

**Supplementary Table S1: Variables defined from the baseline epidemiological self-reported questionnaire of the GCAT cohort**

Name - Variable	Description	Questionnaire - Section	Type	Categories - Label
alcohol_actual	Current alcohol consumption	Alcohol consumption	binary	yes, no
bmi	BMI (Kg/m <sup>2</sup> )	Anthropometric & blood pressure	numeric	
bmi_who_obesity	BMI obesity	Anthropometric & blood pressure	binary	<30, ≥30
bmi_who	BMI WHO categories (Kg/m <sup>2</sup> )	Anthropometric & blood pressure	categorical	<18.50, 18.50 - 24.99, ≥25-29.99, ≥30.00
bmi_deep	BMI WHO categories; additional cut-off points (Kg/m <sup>2</sup> )	Anthropometric & blood pressure	categorical	<18.50, 18.50 - 24.99, ≥25-29.99, ≥30-34.99, ≥35-39.99, ≥40
diastolic_blood_pressure_c	Diastolic blood pressure	Anthropometric & blood pressure	numeric	
heart_rate_c	Heart rate	Anthropometric & blood pressure	numeric	
height_c	Height	Anthropometric & blood pressure	numeric	
hip_c	Hip circumference	Anthropometric & blood pressure	numeric	
systolic_blood_pressure_c	Systolic blood pressure	Anthropometric & blood pressure	numeric	
waist_c	Waist circumference	Anthropometric & blood pressure	numeric	
whr	Waist-hip ratio	Anthropometric & blood pressure	numeric	
whr_who_obesity	Waist-hip ratio obesity	Anthropometric & blood pressure	binary	obesity vs (normalweight, overweight)
whr_who	Waist-hip ratio WHO categories	Anthropometric & blood pressure	categorical	normalweight, overweight, obesity
weight_c	Weight	Anthropometric & blood pressure	numeric	
civil_status	Civil status	Demographic & socioeconomic	categorical	Single, Married, Widow or widower, Divorced or separated, Domestic partner
civil_status_ever_divorced	Civil status (ever been divorced)	Demographic & socioeconomic	binary	yes, no
civil_status_ever_married	Civil status (ever been married)	Demographic & socioeconomic	binary	yes, no
education	Education level	Demographic & socioeconomic	categorical	Without studies, Primary school or equivalent (6thEGB), High school (EGB or ESO), Bachelor Degree (FP1), A levels (BUP), High professional qualifications (FP2), College or University degree
education_college	Education level (College)	Demographic & socioeconomic	binary	College or University degree vs (Without studies, Primary school or equivalent (6thEGB), High school (EGB or ESO), Bachelor Degree (FP1), A levels (BUP), High professional qualifications (FP2))
handedness	Handedness	Demographic & socioeconomic	categorical	
handedness_left	Handedness (left)	Demographic & socioeconomic	binary	Left-handedness, Right-handedness, Ambidextrous

lives_alone	Lives alone	Demographic & socioeconomic	binary	yes, no
lives_in_couple	Lives in couple	Demographic & socioeconomic	binary	yes, no
incapacity	Socialization	Demographic & socioeconomic	binary	yes, no
coffee_intake	Caffeine consumption	Diet	binary	yes, no
predimed	Predimed	Diet	categorical	Low adherence, middle adherence, high adherence
predimed_high_adherence	Predimed (high adherence)	Diet	binary	High adherence vs (Low, middle adherence)
predimed_score	Predimed score	Diet	numeric	
tea_intake	Tea consumption	Diet	binary	yes, no
icd9_code3_244	Acquired hypothyroidism	Medical History	binary	yes, no
icd9_code3_410	Acute myocardial infarction	Medical History	binary	yes, no
icd9_code3_308	Acute reaction to stress	Medical History	binary	yes, no
atc_C09	Agents acting on the renin-angiotensin system	Medical History	binary	yes, no
atc_N02	Analgesics	Medical History	binary	yes, no
atc_M01	Anti-inflammatory and antirheumatic products	Medical History	binary	yes, no
atc_N04	Anti-parkinson drugs	Medical History	binary	yes, no
atc_B03	Antianemic preparations	Medical History	binary	yes, no
atc_J01	Antibacterials for systemic use	Medical History	binary	yes, no
atc_A07	Antidiarrheals, intestinal anti-inflammatory/anti-infective agents	Medical History	binary	yes, no
atc_N03	Antiepileptics	Medical History	binary	yes, no
atc_D01	Antifungals for dermatological use	Medical History	binary	yes, no
atc_M04	Antigout preparations	Medical History	binary	yes, no
atc_R06	Antihistamines for systemic use	Medical History	binary	yes, no
atc_C02	Antihypertensives	Medical History	binary	yes, no
atc_L01	Antineoplastic agents	Medical History	binary	yes, no
atc_D05	Antipsoriatics	Medical History	binary	yes, no
atc_B01	Antithrombotic agents	Medical History	binary	yes, no
icd9_code3_300	Anxiety, dissociative and somatoform disorders	Medical History	binary	yes, no
icd9_code3_493	Asthma	Medical History	binary	yes, no

