



## Long-Pulse 1064 nm Nd:YAG Laser Hair Reduction of the Axillary Area with TimeWalker® Fotona4D®

**Neja Gerdovič, B. Sc. Cosmetics**

### Introduction:

Laser hair reduction is a medical procedure aimed at achieving long-term reduction of unwanted hair through selective photothermolysis of the hair follicle and its associated growth structures, including the dermal papilla. Effective follicular damage requires the use of laser wavelengths with high affinity for melanin and sufficient tissue penetration to reach the follicular unit within the dermis. As laser energy primarily affects hair in the anagen phase of the growth cycle, multiple treatment sessions are necessary to target follicles at different stages of hair growth. Indications for laser hair reduction include aesthetic concerns as well as medical conditions such as pseudofolliculitis, hypertrichosis, and hirsutism.

| Laser          | Fotona TimeWalker® Fotona4D® |
|----------------|------------------------------|
| Wavelength     | Nd:YAG (1064 nm)             |
| Handpiece      | R33T                         |
| Spot size      | 9 mm                         |
| Pulse duration | 15 ms                        |
| Fluence        | 30 J/cm <sup>2</sup>         |
| Frequency      | 1 Hz                         |
| Passes         | 2 passes, stamping mode      |
| Cooling        | Yes (Zimmer level 5)         |
| Sessions       | 6 sessions, 6 weeks apart    |



*Neja Gerdovič holds a Bachelor of Science degree in Cosmetics. During her studies, she gained practical experience with various laser systems for hair reduction and aesthetics. Currently, she is employed at the LA&HA Institute as a laser therapist and assistant, specializing in laser treatments. She also contributes to research projects involving Fotona lasers, further developing her expertise in aesthetic laser procedures.*

CLINICAL CASE:

A patient in her forties, Caucasian, with fair skin and dark hair, requested laser hair removal in the axillary area. She reported no history of ingrown hairs or skin irritation in this region. The procedure was performed using the TimeWalker® Fotona4D® laser system, utilizing the 1064 nm wavelength.

The treatment protocol consisted of six sessions, scheduled at intervals of four to six weeks. The same laser parameters were maintained consistently throughout all treatment sessions. The axillary area was divided into several smaller treatment zones; each zone was treated sequentially, and after completing one pass, a second pass was performed over the same area to ensure uniform energy delivery and optimal treatment coverage.

The patient presented with a pigmented nevus on one axilla. During the first session, only a few laser pulses were applied to the area of the nevus as a test spot. As no adverse reaction was observed and the treated hairs shed normally following the procedure, subsequent sessions included full treatment of this area as well.

Before and after photographs were taken seven days post-shaving to ensure consistent and comparable documentation. Post-procedure care instructions included avoiding hot showers, bathing, or sauna for three days after each session in order to minimize the risk of irritation. No additional special aftercare measures were required. Mild transient erythema was observed after some treatment sessions. The patient reported mild pain during all treatment sessions (VAS 3 out of 10). No other treatment-related side effects were noted.

Follow-up photographs were obtained six months after the final treatment session. The images demonstrated a clear reduction in hair density and thickness. The patient expressed high satisfaction with the results, and the treatment was considered effective and successful.

