



Professional hair and scalp diagnostic software  
**TrichoSciencePro**®

**Patient name: Mary Smyth**

## **Outpatient card**

Patient's first and last name: **Mary Smyth**

Age: **30**

Height: **5 ft. 5 in.**

Weight: **105 lbs.**

Occupation or professional environment: **Teacher**

Referral from: **Physician**

Complaints: **Hair loss, dandruff, scalp sensitivity**

## **Questionnaire**

### **Hair and scalp condition:**

Onset of hair loss: **5 months**

Intensity of hair loss: **Strongly-expressed**

Duration of hairloss: **Less than 6 months**

Hair thinning: **Diffuse**

### **Female Pattern Baldness:**

Ludwig Scale, type: **I-1**

Ludwig Scale, class: **1**

Heredity factor in first degree relatives: **No**

Heredity factor in other relatives: **None**

Hair type: **Mixed**

Hair form: **Wavy**

Hair sort: **Thin**

Hair length and natural color: **16", brown**

Scalp condition: **Combination**  
Scalp changes: **Dandruff, sensitivity**  
Dandruff: **Moderate**  
Seborrheic dermatitis: **Areas of redness**  
Pruritus (itch): **Mild**  
Sensitivity: **Severe**  
Level of greasiness and excessive oils: **1**  
Condition of skin other than scalp: **Normal**  
Hirsutism: **None**  
Acne: **Absent**  
Special diet or dietary regulations: **None**  
Presence of "bad habits" (regular smoking, alcohol, lack of sleep): **lack of sleep**

## **Health conditions:**

Childbirth(s), abortion(s): **Yes**  
Hormonal contraceptive therapy abolition: **None**  
Menses periodicity without contraceptive therapy: **Regular**  
Menses duration (days): **5**  
Menses intensity(Score): **+1**  
Infertility: **No**  
Other: **Flu**  
Surgeries, injuries, high fever, narcosis up to 6 months prior to hair loss onset: **No**  
Administration of drugs potentially causing hair loss: **No**  
Prescription / non-prescription drugs on regular basis: **Tylenol**  
Exposure to stress: **some**  
Condition of nervous system: **Normal**

## **Lab data / Blood tests:**

Hemoglobin: **Below normal range**  
Ferritin, serum iron: **Below normal range**  
Transferrin, total iron binding capacity: **Norm**  
Hormones: FAI (Tx100/SHBG), FSH, LH, Prolactin, DHEAS, 17-OH: **Norm**  
TSH (Thyroid Stimulating Hormone): **Deviations from normal range**

## **Routine care and treatment efficacy:**

Hair wash frequency: **Every other day**  
Choice of shampoo: **Organic**  
Conditioner / Mask / Cream: **Organic**  
Hair styling: **Other**  
Hair dyeing (if yes for how long and how often): **6 month ago**

Hair bleaching (if yes for how long and how often): **None**  
Hair perming (if yes for how long and how often): **None**  
Hair cut frequency: **Tips only**  
Previous hair treatments: **herbal remedies topically**  
Food supplements / special vitamins: **Fish oil, Multivitamins**  
Herbal remedies: **topical**  
Procedures: **Massage**  
History of most effective treatment methods/products: **None**  
Usage of topical minoxidil or similar treatments: **No**  
COC (combined oral contraceptives): **None**  
HRT (hormone replacement therapy): **None**  
Finasterides (Proscar, Propecia, etc.): **None**  
Dutasterides (Avodarf, Avolve, etc.): **None**  
Drug intolerances, if any: **None**  
Provisional diagnosis: **FPHL, Psoriasis**

## **Trichoscopy: 2/20/2013 10:11:05 AM**

### **Parietal area estimation:**

#### **Density/cm<sup>2</sup>:**

Total: 256 (100%)

Terminal: 160 (62%)

Vellus: 96 (38%)

#### **Total calculated/19 sq.mm**

Total: 48 (100%)

Terminal: 30 (62%)

Vellus: 18 (38%)

#### **Total follicular units: 29**

Follicular units per sq.cm: 154.7

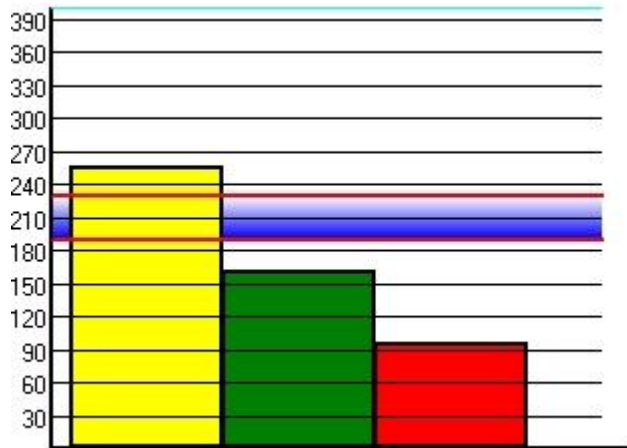
Single follicular units: 58.6% (17 per 18.75 sq.mm)

Double follicular units: 27.6% (8 per 18.75 sq.mm)

Triple follicular units: 13.8% (4 per 18.75 sq.mm)

Yellow dots total: 4 in 1 field of view

Hair density chart:



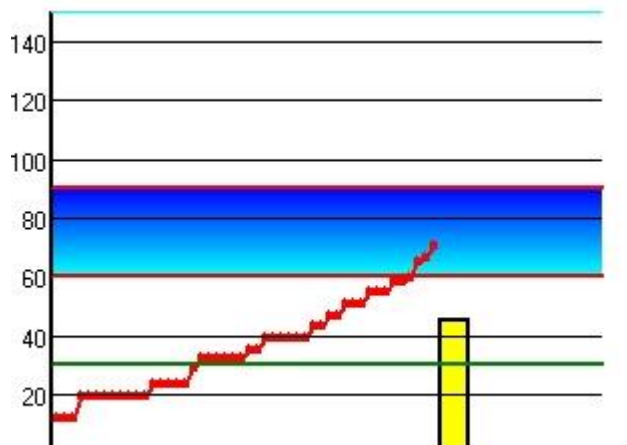
- Total hairs: 256 per sq.cm.
- Terminal hairs: 62% (160 per sq.cm.)
- Vellus hairs: 38% (96 per sq.cm.)
- Normal mean density for this hair type

Follicular units per sq.cm: 154.7  
 Single follicular units: 58.6% (17 per 18.75 sq.mm)  
 Double follicular units: 27.6% (8 per 18.75 sq.mm)  
 Triple follicular units: 13.8% (4 per 18.75 sq.mm)  
 Yellow dots total: 4 in 1 field of view