icd9_code3_041	Bacterial infection in conditions classified elsewhere and of unspecified site	Medical History	binary	yes, no
atc_C07	Beta blocking agents	Medical History	binary	yes, no
birth_weight	Birth weight (kg)	Medical History	categorical	<2.5, 2.5-2.9, 3-3.4, 3.5-4, >4, missing
birth_weight_binary	Birth weight (more than 3.5kg)	Medical History	binary	<3.5, ≥3.5
atc_C08	Calcium channel blockers	Medical History	binary	yes, no
icd9_code3_427	Cardiac dysrhythmias	Medical History	binary	yes, no
atc_C01	Cardiac therapy	Medical History	binary	yes, no
atc_M05	categorical	Medical History	binary	yes, no
icd9_code3_995	Certain adverse effects not elsewhere classified	Medical History	binary	yes, no
icd9_code3_496	Chronic airway obstruction, not elsewhere classified	Medical History	binary	yes, no
icd9_code3_571	Chronic liver disease and cirrhosis	Medical History	binary	yes, no
icd9_code3_472	Chronic pharyngitis and nasopharyngitis	Medical History	binary	yes, no
icd9_code3_692	Contact dermatitis and other eczema	Medical History	binary	yes, no
atc_H02	Corticosteroids for systemic use	Medical History	binary	yes, no
atc_D07	Corticosteroids, dermatological preparations	Medical History	binary	yes, no
atc_R05	Cough and cold preparations	Medical History	binary	yes, no
icd9_code3_311	Depressive disorder, not elsewhere classified	Medical History	binary	yes, no
icd9_code3_250	Diabetes mellitus	Medical History	binary	yes, no
icd9_code3_530	Diseases of esophagus	Medical History	binary	yes, no
icd9_code3_536	Disorders of function of stomach	Medical History	binary	yes, no
icd9_code3_272	Disorders of lipid metabolism	Medical History	binary	yes, no
atc_C03	Diuretics	Medical History	binary	yes, no
atc_A02	Drugs for acid related disorders	Medical History	binary	yes, no
atc_A06	Drugs for constipation	Medical History	binary	yes, no

