

TABLE 1

Cryosurgery Indications and Techniques—General Recommendations

Indication	Technique	Usual number of freeze–thaw cycles	Freeze time (seconds)	Margin (millimeter)*	Expected number of treatment sessions
Benign					
Acne	D/OS/P	1	5 to 15	1	1
Common warts (including anogenital and plantar)	D/OS	1 to 3†	10 to 30	2	1 to 3†
Cutaneous horn	D/OS	1	10 to 15	2	1
Dermatofibroma	OS/P	1	20 to 60	2	2
Hemangioma	D/OS/P	1	10	< 1	1
Ingrown nail	D/OS	1	20 to 30	2	2
Keloid/hypertrophic scar	OS/P	1	20 to 30	2	1 to 3
Molluscum contagiosum	D/OS/P	1	5 to 10	< 1	2
Myxoid cyst	D/OS/P	1	20	< 1	1
Pyogenic granuloma	D/OS	1	15	< 1	1
Seborrheic keratoses	D/OS	1 to 3†	10 to 15	< 1	1 to 3†
Skin tags	D/F/OS/P	1	5	1 to 2	1
Premalignant/malignant					
Actinic keratoses	D/OS	1	5 to 20	1 to 2	1
Basal cell carcinoma	OS	1 to 3†	60 to 90	5	1 to 3†
Squamous cell carcinoma	OS	1 to 3†	60 to 90	5	1 to 3†

D = dipstick; F = forceps; OS = open spray; P = cryoprobe.

*—Margin refers to width of the halo of the surrounding ice ball.

†—Keratinized lesions may require more freeze time and additional treatment sessions.

Information from references 1-4, 12, and 13.

Adapted from 2020 AAFP article: <https://www.aafp.org/afp/2020/0401/p399.html>

TABLE 2

Low-Risk Features of Basal and Squamous Cell Carcinoma Amenable to Cryotherapy

Depth < 3 mm

Diameter < 2 cm

Immunocompetent

Low-risk site (e.g., cheek, extremity, forehead, neck, scalp, trunk)*

Nodular or superficial basal cell carcinoma (not morpheaform, sclerosing, infiltrating, micronodular, or the metatypical basal cell carcinoma subtype)

Nonulcerated

Not fixed to deeper structures

Primary lesion (not recurrent)

Well-defined margin

Well-differentiated squamous cell carcinoma

*—Cryosurgery is discouraged in sites at higher risk for metastasis or recurrence (e.g., ears, nose, nasolabial folds, chin, temple, periorificial areas).

Information from references 1, and 15-18.

TABLE 3

Contraindications and Cautions to Cryosurgery

Absolute contraindications

High-risk basal or squamous cell carcinoma or melanoma
Lesion for which pathology is required
Proven sensitivity or reaction to cryosurgery
Tumors with indefinite margins
Unable to accept possibility of pigment changes

Relative contraindications

Agammaglobulinemia
Cold intolerance
Cold urticarial
Cryofibrinogenemia
Cryoglobulinemia
Immunosuppression
Impaired vascular supply
Multiple myeloma
Pyoderma gangrenosum
Raynaud disease
Unexplained blood dyscrasia

Perform with caution

Anticoagulant use
Blistering disorders
Dark-skinned people
Infants
Older patients
Sensory loss
Sun-damaged or irradiated skin
Treatment over bony prominences

Information from references 1-3, and 23.

Areas Not Recommended for Cryosurgery

- Areas where hair loss is critical to the patient
- Areas where pigment changes are critical to the patient
- Feet, ankles, and lower legs, when circulation is in question (especially patients with diabetes or peripheral vascular disease)
- Over superficial cutaneous nerves (unless adequate skin traction to pull the skin away from the nerve is possible, usually with nitrous oxide technique)
- Basal cell cancers in the nasolabial fold, in preauricular areas, and on lips (often more extensive and tend to recur)
- Any cancer that has not had histologic confirmation
- Periorbital area (may induce immediate and severe swelling)
- Port wine stain (use laser)