

# diffuse alopecia: strengthening and increasing hair density by intradermal administration of mesohyal NCTC 109 and mesohyal BIOTIN

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## INTRODUCTION

Dermatologists and aesthetic medicine professionals are increasingly applying intradermal treatment in cases of diffuse alopecia in both men and women<sup>1</sup>. The technique consists in injecting active ingredients into the dermis to effectively stimulate and treat the fragility, weakness and general alopecia that is typical of the condition.

This study evaluates the clinical efficacy of the combination of two solutions for intradermal administration, with hyaluronic acid a complex of vitamins, amino acids, minerals and coenzymes. Its intradermal application activates skin microcirculation in order to stimulate healthy hair follicles and reactivate the hair formation process in weakened follicles or those in the atrophy phase.

## OBJECTIVE

To evaluate the efficacy and safety of intradermal administration of the combination of mesohyal NCTC 109 and mesohyal BIOTIN in the treatment of diffuse alopecia.

## MATERIALS AND METHODS

The study included 15 volunteers between 18 and 55 years old, who were diagnosed with diffuse alopecia lasting for 3 months to 5 years. As an inclusion criteria, it was established that volunteers had not received oral or topical treatment for this indication in the last 2 months.

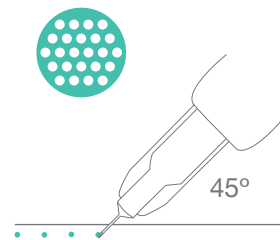
The mesohyal treatment administered consisted of a sterile, isotonic, aqueous solution resulting from the combination of:

- **mesohyal NCTC 109:** hyaluronic acid combined with more than 20 amino acids and a cocktail of 12 vitamins (from groups A, B, C, E and I), coenzymes and mineral salts. It acts to moisturise and invigorate the scalp.
- **mesohyal BIOTIN:** hyaluronic acid combined with vitamin B8 (biotin), other B-group vitamins and mineral salts, which are essential to the hair regrowth process. It has a poly-revitalizing action, reactivating the metabolism and nourishing the scalp.

For intradermal application, was used a 3-part 1 ml syringe with Luer-Lock® technology and a 0.3 x 4 mm 32 gauge needle. A total volume of 4.5 ml of solution was administered: 2.5 ml **mesohyal NCTC 109** + 2 ml **mesohyal BIOTIN**.

**APPLICATION AREA:** the uppermost area of the scalp, between the frontal region, parietal regions and the crown.

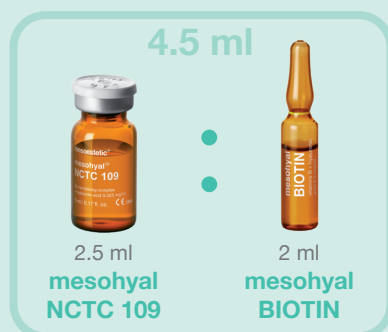
**PUNCTURE TECHNIQUE:** *nappage*<sup>2-3</sup>



- Puncture depth: <4 mm
- Puncture angle: 45° inclination
- Dose per puncture: 0.05 ml of solution
- Distribution: <5 mm between points

## TREATMENT PROTOCOL

The solution resulting from the mixture of 2.5 ml **mesohyal NCTC 109** + 2 ml **mesohyal BIOTIN** is applied intradermally using *nappage*<sup>2-3</sup> over 5 sessions every 15 days:



# X 5 sessions



During the treatment, **tricology hair growth intensive lotion** was applied by the patients at night, on alternate days. Once the protocol ends, it's recommended that patients continue with one session every 1-2 months to improve the result achieved.