atc_A03	Drugs for functional gastrointestinal disorders	Medical History	binary	yes, no
atc_R03	Drugs for obstructive airway diseases	Medical History	binary	yes, no
atc_A10	Drugs used in diabetes	Medical History	binary	yes, no
atc_L02	Endocrine therapy	Medical History	binary	yes, no
icd9_code3_401	Essential hypertension	Medical History	binary	yes, no
icd9_code3_564	Functional digestive disorders not elsewhere classified	Medical History	binary	yes, no
icd9_code3_535	Gastritis and duodenitis	Medical History	binary	yes, no
icd9_code3_780	General symptoms	Medical History	binary	yes, no
icd9_code3_V83	Genetic carrier status	Medical History	binary	yes, no
icd9_code3_365	Glaucoma	Medical History	binary	yes, no
icd9_code3_274	Gout	Medical History	binary	yes, no
offspring_binary	Has children	Medical History	binary	yes, no
icd9_code3_600	Hyperplasia of prostate	Medical History	binary	yes, no
icd9_code3_722	Intervertebral disc disorders	Medical History	binary	yes, no
icd9_code3_579	Intestinal malabsorption	Medical History	binary	yes, no
icd9_code3_280	Iron deficiency anemias	Medical History	binary	yes, no
atc_C10	Lipid modifying agents	Medical History	binary	yes, no
cancer_C43	Malignant melanoma of skin	Medical History	binary	yes, no
cancer_C54	Malignant neoplasm of breast	Medical History	binary	yes, no
cancer_C61	Malignant neoplasm of corpus uteri	Medical History	binary	yes, no
cancer_C50	Malignant neoplasm of skin	Medical History	binary	yes, no
icd9_code3_199	Malignant neoplasm without specification of site	Medical History	binary	yes, no
icd9_code3_627	Menopausal and postmenopausal disorders	Medical History	binary	yes, no
anxiety	Mental Health (MHI-5)	Medical History	binary	Frequency with which he/she has been very nervous during the last 4 weeks from baseline date: 1 (always, almost always, many times), 0 (sometimes, Only ever, never)
calmness	Mental Health (MHI-5)	Medical History	binary	Frequency with which he/she has been feeling calm and peaceful during the last 4 weeks from baseline date: 1 (always, almost always, many times), 0 (sometimes, Only ever, never)

happiness	Mental Health (MHI-5)	Medical History	binary	Frequency with which he/she has been feeling happy during the last 4 weeks from baseline date: 1 (always, almost always, many times), 0 (sometimes, Only ever, never)
sadness	Mental Health (MHI-5)	Medical History	binary	Frequency with which he/she has been feeling depressed and sad during the last 4 weeks from baseline date: 1 (always, almost always, many times), 0 (sometimes, Only ever, never)
upset	Mental Health (MHI-5)	Medical History	binary	Frequency with which he/she has been feeling demoralised during the last 4 weeks from baseline date: 1 (always, almost always, many times), 0 (sometimes, Only ever, never)
icd9_code3_346	Migraine	Medical History	binary	yes, no
atc_A12	Mineral supplements	Medical History	binary	yes, no
atc_R01	Nasal preparations	Medical History	binary	yes, no
offspring	Number of children	Medical History	numeric	
atc_S01	Ophthalmologicals	Medical History	binary	yes, no
icd9_code3_715	Osteoarthritis and allied disorders	Medical History	binary	yes, no
cancer_C44	Other and unspecified	Medical History	binary	yes, no
icd9_code3_285	Other and unspecified anemias	Medical History	binary	yes, no
icd9_code3_724	Other and unspecified disorders of back	Medical History	binary	yes, no
icd9_code3_719	Other and unspecified disorders of joint	Medical History	binary	yes, no
icd9_code3_558	Other and unspecified noninfectious gastroenteritis and colitis	Medical History	binary	yes, no
atc_D11	Other dermatological preparations	Medical History	binary	yes, no
icd9_code3_733	Other disorders of bone and cartilage	Medical History	binary	yes, no
icd9_code3_459	Other disorders of circulatory system	Medical History	binary	yes, no
icd9_code3_569	Other disorders of intestine	Medical History	binary	yes, no
icd9_code3_602	Other disorders of prostate	Medical History	binary	yes, no
icd9_code3_729	Other disorders of soft tissues	Medical History	binary	yes, no

