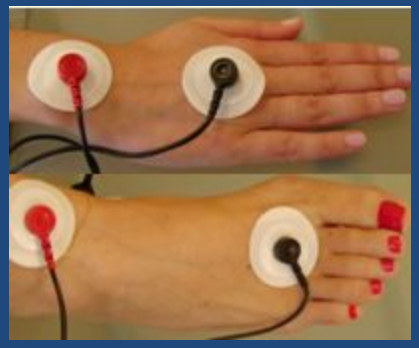
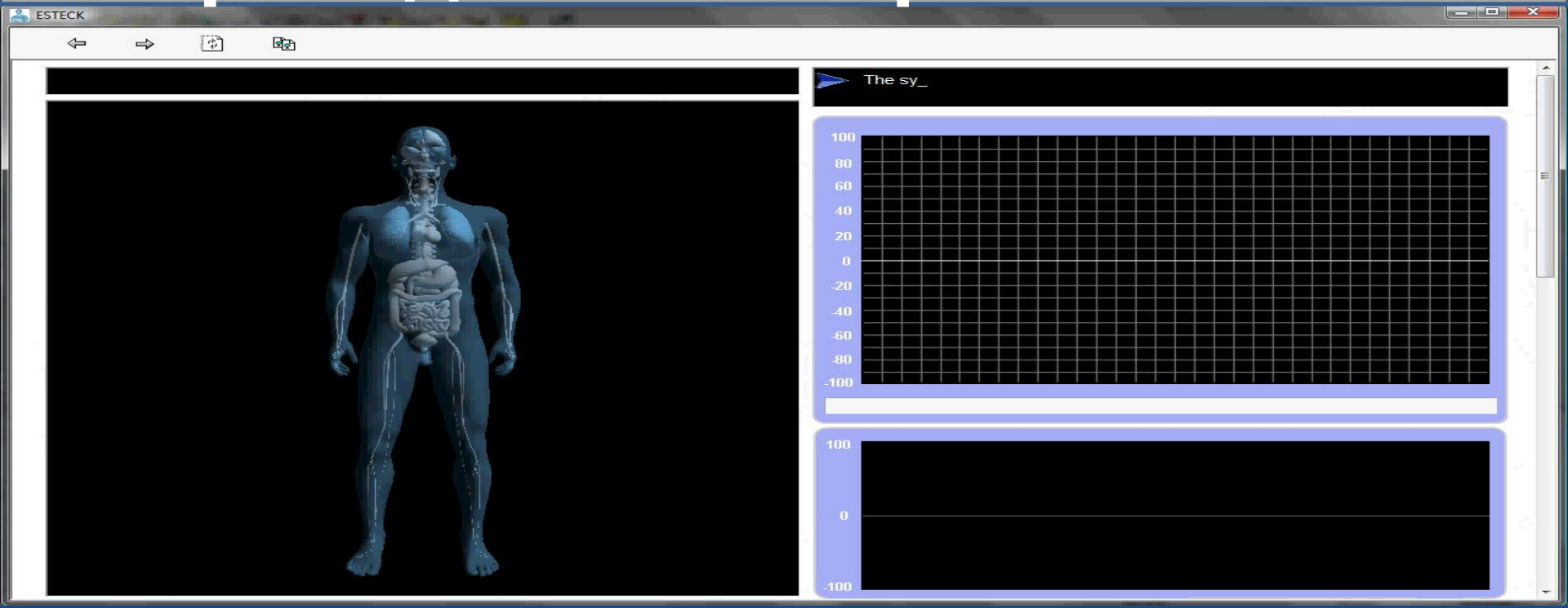
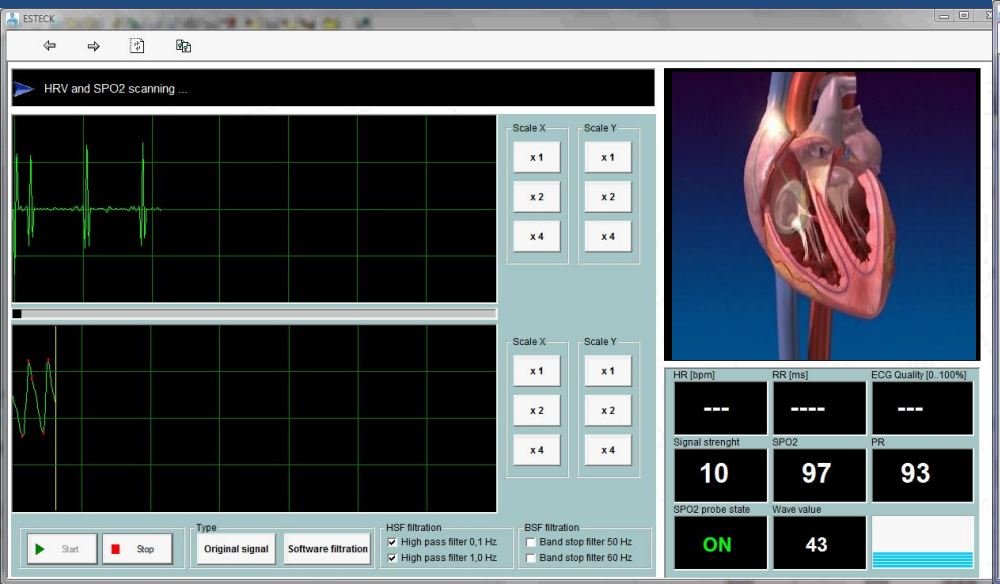
# КОМПЛЕКС ES ТЕСК

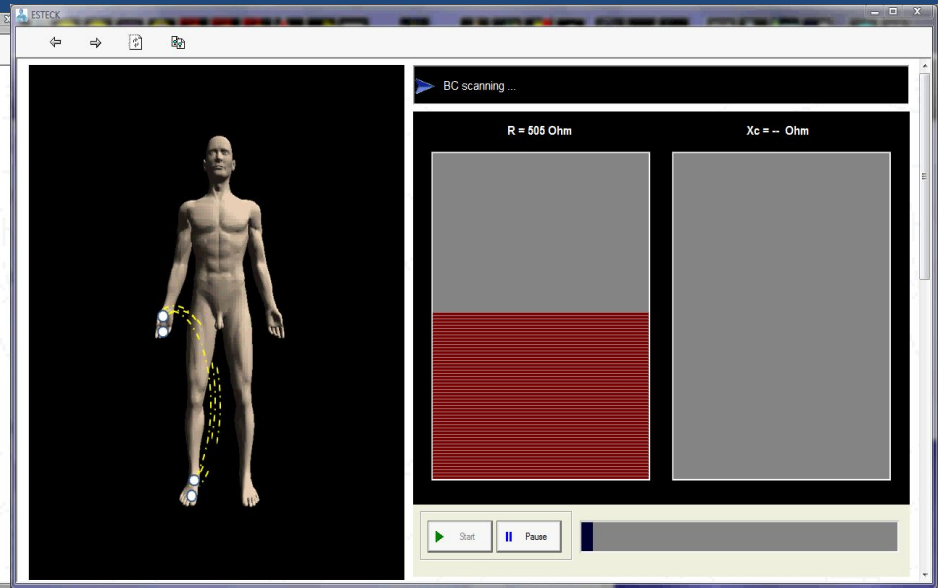
СОСТОИТ ИЗ 4-Х МЕТОДИК (HRV, SPo2, BC, EIS)