**Hair diameter:**

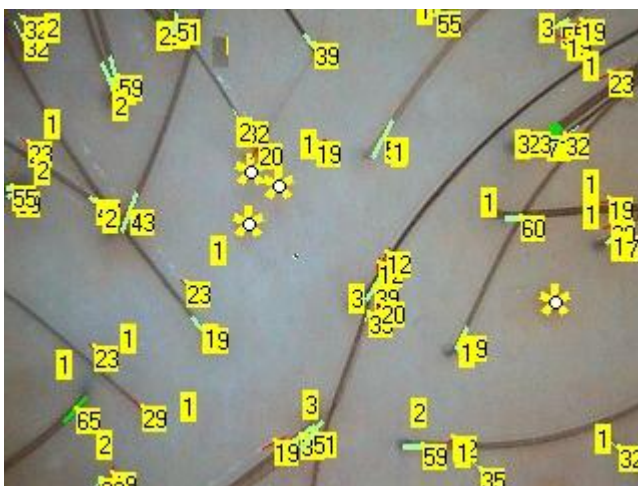
Measured total: 48 hairs per 18.75 sq.mm  
 Mean diameter: All hairs 36 +/- 2.3 µm  
 Mean diameter: All Terminal hairs (>30 µm) 46 +/- 2.1 µm  
 Measured Terminal hairs (>30 µm): 62% (30 per 18.75 sq.mm)  
 Measured Vellus hairs (<30 µm): 38% (18 per 18.75 sq.mm)  
 Among Terminal hairs: Thin hairs (30-60 µm): 90%  
 Regular hairs (60-80 µm): 10%  
 Anisotrichosis: 36 +/- 15.7 µm

Hair diameters chart:



- Mean diameter: All Terminal hairs (>30  $\mu\text{m}$ ) 46 +/- 2.1  $\mu\text{m}$
- Measured hairs diameter
- Normal mean diameter for this hair type

Measured total: 48 hairs per 18.75 sq.mm  
 Mean diameter: All hairs 36 +/- 2.3  $\mu\text{m}$   
 Measured Terminal hairs (>30  $\mu\text{m}$ ): 62% (30 per 18.75 sq.mm)  
 Measured Vellus hairs (<30  $\mu\text{m}$ ): 38% (18 per 18.75 sq.mm)  
 Among Terminal hairs:  
 Thin hairs (30-60  $\mu\text{m}$ ): 90%  
 Regular hairs (60-80  $\mu\text{m}$ ): 10%  
 Anisotrichosis: 36 +/- 15.7  $\mu\text{m}$



**Occipital area estimation:**

**Density/cm2:**

Total: 363 (100%)  
 Terminal: 272 (75%)  
 Vellus: 91 (25%)

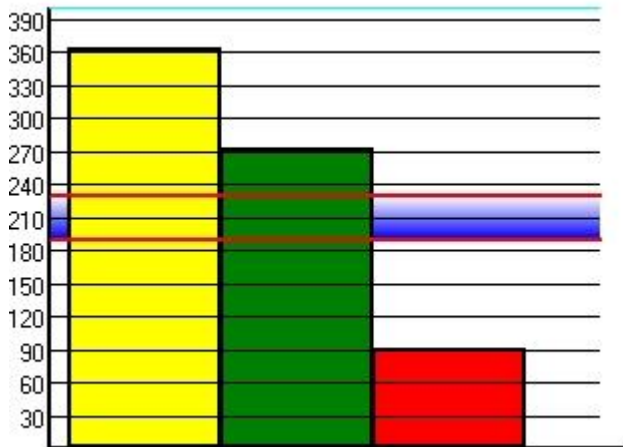
**Total calculated/19 sq.mm**

Total: 68 (100%)  
 Terminal: 51 (75%)  
 Vellus: 17 (25%)

**Total follicular units: 43**

Follicular units per sq.cm: 229.3  
Single follicular units: 72.1% (31 per 18.75 sq.mm)  
Double follicular units: 23.3% (10 per 18.75 sq.mm)  
Triple follicular units: 4.7% (2 per 18.75 sq.mm)  
Yellow dots total: 3 in 1 field of view

Hair density chart:



- Total hairs: 363 per sq.cm.
- Terminal hairs: 75% (272 per sq.cm.)
- Vellus hairs: 25% (91 per sq.cm.)
- Normal mean density for this hair type

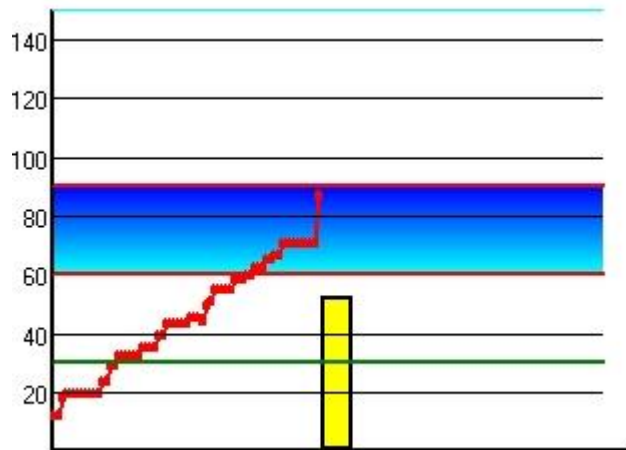
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Follicular units per sq.cm: 229.3  
Single follicular units: 72.1% (31 per 18.75 sq.mm)  
Double follicular units: 23.3% (10 per 18.75 sq.mm)  
Triple follicular units: 4.7% (2 per 18.75 sq.mm)  
Yellow dots total: 3 in 1 field of view

**Hair diameter:**

Measured total: 67 hairs per 18.75 sq.mm  
Mean diameter: All hairs 45 +/- 2.5 µm  
Mean diameter: All Terminal hairs (>30 µm) 53 +/- 2.0 µm  
Measured Terminal hairs (>30 µm): 76% (51 per 18.75 sq.mm)  
Measured Vellus hairs (<30 µm): 24% (16 per 18.75 sq.mm)  
Among Terminal hairs: Thin hairs (30-60 µm): 67%  
Regular hairs (60-80 µm): 31%  
Thick hairs (>80 µm): 2%  
Anisotrichosis: 44 +/- 19.7 µm

Hair diameters chart:



**Mean diameter: All Terminal hairs (>30 µm) 53 +/- 2.0 µm**

**Measured hairs diameter**

**Normal mean diameter for this hair type**

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**Measured total: 67 hairs per 18.75 sq.mm**

