

# Radiofrequency Ablation of Papular Melanocytic Nevi

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Radiofrequency has been established as a gentle surgical method for precise cuts and coagulation in aesthetic surgery. The range of radiofrequency surgery has now been extended to ablative, vaporising methods in aesthetic medicine. This novel method complements the armamentarium of the dermatologist in the operating room as well as those of the plastic surgeon and ENT specialist. Elevated benign nevi may now be removed elegantly and painlessly producing excellent cosmetic results.



Fig. 1: Monopolar ball electrode, malleable (REF 36 08 16)

**Introduction:** One of the most common requests of patients in a cosmetic clinic is the removal of elevated moles in the head and neck region. Commonly these lesions are treated with cryosurgery, electrocautery, ablative laser or by scalpel excision [1,2]. Alternatively, these nevi can now be removed with the CURIS® 4 MHz radiofrequency generator. Radiofrequency surgery facilitates a removal that is gentle to the tissue and produces hardly any scars: While the electrode itself is not heated, it concentrates and delivers energy to the target tissue. As a result, the surrounding tissue is spared. In contrast, low-frequency surgical interventions produce significantly larger lateral necrotized areas [2].

**Case Study:** A 38-year-old woman came to our clinic with two papular nevi on her left cheek (Fig. 2). Dermatoscopic evaluation yielded no signs of malignancy. After local anesthesia with prilocaine 1% and 1:100,000 adrenaline, tangential excision of the



Fig. 2: Papillomatose nevus cells on left cheek



Fig. 3: Tangential excision of papillomatose nevus

protruding nevus part was performed with a No. 15 scalpel blade (Fig. 3).

For the ensuing, more refined ablation, the CURIS® 4 MHz radiofrequency generator (REF 36 08 16) were employed (Fig. 1).

The remaining part of the lesion was removed by repeated, gentle, brush-like strokes with the electrode in a pure CUT mode (Fig. 4). A power adjustment of only 4 watts was sufficient. From time to time denaturated tissue was removed with a damp cotton gauze. The end point of treatment was reached when radiofrequency ablation reached a level just slightly below the surrounding skin. Postoperatively, the patient applied an antibiotic ointment for seven days. During a follow-up visit after 8 weeks the patient expressed her satisfaction with the cosmetic result (Fig. 5).

**Practical Advice:** The following procedure has been established empirically: To reduce

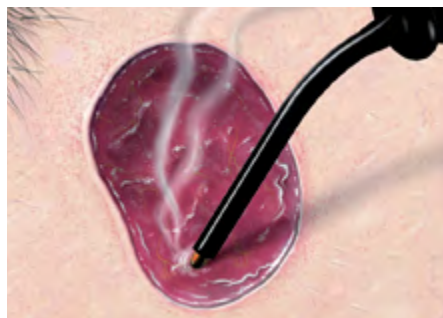


Fig. 4: Removing the remaining part of the lesion



Fig. 5: Eight weeks after radiofrequency ablation



Fig. 6: CURIS® 4 MHz radiofrequency generator

the risk of scar formation, the depth of the ablation should go only minimally below the level of the surrounding skin. Prior to treatment the patient should be informed that radiofrequency surgery is a gentle method and that a touch-up treatment might be indicated if the nevus recurs. The resected part of the nevus has to be sent in for histological examination. This serves for quality control purposes of the diagnosis and will provide additional information in the event that the nevus recurs and shows pseudomelanoma features.

To reduce unpleasant smells a smoke evacuator may be used. For hairy papular nevi radiofrequency epilation with special needles is recommended as a first step. Additionally to removing hair, radiofrequency epilation also reduces the risk of nevus recurrence as nevus cells are thermally damaged around the hair follicle. Congenital nevi have a higher tendency to recur because they extend deeply into the dermis and often involve hair follicles.



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**References:** 1. Hudson-Peacock MJ, Bishop J, Lawrence CM. Shave excision of benign papular naevocytic naevi. *Br J Plast Surg.* 1995; 48:318-22. 2. Tursen U, Kaya TI, Ikizoglu G. Round excision of small, benign, papular and dome-shaped melanocytic naevi on the face. *Int J Dermatol.* 2004; 43:855. 3. Niamtu, J. 4.0 MHz Radio Wave Applications in Cosmetic Facial Surgery. *Cosmetic Dermatology.* 2003 16:11. 33-46.

# Featured Products



Qty.	REF	Description
5	36 08 16	Monopolar ball electrode, malleable Ø 1.0 mm, total length: 63 mm



[REF 87 00 10] CURIS® 4 MHz radiofrequency generator  
basic set with single-use patient plates

Qty.	REF	Description
1	36 01 00-01	CURIS® 4 MHz radiofrequency generator (incl. mains cord, user manual and test protocol)
1	36 01 10	Footswitch two pedals for CURIS® (cut & coag), cable: 4 m
1	37 01 54L	Bipolar cable for CURIS®, length: 3 m
1	36 07 04	Monopolar handpiece (pencil) cut & coag, shaft 2.4 mm, cable: 3 m
1	36 02 38	Cable for single-use patient plates, length: 3 m
1 (x50)	12 80H	Patient plates, single-use, 5 x 10 pcs. (not shown)

### Unit settings / Other accessories\*

**CURIS®**  
4 MHz radiofrequency generator

Monopolar ball electrode: Monopolar CUT 1  
Power adjustment: 4 to 10 watts

Valid for the CURIS®  
with the orange label.

**CURIS®**  
4 MHz radiofrequency generator

Monopolar ball electrode: Monopolar CUT 1  
Power adjustment: 18 to 30 watts

\* Please consider that this information is not meant to serve as a detailed treatment guide. Always adjust according to patient and application.

Product availability is subject to regulatory approval in individual markets. Products may therefore not be available in all markets. Lengths for orientation purposes; may vary slightly.



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