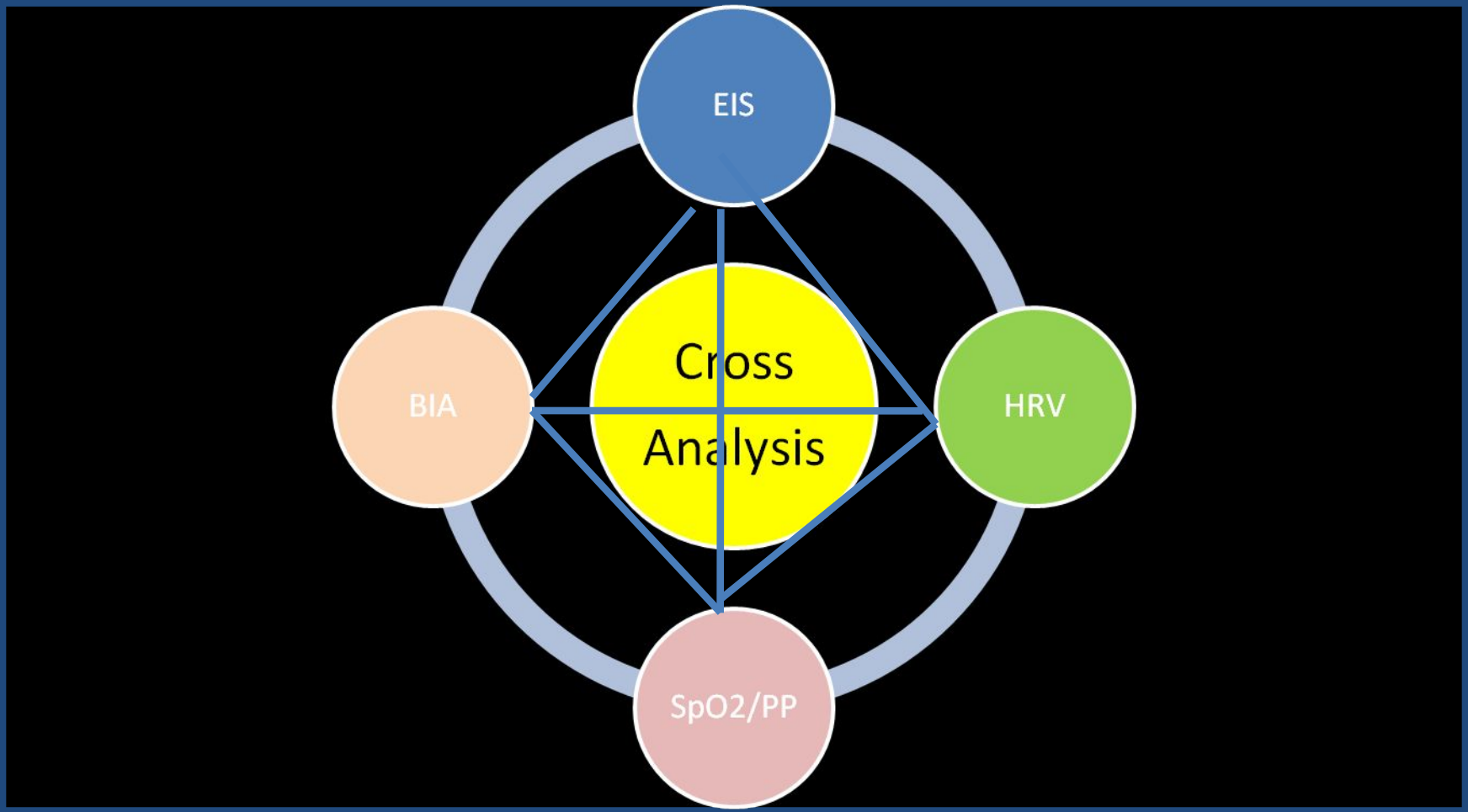
# Проведение измерений ES Teck



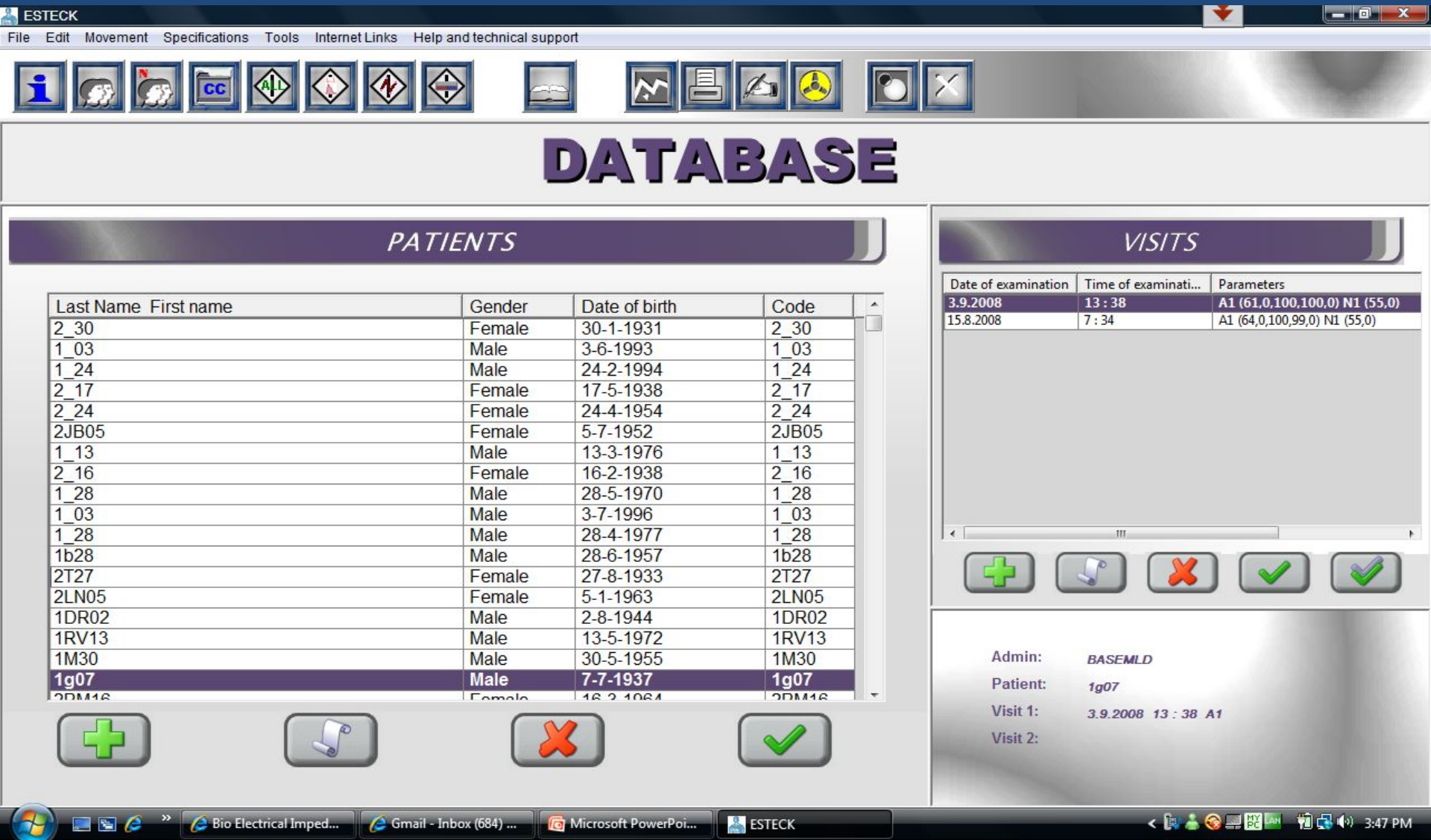
# ПЕРЕКРЕСТНЫЙ АНАЛИЗ РЕЗУЛЬТАТОВ



# ОСНОВНЫЕ ПАРАМЕТРЫ E.S ТЕСК КОМПЛЕКС

- **HRV модуль (вариабельность сердечного ритма):** Анализ ритмов NN или RR интервалов электрокардиограммы, комплексный анализ параметров вариабельности сердечного ритма .
- Модуль рассчитывает числовые параметры измеряемой ЭКГ
- **Оценка параметров симпатической и парасимпатической нервной системы.**
- **PP модуль**: Анализ ритмов пульса методом фотоэлектрической плетизмографии.
- **Исследование параметров ССС**
- **EIS модуль**:
- **Мониторинг заболеваний, функционального состояния и терапии**
- **BIA модуль**:
- **Измерение и мониторинг параметров композиции массы тела**