**Mean diameter: All hairs 45 +/- 2.5 µm**

**Measured Terminal hairs (>30 µm): 76% (51 per 18.75 sq.mm)**

**Measured Vellus hairs (<30 µm): 24% (16 per 18.75 sq.mm)**

**Among Terminal hairs:**

**Thin hairs (30-60 µm): 67%**

**Regular hairs (60-80 µm): 31%**

**Thick hairs (>80 µm): 2%**

**Anisotrichosis: 44 +/- 19.7 µm**

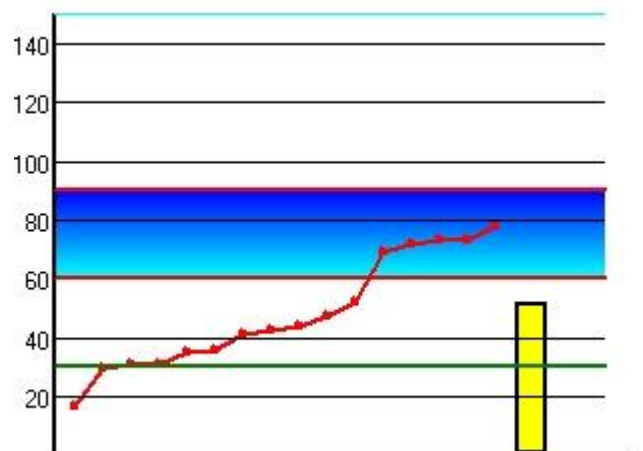


**Hair diameter:**

**Parietal area**



**Occipital area**





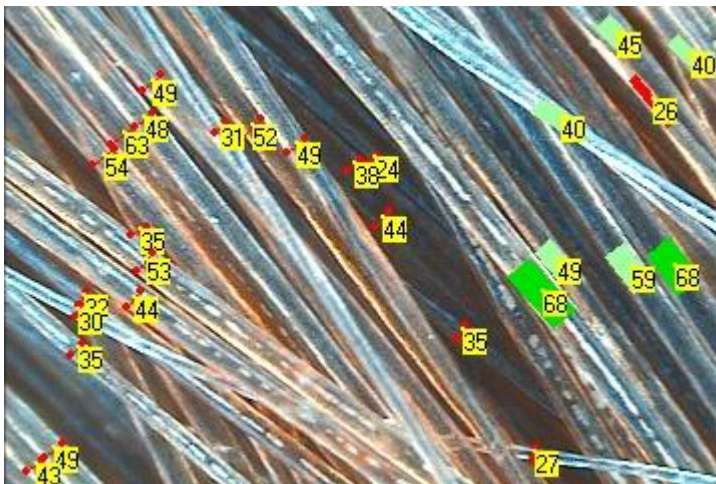
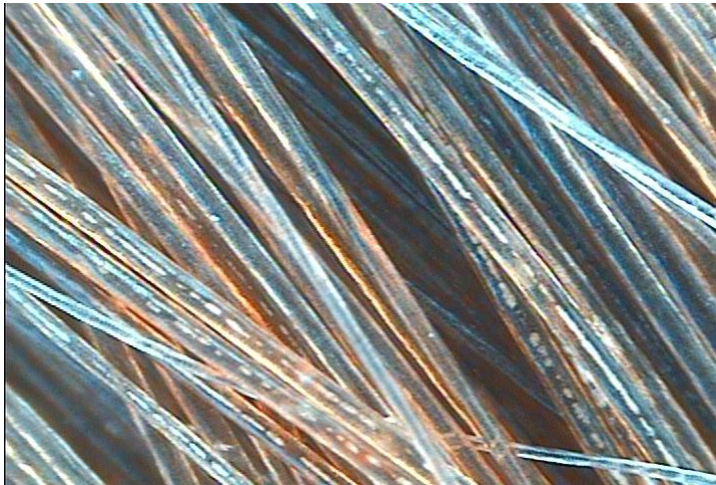
■ Mean diameter: All Terminal hairs (>30  $\mu\text{m}$ ) 47 +/- 2.2  $\mu\text{m}$   
■ Measured hairs diameter  
■ Normal mean diameter for this hair type

■ Mean diameter: All Terminal hairs (>30  $\mu\text{m}$ ) 52 +/- 4.9  $\mu\text{m}$   
■ Measured hairs diameter  
■ Normal mean diameter for this hair type

Measured total: 28 hairs per 1.50 sq.mm  
 Mean diameter: All hairs 44 +/- 2.3  $\mu\text{m}$   
 Measured Terminal hairs (>30  $\mu\text{m}$ ): 86% (24 per 1.50 sq.mm)  
 Measured Vellus hairs (<30  $\mu\text{m}$ ): 14% (4 per 1.50 sq.mm)  
 Among Terminal hairs:  
 Thin hairs (30-60  $\mu\text{m}$ ): 88%  
 Regular hairs (60-80  $\mu\text{m}$ ): 12%  
 Anisotrichosis: 44 +/- 11.8  $\mu\text{m}$

Measured total: 16 hairs per 1.50 sq.mm  
 Mean diameter: All hairs 48 +/- 5.0  $\mu\text{m}$   
 Measured Terminal hairs (>30  $\mu\text{m}$ ): 88% (14 per 1.50 sq.mm)  
 Measured Vellus hairs (<30  $\mu\text{m}$ ): 12% (2 per 1.50 sq.mm)  
 Among Terminal hairs:  
 Thin hairs (30-60  $\mu\text{m}$ ): 64%  
 Regular hairs (60-80  $\mu\text{m}$ ): 36%  
 Anisotrichosis: 48 +/- 18.6  $\mu\text{m}$

Parietal area (window: 1):

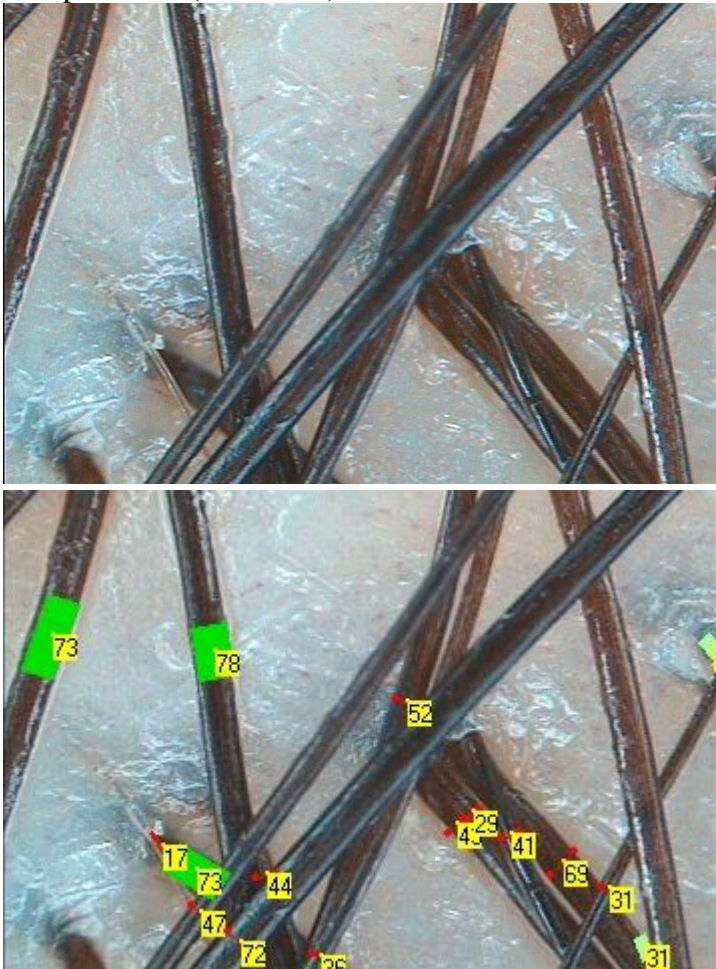


**- Hair diameter in parietal area ( $\mu\text{m}$ ):**

Measured total: 28 hairs per 1.50 sq.mm  
 Mean diameter: All hairs 44 +/- 2.3  $\mu\text{m}$   
 Mean diameter: All Terminal hairs (>30  $\mu\text{m}$ ) 47 +/- 2.2  $\mu\text{m}$   
 Measured Terminal hairs (>30  $\mu\text{m}$ ): 86% (24 per 1.50 sq.mm)  
 Measured Vellus hairs (<30  $\mu\text{m}$ ): 14% (4 per 1.50 sq.mm)  
 Among Terminal hairs: Thin hairs (30-60  $\mu\text{m}$ ): 88%

