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Dr. Kozarev has over fifteen years of experience in derm -atology and skin disease treat -ment. She has performed over 2500 skin laser surgeries. Throughout her career Dr. Kozarev has gained a tremend--ous amount of experience using lasers on a daily basis. Through her long-standing links with Fotona she has worked with virtually all of Fotona's laser systems in the aesthetic and surgery range and currently Dualis<sup>SP</sup> owns the

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# **Removal of Retro-auricular Keloids**

### **Recommended Parameters:**

Laser source:	Er:YAG (2940 µm)
SP Mode:	300 µsec
Fluence:	19 J/cm <sup>2</sup>
Frequency:	15 Hz
Handpiece:	R09

(Courtesy of Dr. Kozarev)



## Anamnesis:

A 19 year old male patient presented with 2 retroauricular keloids behind each ear. The 4 keloid scars resulted from several surgeries undertaken to correct the ear (A and B in the figure).

### Procedure:

The keloids were excised using short pulses  $(300 \ \mu sec)$ , high fluence  $(19 \ J/cm^2)$  and a moderate repetition rate 15 Hz. These settings caused 'cold ablation', i.e. ablation occurred so fast that there was no significant heating of the surrounding tissue.

A histopathological analysis of the keloid tissue showed an increase in connective tissue. The collagen structure of the excised tissue exhibited larger fibers with closely packed fibrils. Orientation of the fibers was random to the epidermis. There was an increase in the density of the blood vessels and the number of cells with respect to normal conditions.

After surgery 0.05% retinoic acid cream was applied daily and 5% imiquimode cream was applied nightly for three months. The patient was seen for follow up on the seventh day (C and D in the figure), and after 3, 6, 12, and 24 months.

### **Discussion:**

Excellent results were achieved using a Er:YAG 'cold ablation' regime coupled with topical retinoin and imiquimode. No follow up treatment was necessary.

There was no recurrence of keloid scarring at the 2 year follow up after surgery. The wound healed well and rapidly.