# БАЗА ДАННЫХ ВИЗИТОВ и ИЗМЕРЕНИЙ

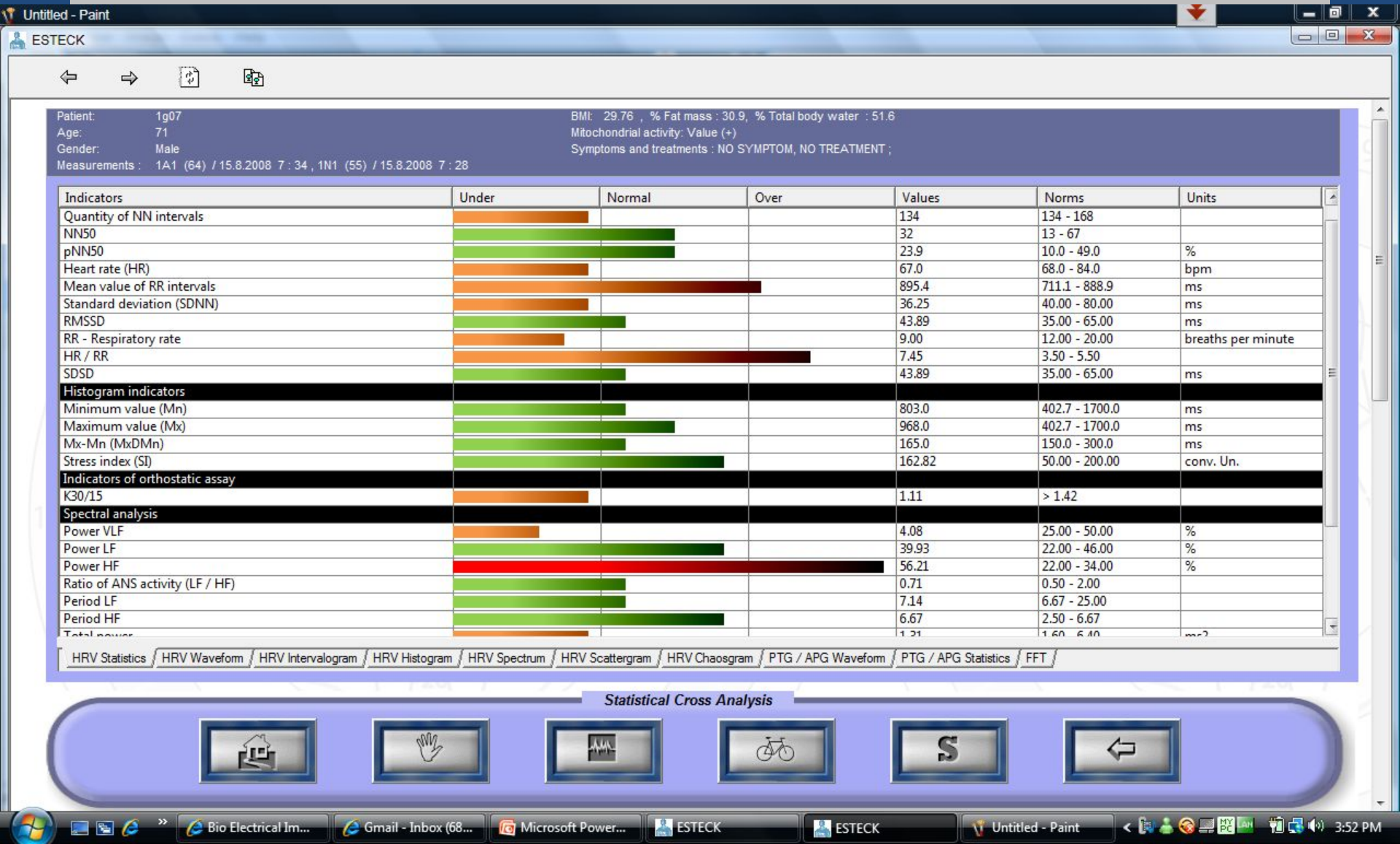


# E.S TECK РЕЗУЛЬТАТЫ

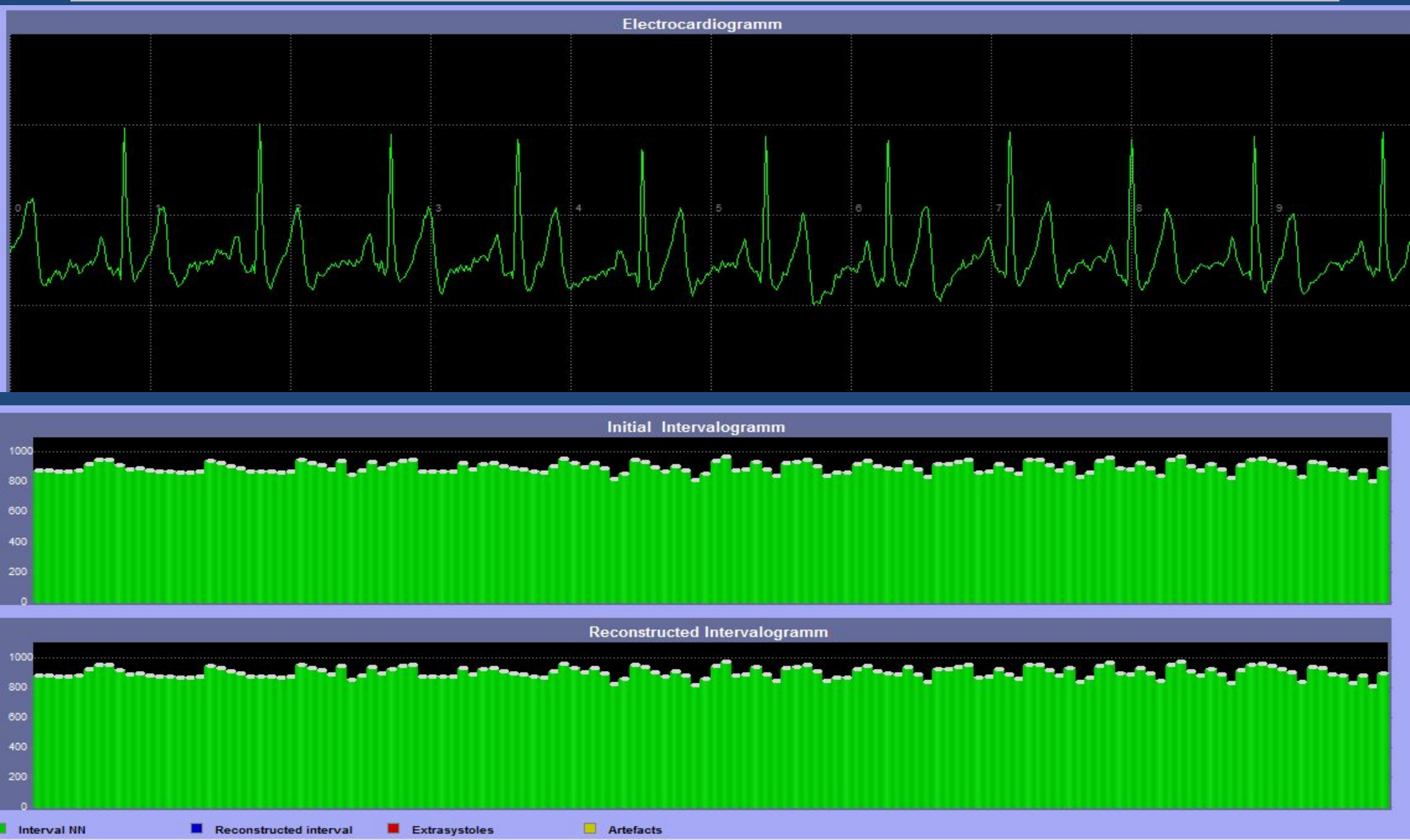
# EIS АНАЛИЗ


DIAGNOSIS.pptx - Microsoft PowerPoint non-commercial use
ESTECK
Patient: 1g07
Age: 71
Gender: Male
Measurements : 1A1 (64) / 15.8.2008 7 : 34 , 1N1 (55) / 15.8.2008 7 : 28
BMI: 29.76 , % Fat mass : 30.9, % Total body water : 49.6
Mitochondrial activity: Value (+)
Symptoms and treatments : NO SYMPTOM, NO TREATMENT ;
ESG adapt
A1
N1
ESG abs
Abs ESG A1
Reference values
A1
N1
Fast Fourier Transformation
70,19
36,37
100,100
62,64
6,5
45,47
45,41
24,21
Statistical Cross Analysis
Bio Electrical Im...
Gmail - Inbox (68...
Microsoft Power...
ESTECK
ESTECK
Untitled - Paint
3:51 PM