Regular hairs (60-80  $\mu\text{m}$ ): 12%  
Anisotrichosis: 44 +/- 11.8  $\mu\text{m}$

Occipital area (window 1):



**- Hair diameter in occipital area( $\mu\text{m}$ ):**

Measured total: 16 hairs per 1.50 sq.mm

Mean diameter: All hairs 48 +/- 5.0  $\mu\text{m}$

Mean diameter: All Terminal hairs (>30  $\mu\text{m}$ ) 52 +/- 4.9  $\mu\text{m}$

Measured Terminal hairs (>30  $\mu\text{m}$ ): 88% (14 per 1.50 sq.mm)

Measured Vellus hairs (<30  $\mu\text{m}$ ): 12% (2 per 1.50 sq.mm)

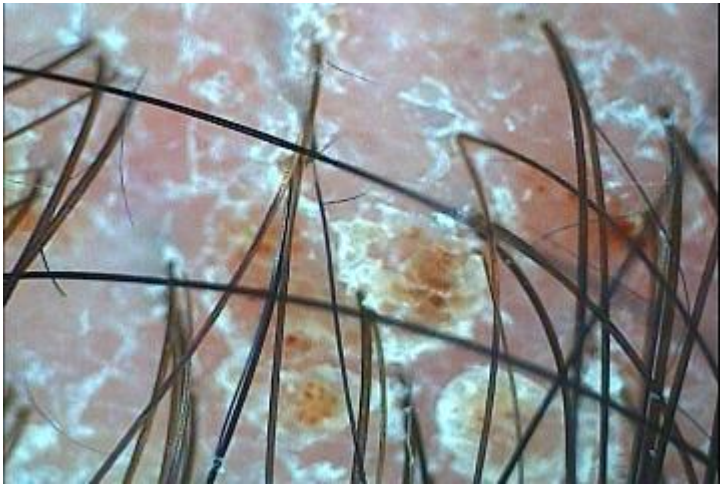
Among Terminal hairs: Thin hairs (30-60  $\mu\text{m}$ ): 64%

Regular hairs (60-80  $\mu\text{m}$ ): 36%

Anisotrichosis: 48 +/- 18.6  $\mu\text{m}$

**- Scalp study (high magnification) has detected:**

Scalp Psoriasis



**- Hair root study has detected:**

Telogen Hair



**- Hair shaft study has detected:**

Dry Hair Shafs



# Phototrichogram: 2/22/2013 10:21:15 AM

## Parietal area

### Phototrichogram:

Total Anagen hairs: 83% (30 per 16.67 sq.mm)

Total Telogen hairs: 17% (6 per 16.67 sq.mm)

Terminal among Anagen: 67%

Terminal among Telogen: 17%

Vellus among Anagen: 33%

Vellus among Telogen: 83%

Mean diameter of Terminal among Anagen: 57 $\mu$ m

Mean diameter of Terminal among Telogen: 76 $\mu$ m

Mean diameter of Vellus among Anagen: 29 $\mu$ m

Mean diameter of Vellus among Telogen: 26 $\mu$ m

### Hair growth rate:

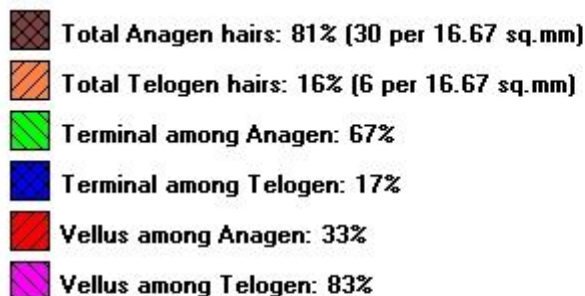
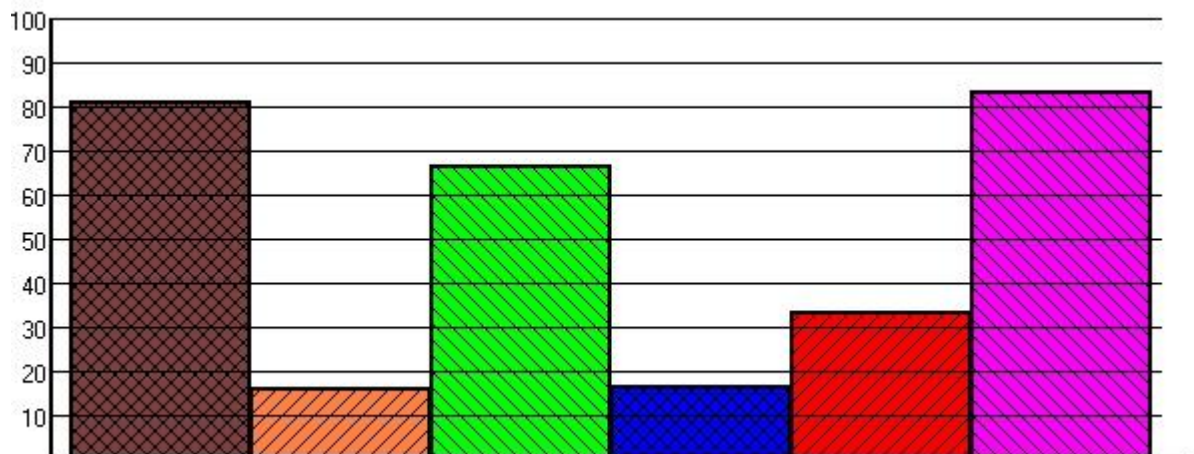
First length value: 206

Second length value: 690

Time period between measurements: 48 hour

Hair growth rate: 242 $\mu$ m (0.24mm) per 24 hours

Phototrichogram chart:



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Mean diameter of Terminal among Anagen: 57 $\mu$ m  
Mean diameter of Terminal among Telogen: 76 $\mu$ m  
Mean diameter of Vellus among Anagen: 29 $\mu$ m  
Mean diameter of Vellus among Telogen: 26 $\mu$ m  
Hair growth rate: 242 $\mu$ m (0.24mm) per 24 hours

**Density/cm2:**

Total: 258 (100%)

Terminal: 162 (63%)

Vellus: 96 (37%)

**Total calculated/17 sq.mm**

Total: 43 (100%)

Terminal: 27 (63%)

Vellus: 16 (37%)

**Total follicular units: 28**

Follicular units per sq.cm: 168.0

Single follicular units: 57.1% (16 per 16.67 sq.mm)

Double follicular units: 35.7% (10 per 16.67 sq.mm)

Triple follicular units: 7.1% (2 per 16.67 sq.mm)

**Total perifollicular signs 2**

Yellow dots total: 2 in 1 field of view

Hair density chart:



