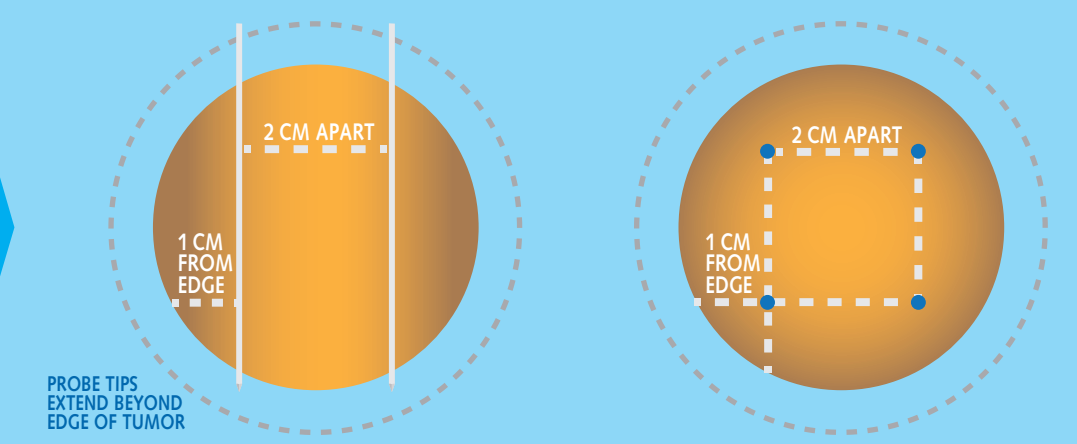


The relative cytotoxic isotherms with multiple cryoprobes are much greater than with a single cryoprobe, producing more reliable and thorough tumor coverage.

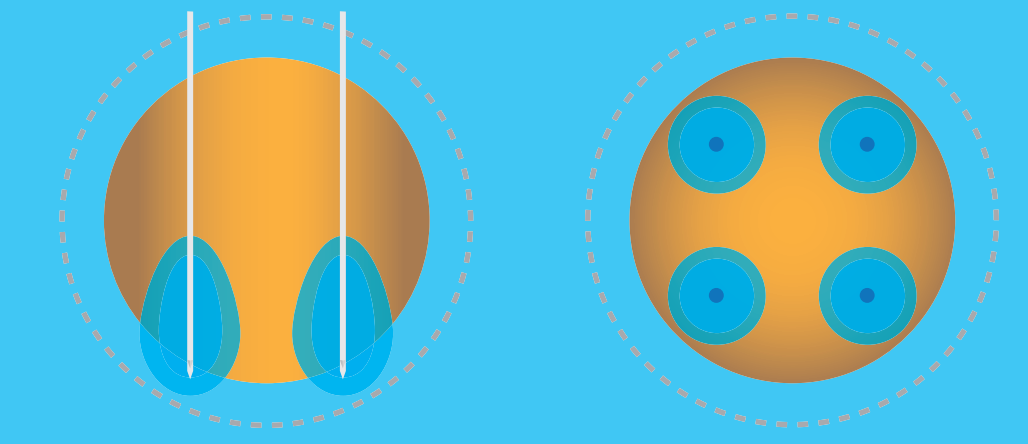
STEP 1:
A 4 cm tumor requires a 6 cm iceball to be formed. A 1 cm margin of ice is to ensure proper margins.



STEP 2:
To achieve proper coverage cryoprobes should be placed 1 cm from edge of tumor and 2 cm apart from each other. Tips should be placed a few millimeters beyond the distal aspect of the tumor.



STEP 3:
Cryoprobes should be started simultaneously to ensure proper coalescence of ice. Ice will start at tip and advance up the probe shaft.



STEP 4:
Final iceball size should be 1 cm beyond edge of tumor and completely covering the mass.