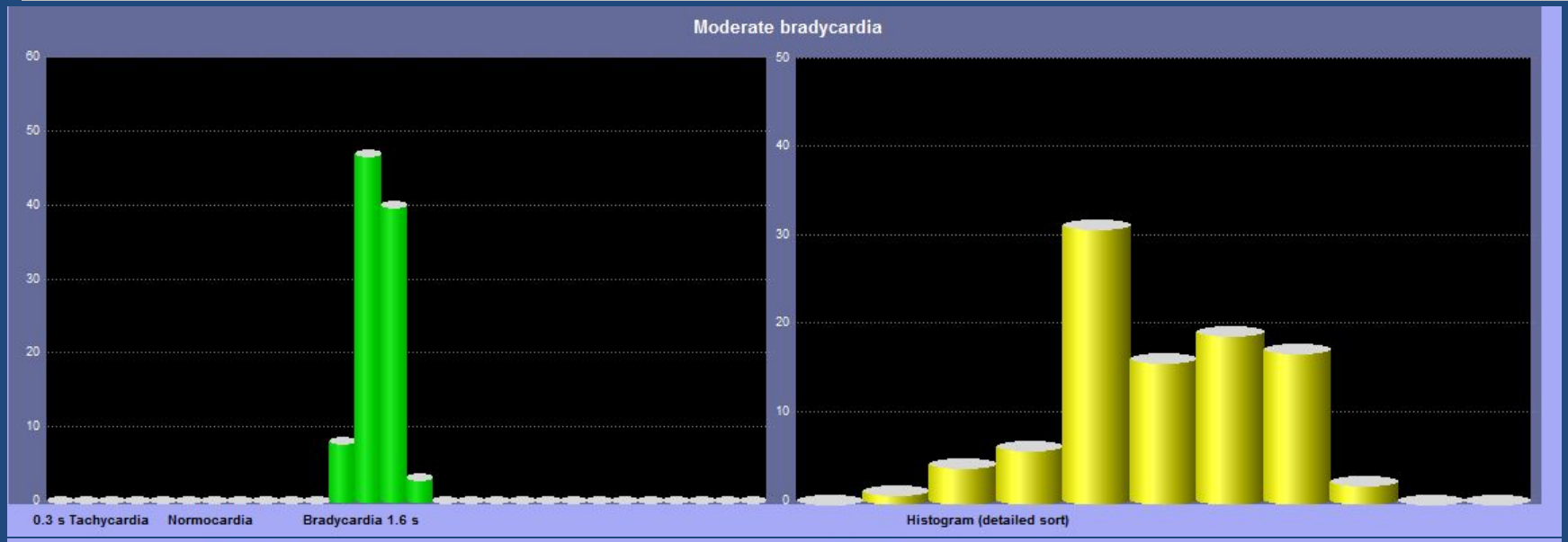
# HRV СТАТИСТИЧЕСКИЕ ПОКАЗАТЕЛИ

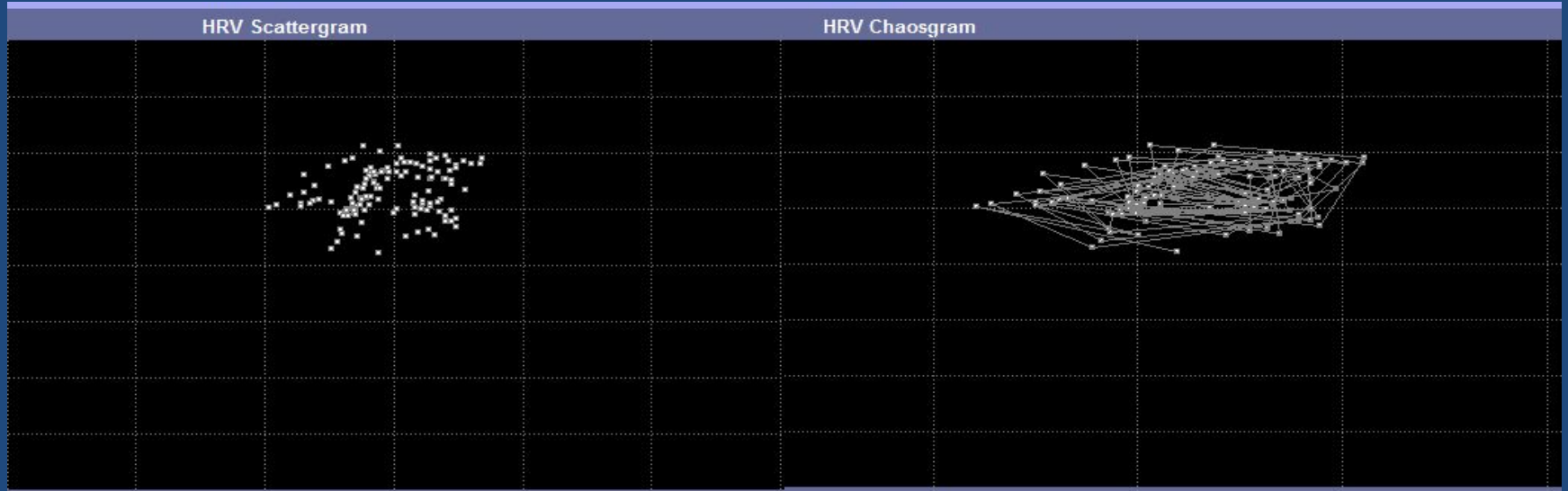


# HRV ИЗМЕРЕНИЕ



# HRV АНАЛИЗ СПЕКТРА



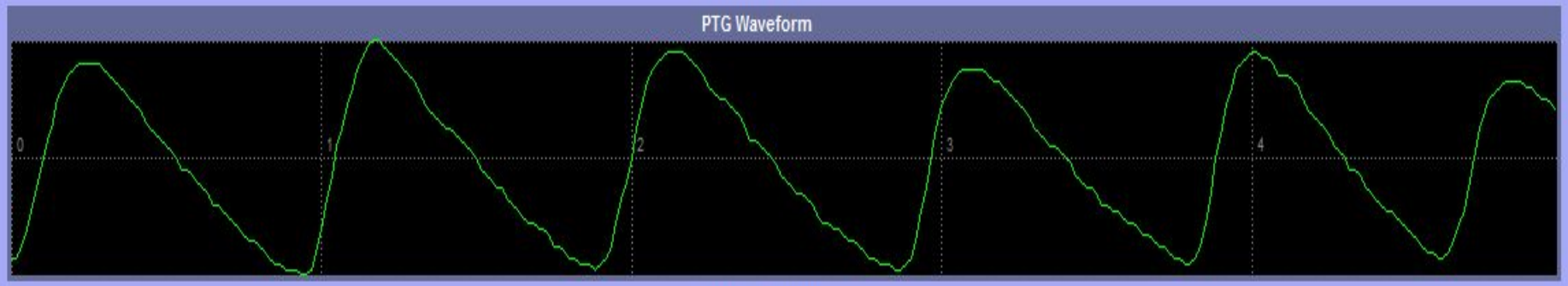



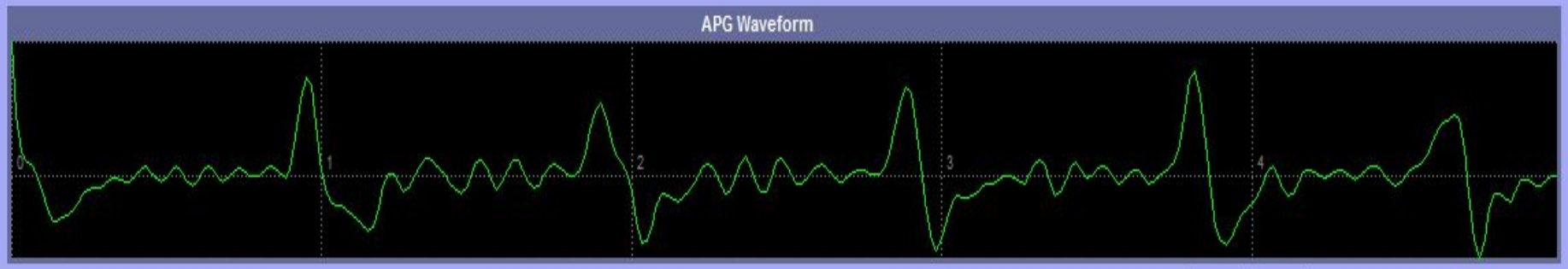
# SpO2 РЕЗУЛЬТАТЫ (ФОТОЭЛЕКТРИЧЕСКАЯ ВОЛНА)