- Total hairs: 258 per sq.cm.
- Terminal hairs: 63% (162 per sq.cm.)
- Vellus hairs: 37% (96 per sq.cm.)
- Normal mean density for this hair type

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Follicular units per sq.cm: 168.0  
 Single follicular units: 57.1% (16 per 16.67 sq.mm)  
 Double follicular units: 35.7% (10 per 16.67 sq.mm)  
 Triple follicular units: 7.1% (2 per 16.67 sq.mm)  
 Yellow dots total: 2 in 1 field of view

**Hair diameter:**

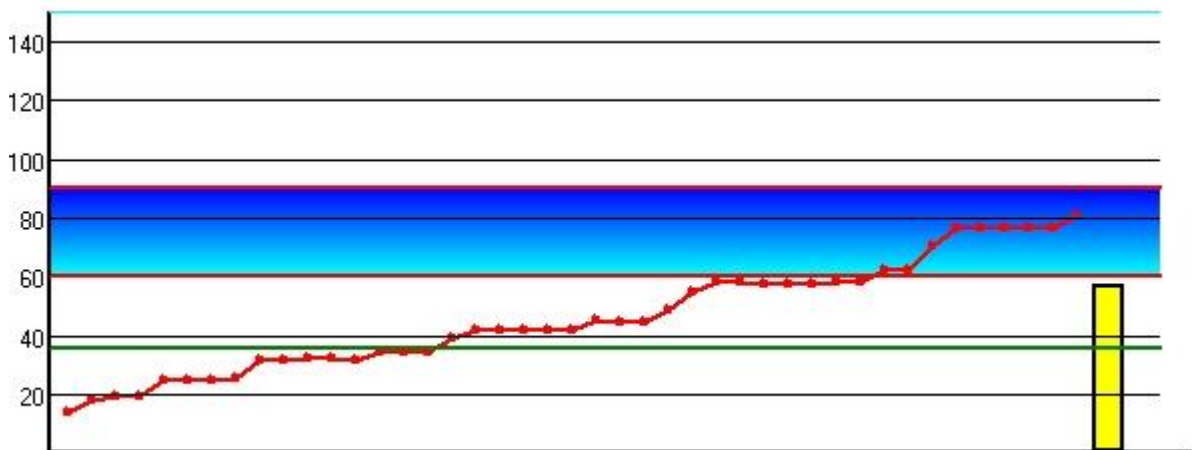
Measured total: 43 hairs per 16.67 sq.mm

Mean diameter: All hairs 46 +/- 2.9 µm

Mean diameter: All Terminal hairs (>35 µm) 57 +/- 2.6 µm

Measured Terminal hairs (>35  $\mu\text{m}$ ): 63% (27 per 16.67 sq.mm)  
 Measured Vellus hairs (<35  $\mu\text{m}$ ): 37% (16 per 16.67 sq.mm)  
 Among Terminal hairs: Thin hairs (35-60  $\mu\text{m}$ ): 67%  
 Regular hairs (60-80  $\mu\text{m}$ ): 30%  
 Thick hairs (>80  $\mu\text{m}$ ): 4%  
 Anisotrichosis: 46 +/- 18.4  $\mu\text{m}$

Hair diameters chart:

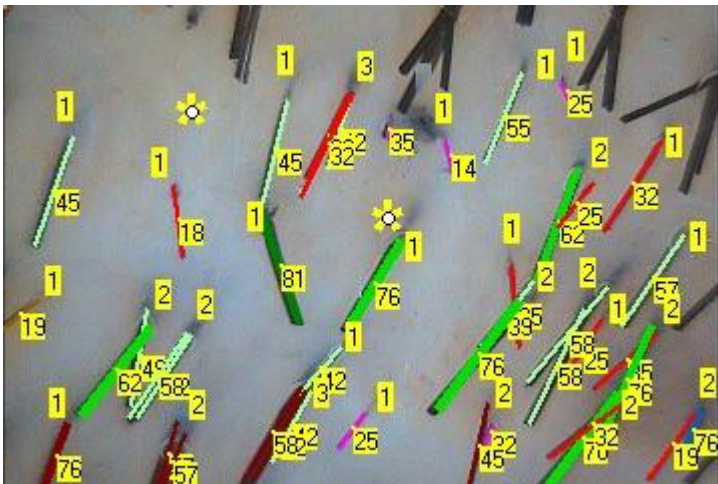


Mean diameter: All Terminal hairs (>35  $\mu\text{m}$ ) 57 +/- 2.6  $\mu\text{m}$   
 Measured hairs diameter  
 Normal mean diameter for this hair type

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**Measured total: 43 hairs per 16.67 sq.mm**  
**Mean diameter: All hairs 46 +/- 2.9  $\mu\text{m}$**   
**Measured Terminal hairs (>35  $\mu\text{m}$ ): 63% (27 per 16.67 sq.mm)**  
**Measured Vellus hairs (<35  $\mu\text{m}$ ): 37% (16 per 16.67 sq.mm)**  
**Among Terminal hairs:**  
**Thin hairs (35-60  $\mu\text{m}$ ): 67%**  
**Regular hairs (60-80  $\mu\text{m}$ ): 30%**  
**Thick hairs (>80  $\mu\text{m}$ ): 4%**  
**Anisotrichosis: 46 +/- 18.4  $\mu\text{m}$**

Field of view - 1



**Occipital area**

**Phototrichogram:**

Total Anagen hairs: 66% (35 per 16.67 sq.mm)

Total Telogen hairs: 34% (18 per 16.67 sq.mm)

Terminal among Anagen: 89%

Terminal among Telogen: 33%

Vellus among Anagen: 11%

Vellus among Telogen: 67%

Mean diameter of Terminal among Anagen: 54µm

Mean diameter of Terminal among Telogen: 52µm

Mean diameter of Vellus among Anagen: 22µm

Mean diameter of Vellus among Telogen: 21µm

**Hair growth rate:**

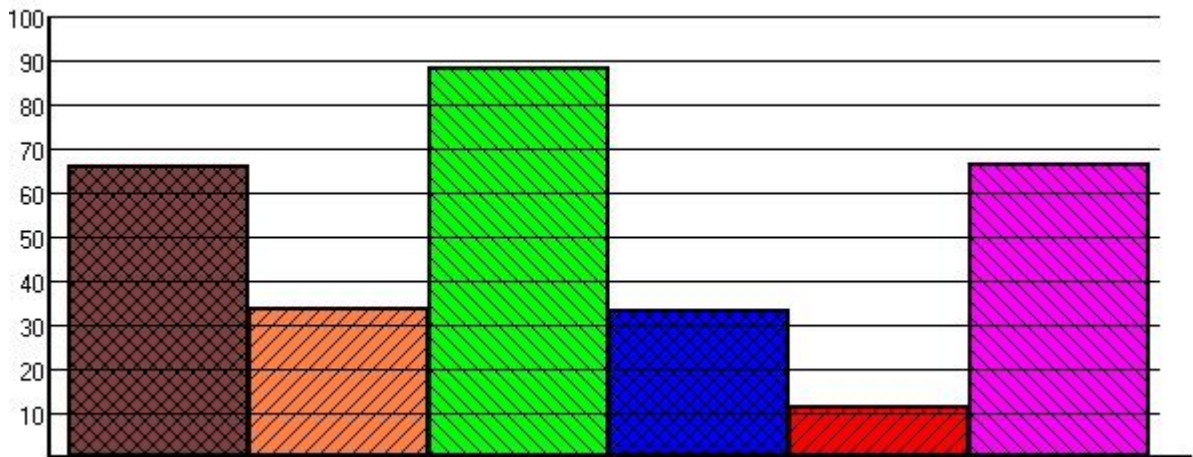
First length value: 180



Second length value: 628

Time period between measurements: 48 hour

Hair growth rate: 224µm (0.22mm) per 24 hours

Phototrichogram chart:



