

## Questionnaire A

Institute:  
 Doctor:  
 Blood sample code:  
 Date of blood sampling:

### **1. Patient personal details**

Insurance number: .....

Name: .....

Date of birth: .....

Gender: Female/Male

Race: Caucasian / Black / Asian / Indian/ Other:

Date of questioning: .....

### **2. Inclusion criteria**

Patient has type 2 diabetes mellitus	YES	NO
Age: 35 - 75 years	YES	NO
Hemoglobin A1c: 7-12%	YES	NO
Treated with oral antihyperglycemic agent or with insulin	YES	NO
Written informed consent signed	YES	NO
ONE „NO” is present = DO NOT INCLUDE!		

### **3. Exclusion criteria**

Other type of diabetes mellitus	YES	NO
patients with poor glycaemic control or unstable diabetes	YES	NO
patients with known serious comorbidity and/ or with advanced macrovascular complications	YES	NO
active bacterial infection or treatment with antibiotics within 3 weeks	YES	NO
open wounds or skin lesions	YES	NO
history of skin-related conditions or sensitivity to prolonged water immersion	YES	NO

or exposure to pool chemicals		
severe psychiatric pathology or psychosis	YES	NO
pregnancy or breastfeeding	YES	NO
judgment by medical provider that heat therapy/hydrotherapy poses an undue burden or risk	YES	NO
participating in other ongoing clinical trials	YES	NO
heat or balneotherapy in the past 3 months	YES	NO
morbid obesity (body mass index > 40 kg/m <sup>2</sup> )	YES	NO
steroid treatment	YES	NO
active autoimmune diseases	YES	NO
coronavirus disease 2019 (COVID-19) in the past 3 months.	YES	NO
One „YES” is present = EXCLUDE!		

#### 4. Medical history

**Alcohol consumption** YES / NO

If yes: daily /weekly/ monthly/ occasionally

**Smoking:** YES / NO

If yes: ..... pocket

..... years

If no: .. earlier? YES/NO

If yes: ..... pocket

..... years

**Diabetes mellitus (2):** since.....

**Hypertension:** YES since:.....

NO

#### 5. Physical examination

Height: ..... cm

Body weight:.....kg

BMI: .....kg/m<sup>2</sup>

Blood pressure:..... Hgmm

Heart rate:..... bpm

Blood sugar: ..... mmol/l

## 6. Treatment

### Oral antidiabetic treatment

NAME	Active substance	Dose (number only)	Unit (g/mg/IU)	Dosage (time/day)	Oral/subcutan	Since when?

### Insulin treatment

NAME	Active substance	Total daily dose	Since when?

## 7. Blood sample - routine laboratory examination

<b>Glycaemic control</b>	
Fasting plasma glucose (mmol/l)	
Hemoglobin A1c (%)	
Plasma insulin (pmol/l??)- only in OAD treated patients	
<b>Inflammatory markers</b>	
CRP (mg/l)	
Erythrocyte sedimentation rate (mm/h)	
<b>Blood</b>	
White blood cell count (G/l)	
Neutrophils (%)	
Red blood cell count (T/l)	
Hemoglobin (g/l)	
Hematokrit (%)	
MCV (fl)	
Platelet count (G/l)	

<b>Ions</b>	
Sodium (mmol/l)	
Potassium (mmol/l)	
<b>Renal function</b>	
Urea nitrogen (mmol/l)	
Creatinine (umol/l)	
eGFR (ml/min/m <sup>2</sup> )	
<b>Liver functions</b>	
Total bilirubin (umol/l)	
Aspartate aminotransferase (ASAT/GOT – U/l)	
Alanine aminotransferase (ALAT/GPT – U/l)	
Alkaline phosphatase (ALP – U/l)	
Lactate dehydrogenase (LDH – U/l)	
Gamma glutamyl transferase (GGT – U/l)	
Prothrombin (%)	
INR	
Total protein (g/l)	
Albumin (g/l)	
<b>Lipids</b>	
Total cholesterol (mmol/l)	
Low-density lipoprotein (LDL – mmol/l)	
High-density lipoprotein (HDL – mmol/l)	
Triglyceride (mmol/l)	
TSH (mU/l)	
<b>Iron status</b>	
Iron (umol/l)	
Transferrin (g/l)	
Transferrin saturation (%)	
Ferritin (ug/l)	
Thrombocyte aggregation....???	

### 8. Spot urine analysis

Albumin/creatinine ratio (ACR, mg/g): .....

Fractional excretion of amino acids	




### 9. Oxidative stress markers – blood sample

Ortho-thyrozine level	
Meta-thyrozine level	
Para-thyrozine level	

### 10. Heat shock proteins – blood sample

Yes            no

### 11. Cardiovascular measurements

24 h ambulatory blood pressure monitor	
Mean systolic blood pressure (Hgmm)	
Mean diastolic blood pressure (Hgmm)	
Diurnal index (%)	
- Dipper (10-20%)	YES      NO
- Non-dipper (<10%)	YES      NO
- Extreme dipper (>20%)	YES      NO
- Inversed diurnality	YES      NO
Percent time elevation index (or hypertensive time index, %)	
Pulse pressure (Hgmm)	

Arterial pulse wave velocity: .....

Overnight pulzoxymeter – apnoe-hypopnoe index (AHI): .....

- AIH > 5:      YES            NO

### 12. Examinations for neuropathy

Neurometer									
	<u>Left</u>	<u>Nervus medianus</u>	<u>Right</u>	<u>Normal range (Hz)</u>		<u>Left</u>	<u>Nervus peroneus</u>	<u>Right</u>	<u>Normal range (Hz)</u>

		2000 Hz		<b><u>120-289</u></b>		2000 Hz		<b><u>187-516</u></b>
<b><u>Abnormal: 1</u></b>								
<b><u>Normal: 0</u></b>								
		250 Hz		<b><u>22-180</u></b>		250 Hz		<b><u>44-190</u></b>
<b><u>Abnormal: 1</u></b>								
<b><u>Normal: 0</u></b>								
		5 Hz		<b><u>16-100</u></b>		5 Hz		<b><u>18-170</u></b>
<b><u>Abnormal: 1</u></b>								
<b><u>Normal: 0</u></b>								

<b>128-Hz tuning fork</b>		
	<b><u>Right radius:</u></b>	<b><u>Left radius:</u></b>
<b><u>Abnormal: 1, Normal: 0</u></b>		
	<b><u>Right hallux:</u></b>	<b><u>Left hallux:</u></b>
<b><u>Abnormal: 1, Normal: 0</u></b>		

<b><u>Symptoms of neuropathy</u></b>		
	<b>Score</b>	<b><u>Abnormal: 1</u></b> <b><u>Normal: 0</u></b>
<b>DN4 Questionnaire</b>		
<b>Neuropathy Total Symptom Score-6</b>		

**Neurotest:**    PINK            MIXED            BLUE  
                          0                    1                    1