icd9_code3_246	Other disorders of thyroid	Medical History	binary	yes, no
icd9_code3_414	Other forms of chronic ischemic heart disease	Medical History	binary	yes, no
atc_G02	Other gynecologicals	Medical History	binary	yes, no
icd9_code3_339	Other headache syndromes	Medical History	binary	yes, no
icd9_code3_553	Other hernia of abdominal cavity without mention of obstruction or gangrene	Medical History	binary	yes, no
icd9_code3_799	Other ill-defined and unknown causes of morbidity and mortality	Medical History	binary	yes, no
atc_N07	Other nervous system drugs	Medical History	binary	yes, no
icd9_code3_338	Pain, not elsewhere classified	Medical History	binary	yes, no
icd9_code3_696	Psoriasis and similar disorders	Medical History	binary	yes, no
atc_N06	Psychoanaleptics	Medical History	binary	yes, no
atc_N05	Psycholeptics	Medical History	binary	yes, no
icd9_code3_714	Rheumatoid arthritis and other inflammatory polyarthropathies	Medical History	binary	yes, no
icd9_code3_295	Schizophrenic disorders	Medical History	binary	yes, no
self_perceived_health	Self-perceived health	Medical History	categorical	very good, good, so-so, bad, very bad
self_perceived_health_binary	Self-perceived health (bad)	Medical History	binary	(bad, very bad) vs (very good, good, so-so)
atc_G03	Sex hormones and modulators of the genital system	Medical History	binary	yes, no
icd9_code3_785	Symptoms involving cardiovascular system	Medical History	binary	yes, no
icd9_code3_786	Symptoms involving respiratory system and other chest symptoms	Medical History	binary	yes, no
icd9_code3_788	Symptoms involving urinary system	Medical History	binary	yes, no
atc_H03	Thyroid therapy	Medical History	binary	yes, no
icd9_code3_242	Thyrotoxicosis with or without goiter	Medical History	binary	yes, no
atc_G04	Urologicals	Medical History	binary	yes, no
icd9_code3_454	Varicose veins of lower extremities	Medical History	binary	yes, no

atc_C05	Vasoprotectives	Medical History	binary	yes, no
atc_A11	Vitamins	Medical History	binary	yes, no
working_shift	Work shift	Occupation	binary	yes, no
working_last_year	Working last year	Occupation	binary	yes, no
				Self-employed without employee, Self-employed with less than 10 employee, Self-employed with more than 10 employee, Other worker, Manager of a company with less than 10 employee, Manager of a company with more than 10 employee, Foreperson, supervisor, person in charge
working_status	Working status	Occupation	categorical	
working_status_active	Working status (active)	Occupation	binary	yes, no
ethnic_group_phototype_score	Ethnic group phototype score	Other habits	numeric	1 (White or caucasian), 4 (Gypsy or Maghrebin), 8 (Latino) , 12 (Black)
eye_color	Eye color	Other habits	categorical	black or deep brown, brown, light brown, blue-grey-green, blue-grey-light green
eye_color_dark	Eye color (dark)	Other habits	binary	black or deep brown vs. (brown, light brown, blue-grey-green, blue-grey-light green)
eye_color_phototype_score	Eye color phototype score	Other habits	numeric	0 (blue-grey-light green), 2 (blue-grey-green), 4 (light brown), 8 (brown), 12 (black or deep brown)
phototype_score_categorical	Fitzpratck phototype score	Other habits	numeric	1 (very sensitive to sunlight), 2 (sensitive to sunlight), 3 (tolerance to sunlight), 4 (dark skin and high tolerance to sunlight), 5 (dark skin and very high tolerance to sunlight)
freckling	Freckling	Other habits	categorical	abundants, some, a few, occasionals, no
freckling_binary	Freckling (has freckles)	Other habits	binary	yes, no
freckling_phototype_score	Freckling phototype score	Other habits	numeric	0 (Abundant), 4 (Some), 6 (A little), 8 (Occasional)
hair_color	Hair color	Other habits	categorical	black, deep brown, light brown, blond, red
hair_color_black	Hair color (black)	Other habits	binary	black vs (deep brown, light brown, blond, red)
hair_color_blond	Hair color (blond)	Other habits	binary	blond vs (black, deep brown, light brown, red)
hair_color_brown	Hair color (brown)	Other habits	binary	deep brown vs (black, light brown, blond, red)
hair_color_light	Hair color (light)	Other habits	binary	light brown vs (black, deep brown, blond, red)
hair_color_red	Hair color (red)	Other habits	binary	red vs (black, deep brown, light brown, blond)
hair_color_phototype_score	Hair color phototype score	Other habits	numeric	0 (Red), 2 (Blond), 4 (Light brown), 8 (Dark brown), 16 (Black)
hair_loss_20	Hair loss pattern at 20	Other habits	categorical	
hair_loss_20_binary	Hair loss pattern at 20 (3&4)	Other habits	binary	(1,2) vs (3,4)
hair_loss_30	Hair loss pattern at 30	Other habits	categorical	