-  Total Anagen hairs: 66% (35 per 16.67 sq.mm)
-  Total Telogen hairs: 34% (18 per 16.67 sq.mm)
-  Terminal among Anagen: 89%
-  Terminal among Telogen: 33%
-  Vellus among Anagen: 11%
-  Vellus among Telogen: 67%

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**Mean diameter of Terminal among Anagen: 54µm**  
**Mean diameter of Terminal among Telogen: 52µm**  
**Mean diameter of Vellus among Anagen: 22µm**  
**Mean diameter of Vellus among Telogen: 21µm**  
**Hair growth rate: 224µm (0.22mm) per 24 hours**

**Density/cm2:**

Total: 360 (100%)

Terminal: 264 (73%)

Vellus: 96 (27%)

**Total calculated/17 sq.mm**

Total: 60 (100%)

Terminal: 44 (73%)

Vellus: 16 (27%)

**Total follicular units: 37**

Follicular units per sq.cm: 222.0

Single follicular units: 56.8% (21 per 16.67 sq.mm)

Double follicular units: 37.8% (14 per 16.67 sq.mm)

Triple follicular units: 5.4% (2 per 16.67 sq.mm)

**Total perifollicular signs 1**

Yellow dots total: 1 in 1 field of view

Hair density chart:





- Total hairs: 360 per sq.cm.
- Terminal hairs: 73% (264 per sq.cm.)
- Vellus hairs: 27% (96 per sq.cm.)
- Normal mean density for this hair type

Follicular units per sq.cm: 222.0  
 Single follicular units: 56.8% (21 per 16.67 sq.mm)  
 Double follicular units: 37.8% (14 per 16.67 sq.mm)  
 Triple follicular units: 5.4% (2 per 16.67 sq.mm)

Yellow dots total: 1 in 1 field of view

#### Hair diameter:

Measured total: 60 hairs per 16.67 sq.mm

Mean diameter: All hairs 45 +/- 2.2  $\mu$ m

Mean diameter: All Terminal hairs (>35  $\mu$ m) 54 +/- 1.4  $\mu$ m

Measured Terminal hairs (>35  $\mu$ m): 73% (44 per 16.67 sq.mm)

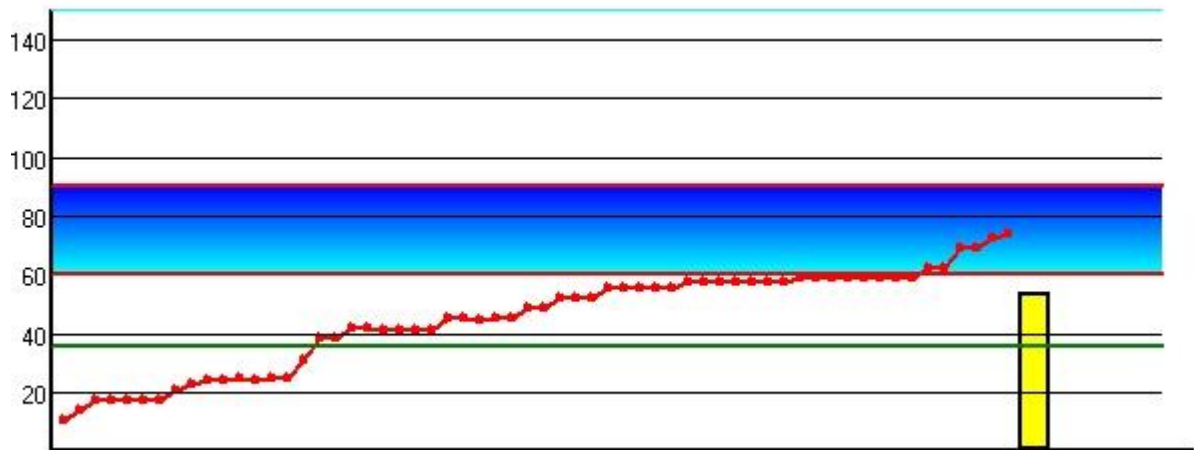
Measured Vellus hairs (<35  $\mu$ m): 27% (16 per 16.67 sq.mm)

Among Terminal hairs: Thin hairs (35-60  $\mu$ m): 86%

Regular hairs (60-80  $\mu$ m): 14%

Anisotrichosis: 45 +/- 16.7  $\mu$ m

Hair diameters chart:



- Mean diameter: All Terminal hairs (>35  $\mu\text{m}$ ) 54  $\pm$  1.4  $\mu\text{m}$
- Measured hairs diameter
- Normal mean diameter for this hair type

Measured total: 60 hairs per 16.67 sq.mm  
 Mean diameter: All hairs 45  $\pm$  2.2  $\mu\text{m}$   
 Measured Terminal hairs (>35  $\mu\text{m}$ ): 73% (44 per 16.67 sq.mm)  
 Measured Vellus hairs (<35  $\mu\text{m}$ ): 27% (16 per 16.67 sq.mm)  
 Among Terminal hairs:  
 Thin hairs (35-60  $\mu\text{m}$ ): 86%  
 Regular hairs (60-80  $\mu\text{m}$ ): 14%  
 Anisotrichosis: 45  $\pm$  16.7  $\mu\text{m}$