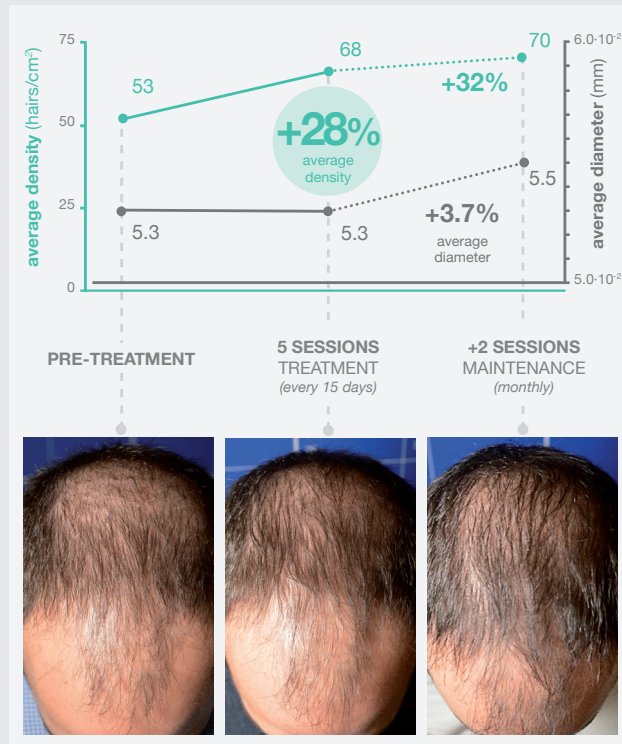
## RESULTS

In the clinical evaluation of results from the photographic record using the TrichoScope system, an **increase in hair density** per  $\text{cm}^2$  and an **increase in the mean hair diameter** were observed.

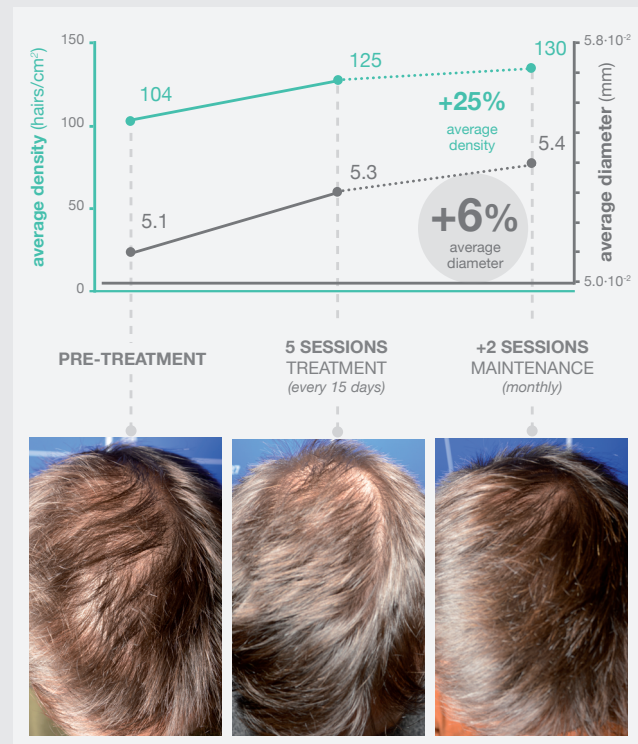
### Results and progress of the treatment in two representative cases:

To evaluate the effectiveness of the treatment, images with a x 55 magnification were taken of the treated area during each control visit using the TrichoScope system, and the hair density and diameter were calculated.

CASE 1: **Gender: Male · Age: 43**



CASE 2: **Gender: Male · Age: 36**



• **Average hair density per  $\text{cm}^2$ :** this was calculated by counting the hairs in the area covered by each image ( $0.4\text{cm}^2$ ). The result was expressed as the number of hairs per  $\text{cm}^2$ .

• **Average hair diameter:** average value of the hair diameter obtained using the TrichoScope software, in millimetres.

**Results obtained after subjective evaluation by the patients at the end of treatment:**

**80%** satisfaction with the result obtained and **93%** decrease in alopecia.

## CONCLUSIONS

- ▶ The intradermal administration of **mesohyal NCTC 109 + mesohyal BIOTIN** to the scalp **increases the density and diameter of the hair**, as well as increases its resistance to traction, with **visible results after 5 sessions of treatment**. The volunteers reported a good tolerability profile.
- ▶ The good results observed make it an effective and reliable alternative for treating diffuse alopecia.

1. Bou Camps L; Mesoterapia en el tratamiento de la alopecia. Oral comunicacion. XXVII GEDET meeting. 2015; Málaga, 13-14 Nov. 2. Ordiz I. Tratado de Mesoterapia. KRK Ediciones, 2nd spanish edition. 1999. 3. Scan the QR code to display the principal mesotherapy injection techniques.

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Intradermal medical devices are controlled by independent official bodies that certify their quality through the CE mark. This guarantee of safety and efficacy is mandatory.

Scan the QR code to display *nappage* injection technique.



KFMHYA0013/2007