Patient: 1g07
Age: 71
Gender: Male
Measurements : 1A1 (64) / 15.8.2008 7 : 34 , 1N1 (55) / 15.8.2008 7 : 28

BMI: 29.76 , % Fat mass : 30.9, % Total body water : 51.6
Mitochondrial activity: Value (+)
Symptoms and treatments : NO SYMPTOM, NO TREATMENT ;

| Indicators | Under | Normal | Over | Values | Norms | Units | Comments | Follow Up |
|---|---|---|---|---|---|---|---|---|
| SpO2 Measurement | | | | | | | | |
| SpO2 | | | | 98.0 | 94.0 - 96.0 | % | | |
| PR (Pulse Rate) | | | | 66 | 68 - 79 | bpm | | |
| Signal Strength | | | | 10 | 8 - 12 | mm | | |
| Wave Value | | | | 72 | 65 - 95 | mm | | |



# ФОТОАЭЛЕКТРИЧЕСКАЯ ПЛЕТИЗМОГРАММА (АНАЛИЗ И РЕЗУЛЬТАТЫ)

Patient: 1g07
Age: 71
Gender: Male
Measurements : 1A1 (64) / 15.8.2008 7 : 34 , 1N1 (55) / 15.8.2008 7 : 28

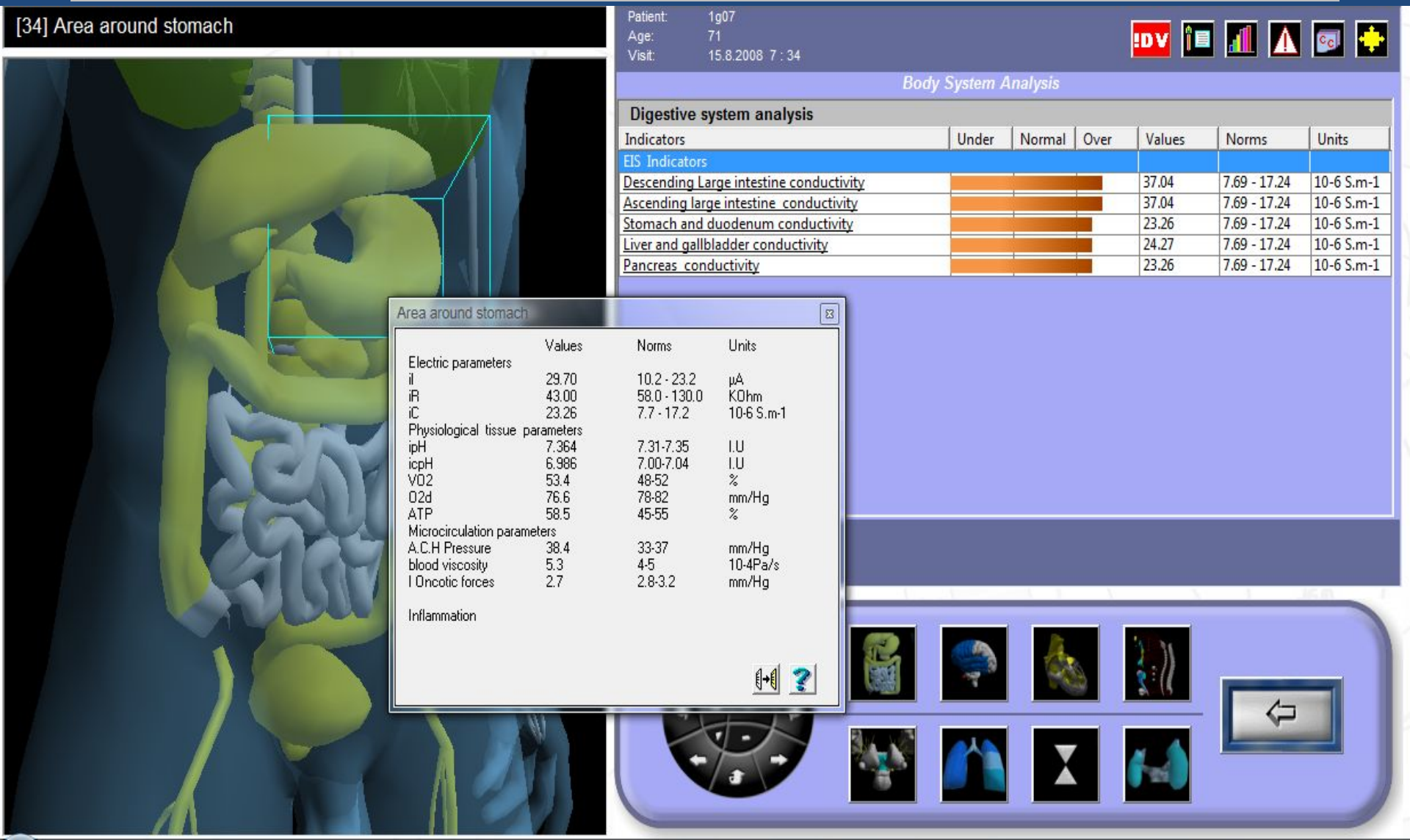
BMI: 29.76 , % Fat mass : 30.9, % Total body water : 51.6
Mitochondrial activity: Value (+)
Symptoms and treatments : NO SYMPTOM, NO TREATMENT ;

| Indicators | Under | Normal | Over | Values | Norms | Units |
|---|---|---|---|---|---|---|
| PTG Analysis | | | | | | |
| AI (Augmentation Index) | | | | 1.03 | 1.05 - 1.45 | |
| EEI (Ejection Elastic Index) | | | | 0.00 | 0.40 - 0.80 | |
| DDI (Dicrotic Dilation Index) | | | | 0.10 | 0.20 - 0.40 | |
| DEI (Dicrotic Elastic Index) | | | | 0.10 | 0.10 - 0.30 | |
| PR (Pulse Rate) | | | | 66 | 68 - 79 | |
| PH (Pulse Height) | | | | 8.1 | 2.0 - 8.0 | |
| Etc (Estimated Cardiac Ejection time) | | | | 233 | 260 - 380 | ms |
| APG Analysis | | | | | | |
| APG Type | | | | 75 | | |
| APG Aging Index | | | | 0.19 | -0.32 - 0.32 | |
| a-b | | | | 78 | | ms |
| a-c | | | | 123 | | ms |
| a-d | | | | 175 | | ms |
| a-e | | | | 346 | | ms |
| b/a | | | | -0.41 | -0.61 - -0.35 | |
| c/a | | | | -0.07 | -0.34 - -0.06 | |
| -d/a | | | | 0.65 | 0.32 - 0.58 | |
| e/a | | | | 0.12 | 0.09 - 0.23 | |
| APG Type: 21(25), 11(35), 25(45), 12(55), 7(65), 22(75) (%) | | | | | | |