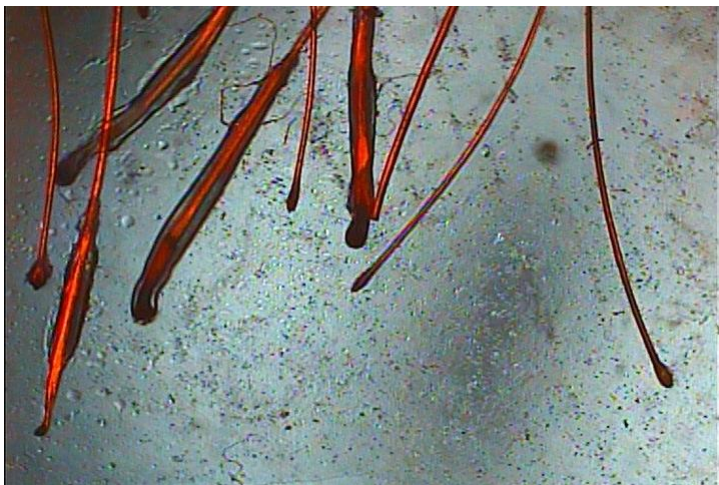
Field of view - 1

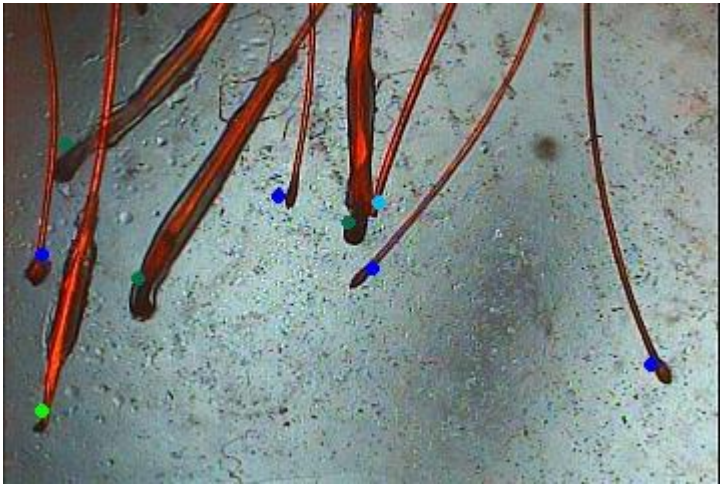




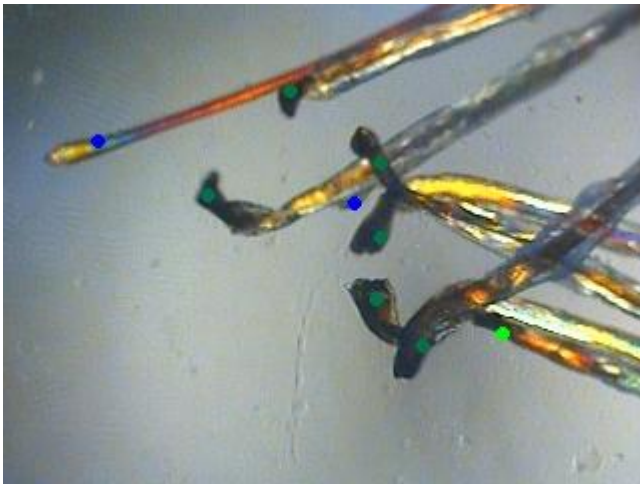
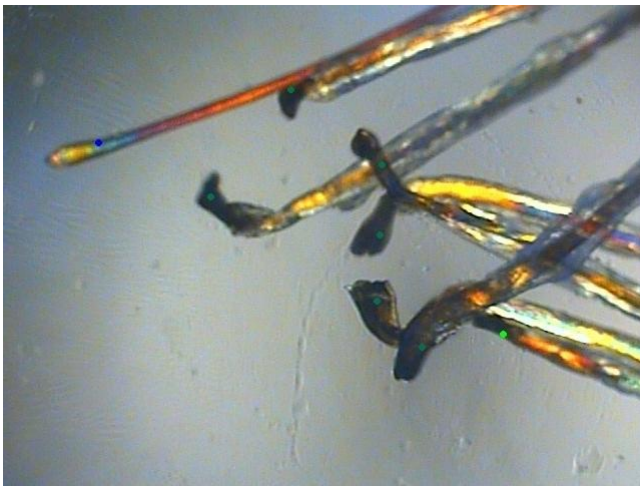
## Trichogram: 2/20/2013 10:31:25 AM

Parietal area (window: 1):





Occipital area (window 1):



Epilated hair type	Parietal area				Occipital area			
	Absolute amount	%	Norm	Absolute amount	%	Norm		
Anagen	3	33	Total	To	6	67	Total	To

Dysplastic Anagen	1	11	Anagen 56	95%	1	11	Anagen 78	95%
Broken Anagen	1	11			0	0		
Anagen with papilla	0		0	0%	0		0	0%
Telogen	4		44	To 18%	2		22	To 18%
Catagen	0		0	To 3%	0		0	To 3%
Dystrophic	0		0	To 4%	0		0	To 4%
Sum	9				9			

## Dermatoscopy: 2/20/2013 10:41:35 AM

- General Dermatoscopy study identified specialty signs as follows:

Scalp Psoriasis



- Pigmented lesions study identified specialty signs as follows:

Nevus Sebaceous



**ABCD algorithm of melanoma and other tumors evaluation  
GDI (General Dermatoscopic Index)**

Criteria features	Score	Coefficient	Enter points	Results
Asymmetry In perpendicular axes: contour, colours and structures	0-2	1.3	2	2.6
Borders 8 segments: abrupt ending of pigment pattern	0-8	0.1	1	0.1
Colours White, red, light-brown (tan), dark-brown, blue-grey, black	1-6	0.5	2	1
Differential structural components or Dermoscopic structures (pigment network, structureless areas, dots, aggregated globules, branched streaks)	1-5	0.5	1	0.5
Total score	Benign			4.2

**ABC algorithm of melanoma and other tumors evaluation  
(A - asymmetry, B - clarity of boundaries, C - color)**

Diagnostic criteria	Criteria features	Evaluation	Mark if applicable
Asymmetry on one axis	Boundaries of lesion	1	*
Asymmetry on one axis	Disposition of dermatoscopic elements	1	
Boundaries	Sharp separation of pigment grid over 1/4 of	1	

	lesion perimeter		
Color	White Red Beige Dark-brown Blue-black Black	1	
Dermatoscopic elements in lesion	Three and more Pigment grid Homogeneous zones (over 10% of lesion area) Stripes (more than two) Granules (more than two) Black-brown dots (more than two)	1	
Evolution of tumors	Lesion changes within 3 month	+1	
	No data about changes	0	*
	No changes within 3 month	-1	
Results			1

### Algorithm for melanoma and other tumor estimation by Argenziano

Criteria	Features	Points	Mark if applicable
Evolution of tumors			
Atypical pigment grid	By color, wall thickness and cell size	2	
A shroud or blue-white veil	Distinguish from dermatoscopic sings of pigment regression in skin lesion. Morphological substrate of a shroud or blue-white veil is represented by foci of acanthosis and hypergranulosis over the clusters of melanocytes in dermis.	2	
Atypical vessels	Atypical convoluted linear and dotted vessels	2	
Small criteria			
Atypical stripes	By color, shape and location	1	
Dots/granules,	By color and size	1	

unevenly distributed			
Blots (ink stains)	Assymetric and atypical by color	1	*
Dermatoscopic signs of pigment regression in skin lesion	Scar-like patches of depigmentation and dots, often described as "pepper-like" in pattern	1	
Results			1

## Trichometry (hair wash test) \ Patient: Mary Smyth:

Patient current hair length (cm): 40

Hair length	Hair quantity	Percentage of hair
Under 3 cm:	25	28
3-5 cm:	13	15
Over 5 cm:	50	57
Total hair shedded:	88	100

## Trichometry (growing hair test) \ Patient: Mary Smyth:

Date of hair sampling : 20.02.2013

Hair length	Total amount	Intensity of monthly hair loss
Over 5 cm.long hair	50	
4-5 cm.	14	September - October - 19029