hair_loss_30_binary	Hair loss pattern at 30 (3&4)	Other habits	binary	(1,2) vs (3,4)
hair_loss_40	Hair loss pattern at 40	Other habits	categorical	
hair_loss_40_binary	Hair loss pattern at 40 (3&4)	Other habits	binary	(1,2) vs (3,4)
phototype_score	Phototype score	Other habits	numeric	
skin_color	Skin color	Other habits	categorical	black, brown, middle, white, very white
skin_color_phototype_score	Skin color phototype score	Other habits	numeric	0 (Very white), 2 (White), 8 (Median), 12 (Dark skinned), 16 (Black)
skin_sensitivity_to_sun	Skin sensitivity to sun	Other habits	categorical	easily burn, moderately, some times, rarely, never
skin_sensitivity_to_sun_binary_1_low	Skin sensitivity to sun (high to low)	Other habits	binary	
skin_sensitivity_to_sun_binary_12_medium_to_low_medium	Skin sensitivity to sun (high-medium to low-medium)	Other habits	binary	
skin_sensitivity_to_sun_binary_12_medium_to_low	Skin sensitivity to sun (high-medium to low)	Other habits	binary	
skin_sensitivity_to_sun_phototype_score	Skin sensitivity to sun phototype score	Other habits	numeric	0 (easily burn), 2 (moderately), 4 (some times), 9 (rarely), 12 (never)
skin_tanning_without_protection	Skin tanning without protection	Other habits	categorical	Never or rarely, Sometimes, Mostly, Always, I never suntan
skin_tanning_without_protection_phototype_score	Skin tanning without protection phototype score	Other habits	numeric	(Never or rarely), 2 (Sometimes), 4 (Mostly), 5 (Always), 8 (I never suntan)
bedtime	Bed time	Physical Activity	time	
morningness	Get up time	Physical Activity	time	
nap	Nap	Physical Activity	binary	yes, no
nap_duration	Nap duration	Physical Activity	numeric	
sleep_duration	Sleep duration	Physical Activity	numeric	
smoking_fagerstrom_score	Fagerstrom score	Tobacco consumption	numeric	
smoking_cesation_time	Smoking cesation time	Tobacco consumption	numeric	
smoking_habit	Smoking habit	Tobacco consumption	categorical	current, former, never
smoking_intensity	Smoking intensity	Tobacco consumption	categorical	Never, Current-occasionally, Current-unknown, Current: <=15 cig/day, Current: 16-25 cig/day, Current: 26+ cig/day, Former-unknown, Former: quit<=10 yrs, Former: quit 11-20 yrs, Former: quit 20+ yrs
smoking_packs	Smoking packs per day	Tobacco consumption	numeric	
smoking_packs_exsmoker	Smoking packs per day (exsmoker)	Tobacco consumption	numeric	
smoking_packs_year	Smoking packs year	Tobacco consumption	numeric	

smoking_packs_year_smoker	Smoking packs year (current smoker)	Tobacco consumption	numeric	
smoking_packs_year_exsmoker	Smoking packs year (exsmoker)	Tobacco consumption	numeric	
smoking_status	Smoking status (ever smoked)	Tobacco consumption	binary	yes, no
smoking_time_exsmoker	Smoking time years (current exsmoker)	Tobacco consumption	numeric	
smoking_time_smoker	Smoking time years (current smoker)	Tobacco consumption	numeric	
smoking_time	Smoking time years (no current smoker)	Tobacco consumption	numeric	
age_at_fist_birth	Age at first birth (women)	Women's Health	numeric	
age_at_menarche	Age at menarche (women)	Women's Health	numeric	
age_at_menopause	Age at menopause (women)	Women's Health	numeric	
hrt_use	Hormone replacement therapy use	Women's Health	binary	yes, no
offspring_female	Number of female children	Women's Health	numeric	
offspring_male	Number of male children	Women's Health	numeric	
oc_use	Oral contraceptive use	Women's Health	binary	yes, no
reproductive_life_span	Reproductive life span	Women's Health	numeric	