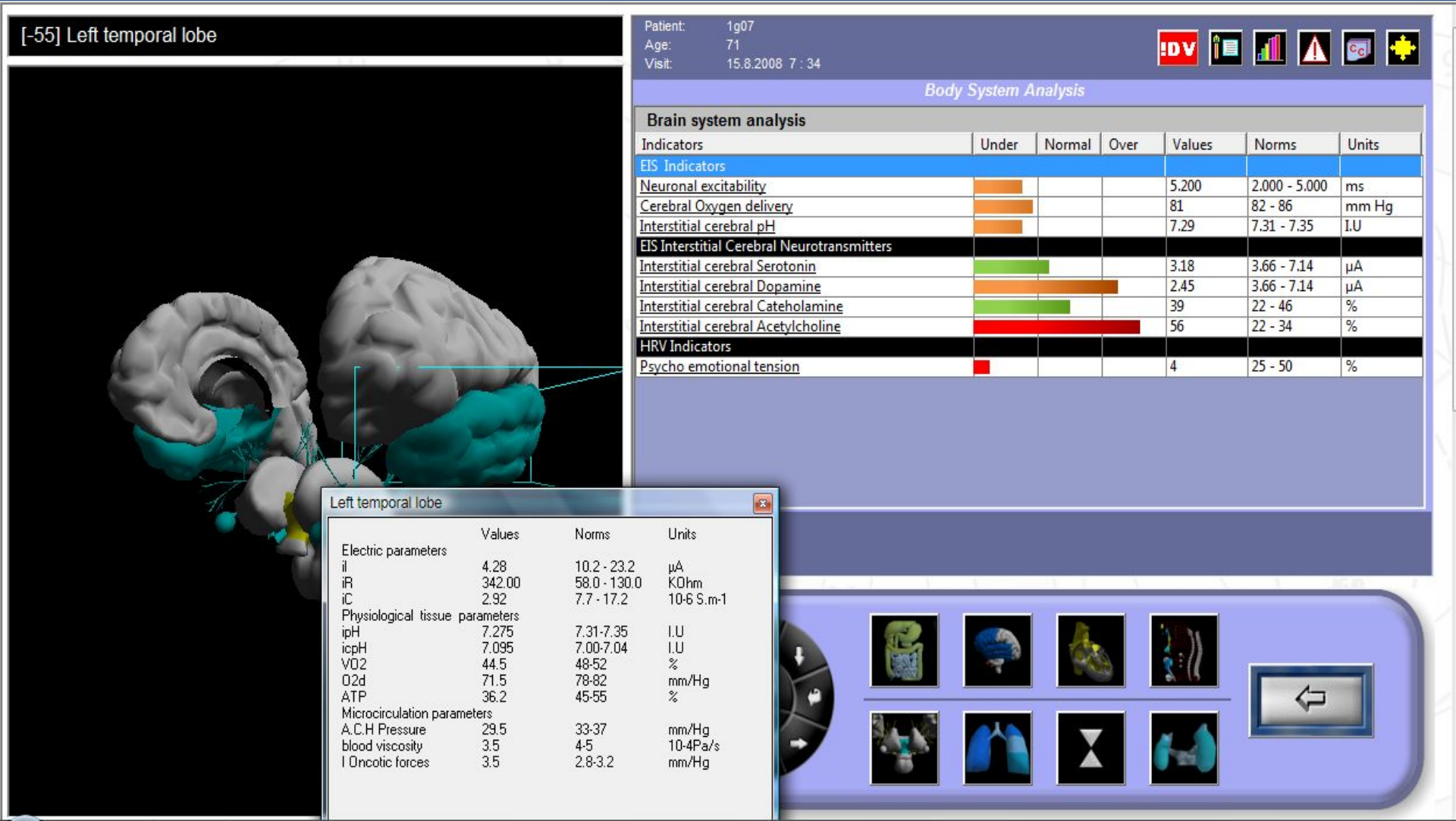

# E.S TECK COMPLEX

- ПЕРЕКРЕСТНЫЙ АНАЛИЗ
- МОДЕЛИРОВАНИЕ ИНДИКАТОРОВ СОСТОЯНИЯ

# ИНДИКАТОРЫ СИСТЕМЫ ПИЩЕВАРЕНИЯ

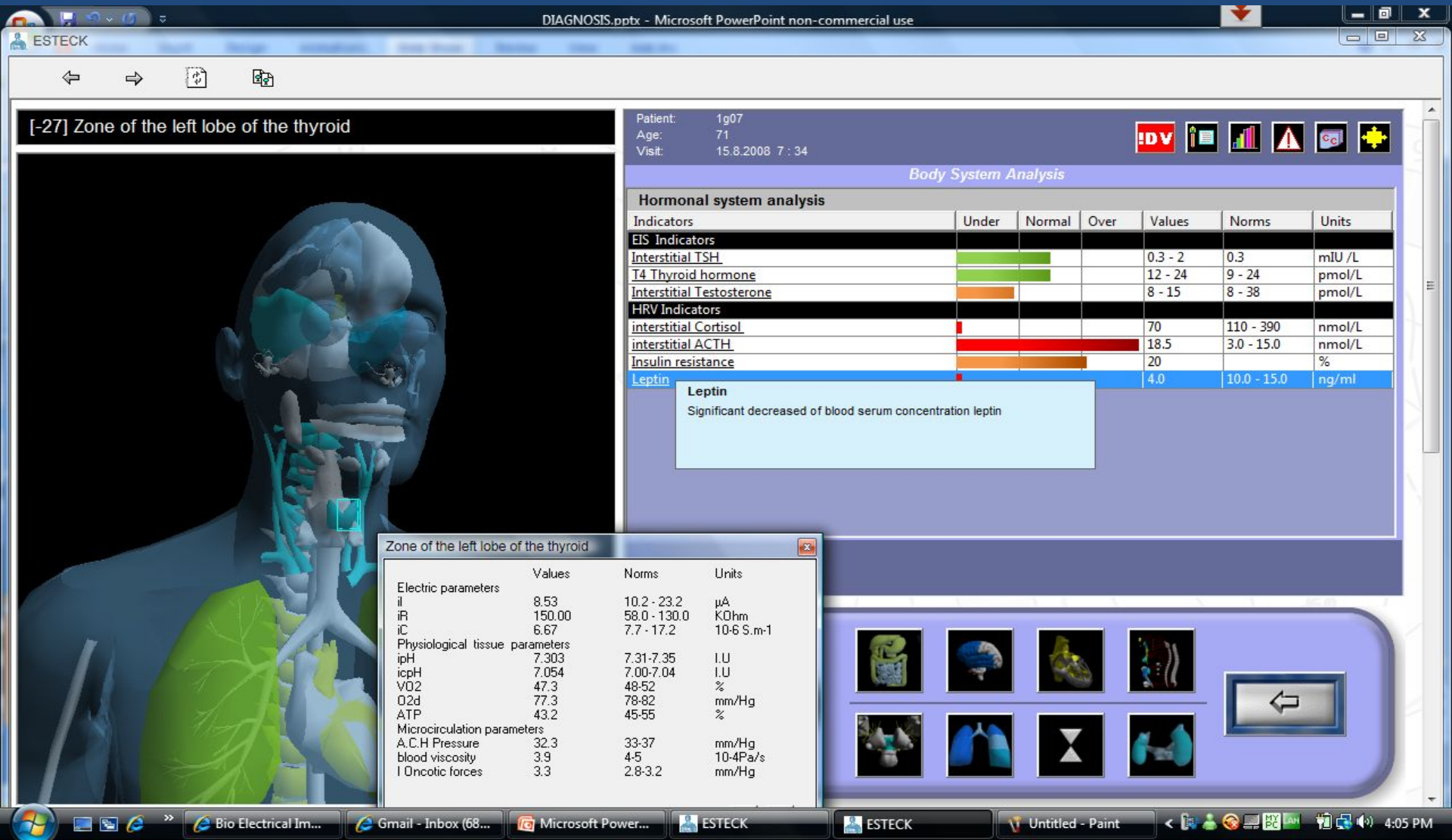


# ИНДИКАТОРЫ СОСТОЯНИЯ МОЗГА

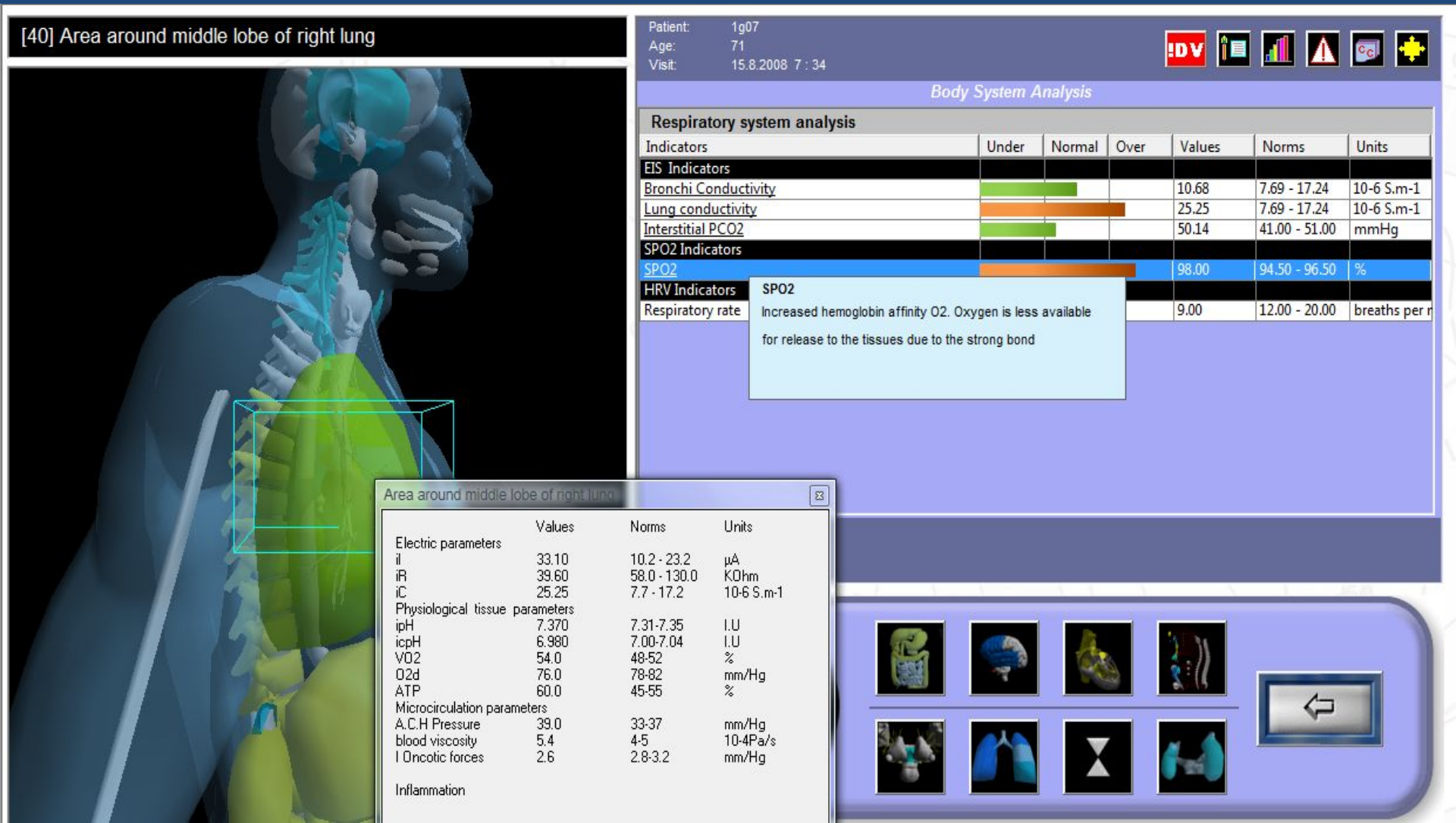


# ИНДИКАТОРЫ ССС (сердечно – сосудистая система)

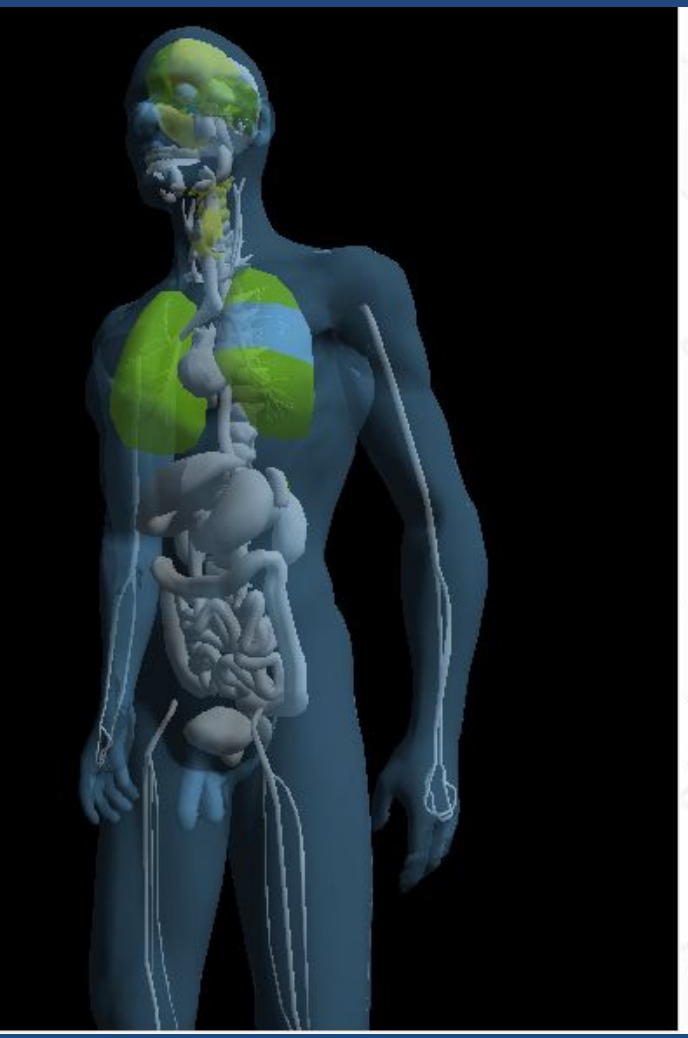
# ГОРМОНАЛЬНЫЙ БАЛАНС



# ИНДИКАТОРЫ СИСТЕМЫ ДЫХАНИЯ



# Оценка и мониторинг параметров образа жизни (Life Style)



**ES Teck Lifestyle**

**Lifestyle Indicators**

| Indicators | Under | Normal | Over | Values | Norms | Units |
|---|---|---|---|---|---|---|
| EIS Indicators | | | | | | |
| ESG 9+10 | | | | 23.26 | 7.69 - 17.24 | 10-6 S.m-1 |
| ATP production | | | | 51 | 45 - 55 | % |
| Insulin resistance | | | | 0 | < 5 | % |
| interstitial Na+ | | | | 131.0 | 121.6 - 129.0 | mmol/L |
| interstitial K+ | | | | 2.95 | 3.00 - 3.40 | mmol/L |
| interstitial Cl- | | | | 106.7 | 107.5 - 115.0 | mmol/L |
| intertitial Ph | | | | 2.85 | 1.60 - 2.70 | mmol/L |
| interstitial Ca++ | | | | 1.43 | 1.45 - 1.63 | mmol/L |
| interstitial Mg | | | | 0.32 | 0.40 - 0.56 | mmol/L |
| interstitial H+ | | | | 47.84 | 42.60 - 51.30 | mmol/L |
| BIA Indicators | | | | | | |
| Fat mass | | | | 25.8 | 10.0 - 20.0 | % |
| Fat free mass | | | | 91.5 | 79.0 - 89.0 | % |
| Total Body Water | | | | 49.5 | 55.6 - 65.6 | % |
| Body Mass Index | | | | 28.9 | 18.5 - 24.5 | |