3-4 cm.	7	October - November - 9514
2-3 cm.	8	November - December - 10873
1-2 cm.	9	December - January - 12233
Total	88	Total: 51649

## Hair Calculator \ Patient: Mary Smyth:

Total mean quantity of scalp hairs(racial norms): 100,000 (70,000-130,000)

Total actual quantity of scalp hairs: 119612 +/-12000

Total actual quantity of Terminal hairs: 82451 +/-8200

Total actual quantity of Vellus hairs: 37161 +/-3700

Mean hair growth rate, mm/24hrs.(racial norms): 0.3-0.4

Actual hair growth rate in Parietal area, mm/24hrs.: 0.24

Actual hair growth rate in Occipital area, mm/24hrs.: 0.22

Total mean daily rate of hair loss: 120

Total actual quantity of hair shed per 24hrs: 320

Total actual quantity of Terminal hair shed per 24hrs: 90

Total actual quantity of Vellus hairs shed per 24hrs: 230

## Hospital Anxiety and Depression Scale:

- |   |                                   |
|---|-----------------------------------|
| 1. I feel tense or 'wound up':  | Most of the time                  |
| 2. I still enjoy the things I used to enjoy:                                    | Not quite so much                 |
| 3. I get a sort of frightened feeling as if something awful is about to happen: | A little, but it doesn't worry me |

4. I can laugh and see the funny side of things:	Not quite so much now
5. Worrying thoughts go through my mind:	From time to time, but not too often
6. I feel cheerful:	Not often
7. I can sit at ease and feel relaxed:	Nearly all the time
8. I feel as if I am slowed down:	Nearly all the time
9. I get a sort of frightened feeling like 'butterflies' in the stomach:	Not at all
10. I have lost interest in my appearance:	I don't take as much care as I should
11. I feel restless as I have to be on the move:	Quite a lot
12. I look forward with enjoyment to things:	As much as I ever did
13. I get sudden feelings of panic:	Not very often
14. I can enjoy a good book or radio or TV program:	Not often

**Conclusion:**

Clinical depression. Subclinical anxiety.

## **Additional Studies: 2/20/2013 10:45:45 AM**

**Image Nr. 1 taken 2/20/13 10:39:00 AM**



Image Nr. 2 taken 6/29/13 11:51:11 AM



## **Conclusions and Recommendations: 20.02.2013 10:50:05**

### **-Diagnosis:**

-Female Pattern Hair Loss, Ludwig I (Mild) Psoriasis :

### **-List of diagnoses:**

**Female Pattern Hair Loss**

Ludwig I (Mild)

## **Telogen Effluvium**

Hypothyroidism and other Endocrinopathies

## **Disorders of the scalp**

Psoriasis

## **Cicatricial Alopecia (secondary)**

-Organoid Nevi (sebaceous, epidermal)

## **-Conclusions and Recommendations:**

### **Hair growth assessment**

Trichoscopy

Dermatoscopy

Classic Trichogram

Phototrichogram

Hair wash test

Growing hair test

Global Photographs

### **Iron status blood tests**

Complete Blood Count (CBC)

Serum Ferritin

Serum Iron

Iron Saturation

Transferrin

Total iron binding capacity (TIBC)

### **Hormone tests**

Thyroid stimulating hormone (TSH)

Total Testosterone

Prolactin

Sex-hormone-binding globulin (SHBG)

**Other testing**

Hospital Anxiety and Depression Scale

**-Topical treatment:**

**Minoxidil**

2% minoxidil solution twice daily

**Topical antiandrogenic therapy**

Ell Cranell Alpha (Pantosin)

**Topical antiseborrheic therapy**

Ketoconazole shampoo

Topical Betamethasone Valerate foam

**-Oral therapy:**

**Systemic agents**

Spiroinolactone

**Supplements**

Zinc Gluconate

L-cysteine

Biotin

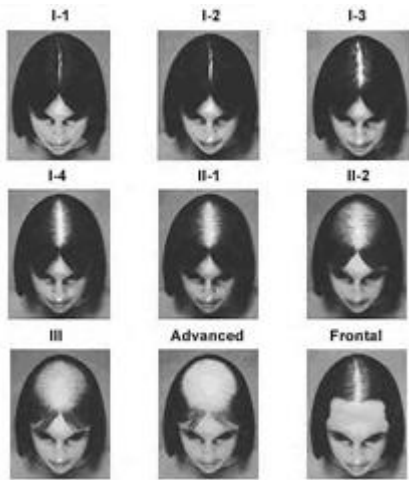
**-Physiotherapy:**

Low-level laser light therapy (Hair Max Laser Comb)

Criootherapy

**-Reference materials:**

Ludwig Scale, type



Ludwig Scale, class



**Criteria for differential diagnosis of female pattern and diffuse telogen hair loss in women**

Criteria	Female pattern alopecia	Telogen Diffuse Alopecia
Clinical history		
Hair and scalp condition:		
Intensity of hair loss:		Strongly-expressed
Duration of hairloss:		Less than 6 months
Hair thinning:	Diffuse	
Female Pattern Baldness:		
Ludwig Scale, type:	I-1	
Ludwig Scale, class:	1	
Heredity factor in first degree relatives:		No

Scalp condition:	Combination	
Dandruff:	Moderate	
Seborrheic dermatitis:	Areas of redness	
Data of Trichologic objective study		
Trichoscopy Terminal hair count in parietal area	Less than 250 for sq.cm.	Over 250 for sq.cm.
Trichoscopy Average Terminal hair diameter without Vellus hair accounted	In parietal area is less than in occipital	In parietal area is more than in occipital
Trichoscopy Percent of Vellus hair in parietal area	More than 20%	Less than 20%
Trichoscopy Anisotrichosis in parietal area	Over 12 for parietal area	Less than 12 for parietal area
Trichoscopy Presence of thin, medium and thick hair in parietal area	Presence of all types	Presence of 2 types out of 3
Trichoscopy Yellow dots Pointed hairs (in parietal area)	Yellow dots applicable Presence of all types	No yellow dots. Pointed hairs possible
Phototrichogram: Percent of Telogen hair in parietal and occipital areas	Over 15% of Telogen hair. More in parietal area vs occipital	Over 15% of Telogen hair. More (or equal) in occipital area
Phototrichogram: Proportion of Vellus among Telogen hair in parietal area	>30%	<30%
Presence of anxiety or depression		Yes
Lab data / Blood tests:		
Hemoglobin:		Below normal range
Ferritin, serum iron:		Below normal range

TSH (Thyroid Stimulating Hormone):		Deviations from normal range
Body Mass Index (BMI)	Within 18.5 – 24.9	Less than 18.5
Conclusion	Female pattern alopecia (25 Points)	Telogen Diffuse Alopecia (27 Points)
	<ul style="list-style-type: none"> <li>- Insufficient body mass</li> <li>- Dry Hair Shafs</li> <li>- Scalp Psoriasis</li> <li>- Dysplasia of hair roots</li> <li>- Nevus Sebaceous</li> <li>- Clinical depression. Subclinical anxiety.</li> <li>- Recommended consultation with a therapist, nutritionist, endocrinologist gastroenterologist.</li> </ul>	