



Standardization of the Terminology Used in FUE

Part III

Introduction

The terms in this part of FUE standard terminology focus on the measurement of quality in extraction. Utilizing these measurements in daily practice allows the practitioner to fully assess the quality of his or her technique. In order to perform these calculations, the following must be observed, counted, and recorded in all surgeries: 1) the number of punch insertions; 2) all pieces of tissue removed regardless of appearance; 3) the number of partially and completely transected follicles in all removed tissue; 4) the number of follicles intact and transected per graft, and 5) pre-operative densitometry.

Results

Intact Graft: This graft is comprised of the entire structure of a healthy terminal follicular unit, including intact structures of the infundibulum, isthmus, and bulbar structures, and has not suffered any trauma during the process of extraction.

Partially Transected Graft: Refers to a graft that contains one or more follicles that have been transversally cut, but which still contains intact follicles.

Completely Transected Graft: Refers to the amputation of all the follicles within a graft so that there are no intact follicles in the extracted tissue.

Buried Graft: A graft that is pushed and remains under the skin surface during an attempt to cut and isolate with a circular punch.

Empty Graft: A graft of skin lacking hair follicles resulting from the insertion of a punch into bald skin.

Missing Graft (MG): Any graft (intact, complete or partial transection, capped, buried, or empty) that cannot be located because it is misplaced during the surgery. It's the difference between the total number of punch insertions and the total number of grafts available for hair transplant, plus the number of grafts unavailable for transplantation:

$MG = \text{total number of punch insertions} - (\text{grafts available for HT} + \text{graft unavailable for HT}).$

Total Number of Punch Insertions (or Punch Attempts): The total of all punch insertions made, whether the insertions yield graft or not.

Total Number of Grafts Available for Transplant: The total number of intact grafts or partially transected grafts available for insertion.

Total Number of Grafts Unavailable for Hair Transplant: The difference between the number of punch insertions and number of grafts available for hair transplant. The sum of missing, capped, completely transected, and empty grafts equals the total number of grafts unavailable for hair transplant.



Total Number of Grafts Extracted: The number of grafts available for transplant plus the number of grafts unavailable for transplant.

Missing Graft Rate (MGR): The number of missing grafts divided by the number of punch insertions. MGR equals:

$$\frac{\text{Number of missing grafts} \times 100}{\text{Number of punch insertions}}$$

Graft Transection Rate (GTR): The result obtained when the number of grafts containing one or more transected follicles is divided by the total number of grafts extracted. GTR equals:

$$\frac{\text{Total number of transected grafts (partially + completely)} \times 100}{\text{Total number of extracted grafts}}$$

Completely Transected Graft Rate (Total Transection Rate, TTR): The result of the total number of grafts completely transected divided by the total number of grafts extracted. TTR equals:

$$\frac{\text{Total number of completely transected grafts} \times 100}{\text{Total number of extracted grafts}}$$

Partially Transected Graft Rate (Partial Transection Rate, PTR): The result obtained by dividing the number of grafts partially transected by the total number of grafts extracted. PTR equals:

$$\frac{\text{Total number of partially transected grafts} \times 100}{\text{Total number of extracted grafts}}$$

Follicle Transection Rate (FTR or TR): The result obtained when the number of transected follicles is divided by the total number of follicles that have been extracted, both intact and transected. FTR equals:

$$\frac{\text{Total number of transected follicles} \times 100}{\text{Total number of extracted follicles (intact + transected)}}$$

Calculated Follicles per Graft Expected (CFGE): The number of intact follicles extracted plus the number of follicles transected divided by number of grafts available for transplant plus the total number of completely transected grafts. CFGE equals:

$$\frac{\text{Intact follicles} + \text{transected follicles extracted} \times 100}{\text{Total number of grafts available for transplant} + \text{completely transected grafts}}$$

Calculated Follicles per Graft Achieved (CFGGA): The number of intact follicles extracted divided by the number of extracted grafts available for transplant plus the total number of completely transected grafts. CFGGA equals:

$$\frac{\text{Intact follicles} \times 100}{\text{Total number of grafts available for transplant} + \text{completely transected grafts}}$$



Pared Follicle Rate (CFGF): The number of follicles pared (or de-sheathed) divided by the total number of follicles (intact and transected) that have been extracted. PFR equals:

$$\frac{\text{Total number pared follicles}}{\text{Total number of extracted follicles (intact + transected)}}$$

Donor's Area Calculated Density (Hairs per Follicular Group): The number of follicles counted in the donor area divided by the number of follicular units or follicular families counted in the same donor area (typically performed with a dermatoscope or trichoscope).

Source

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