# Советы по питанию (показанные, противопоказанные продукты…)

## NOT RECOMMENDED FOODS

***Vegetables***
Egg Plant, Avocado
***Animal protein***
Salami , Frankfurters, Well-hung game, Marinated herring, Beef liver, Brain, Lard, Sausages, Bacon, Goose
***Dairy products***
Mozzarella, Margarine, Fresh cream, Cheese
***Carbohydrates***
Brewer's yeast, Sodium glutamate (often used in Chinese cooking), Chocolate, Ice-cream, Honey, Jam, Cocoa, Jam tart
***Fats***
Fried food, Mayonnaise
***Drinks***
Sweetened Cola Drinks
***Oily foods***
Almonds, Pistachios, Hazel nuts, Walnuts, Pine nuts
***Fruit***
Bananas, Pineapple, Dates , Fruit in syrup, Candied fruit, Dried fruit, Fruit jelly, Coconut

## RECOMMENDED FOODS

***Vegetables***
Artichokes, String beans, Celery root, Leeks, Fennel, Dandelion
***Drinks***
Chicory
***Fruit***
2 fruits per day max
***Herbs***
Parsley

## MICRONUTRITION

***Trace elements***
Magnesium

***Plant therapy***
Poppy ,Passion flower ,Aubeline ,Hawthorn ,Garlic ,Cypress ,Chestnut tree ,Horsetail

## COOKING METHODS

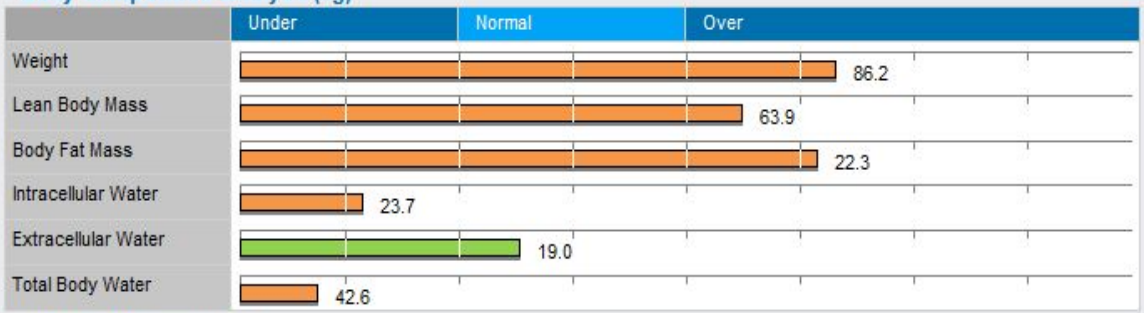
- Steaming is to be preferred to all other methods.
- For cooking food: olive, peanut or palm oil, without ever allowing it to smoke.
- For improved carotenoid digestion, cook: carrots, tomatoes, broccoli, spinach then add olive or colza oil after cooking.
- To prepare fish, marinate in lemon juice, wine or oil, then steam or poach in stock
- Do not burn or carbonize meat and throw away the gravy.

# Индикаторы композиции массы тела

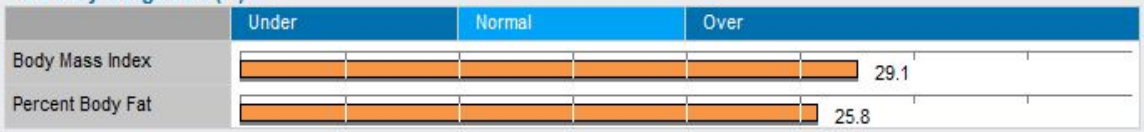
## Body Composition (kg)

| Compartments | Values | Total Body Water | Lean Body Mass | Weight |
|---|---|---|---|---|
| Intracellular Water | 23.7 | 42.6 | 63.9 | 86.2 |
| Extracellular Water | 19.0 | | | |
| Dry Lean Mass | 21.3 | | | |
| Body Fat Mass | 22.3 | | | |

## Body Composition Analysis (kg)




## Obesity Diagnosis (%)




## Weight Control (kg)

**Current Target Weight: 69.9** **Fat Control: -9.3** **Basal Metabolic Rate: 2003 Kcal**

**Weight Control: -16.3** **LBM Control: -5.3**

Daily Activity Level:
Very light: stay at home, no activity
Overweight
Height: 172.7 cm
Weight : 86.2 kg
Fat free mass: 63.9 kg
Fat mass: 22.3 kg (25.8%)
TBW: 42.6 kg (49.5%)
Extracellular Water: 18.97 kg (-2.2%)
Intracellular Water: 23.67 kg (-9.1%)
Basal metabolic rate / 24 Hours: 2003 Kcal

***Algorithms used :***

TBW: Davies et al 1988
FFM: Deurenberg et al 1991
ECW: Sergi G, et al 1994

***Actual Impedance:***

Z = 417.4 Ohm
R = 415 Ohm Xc = 45 Ohm
Phase Angle (PA) = 6.2

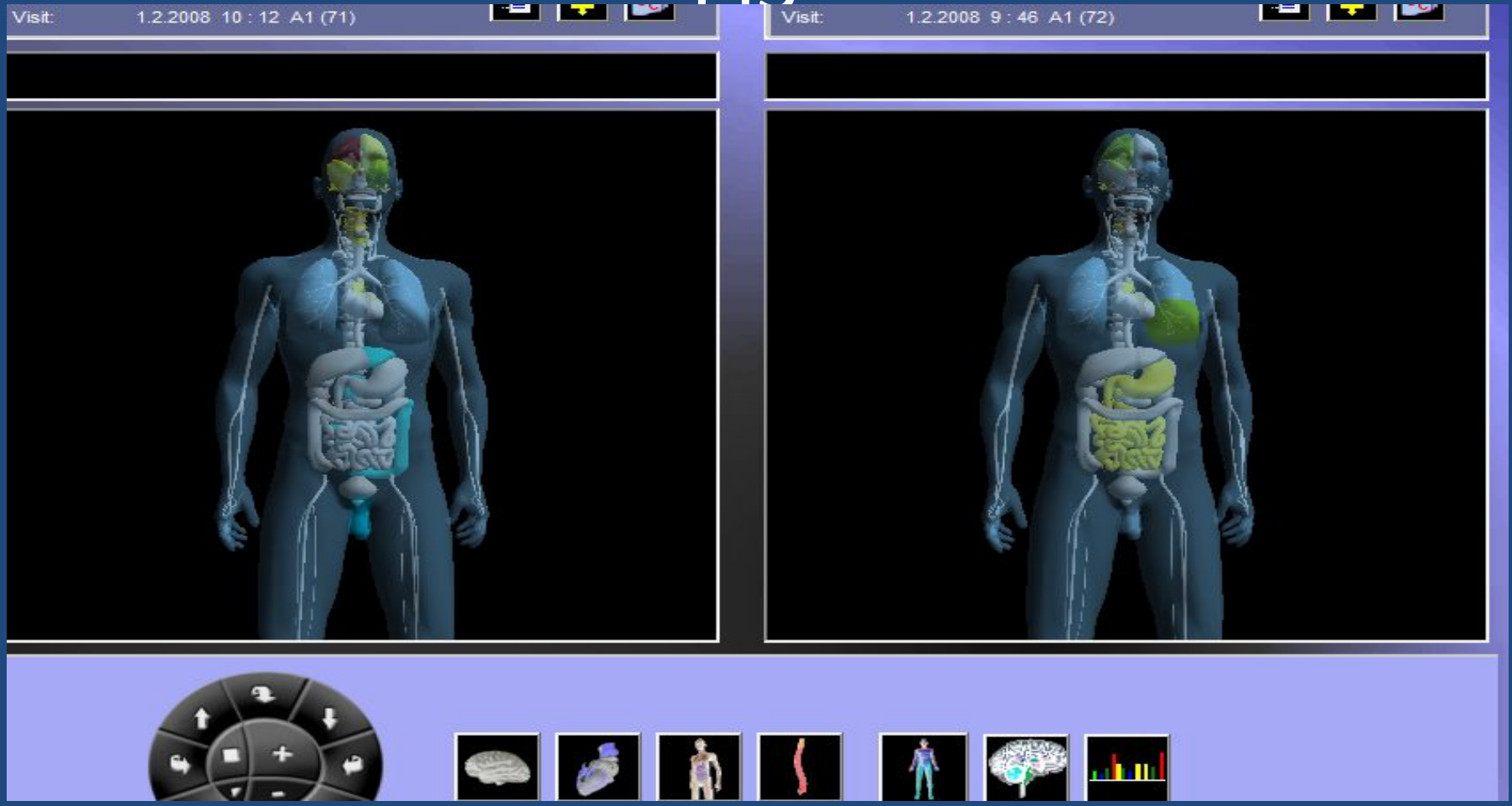
The calculation of the body composition is made according to the Bioelectrical Impedance Analysis (BIA). BIA in tetra polar mode and mono frequency of 50KHz.

*Statistical Cross Analysis*

# Мониторинг динамики показателей до и после спортивной нагрузки

| Indicators | Value before sport | Value after sport | BIA and Modeling Monitoring |
|---|---|---|---|
| **HRV Indicators** | | | |
| HR | 56 | 83 | |
| HRVLF | 25.59 | 49 | |
| MxDMn | 150 | 161 | |
| **BIA Indicators** | | | |
| TWB | | | |
| ECW | | | |
| ICW | | | |
| **EIS Indicators** | | | |
| Cortisol | | | |
| Aldosterone | | | |
| Na+ | | | |
| K+ | | | |
| Cl- | | | |
| Ca++ | | | |
| Mg | | | |
| Phosphates | | | |
| [H+] | | | |
| ESG 9/10 ( VO2) | | | |
| **SpO2% and photoelectrical Plethysmography Indicators** | | | |
| SpO2 | | | |
| Etc | | | |
| EEI | | | |
| DDI | | | |
| DEI | | | |

# Сравнение моделей состояния до и после спортивных упражнений в FIS



# Мониторинг показателей композиции массы тела