



ZAN MITREV  
CLINIC

# CATALOG OF SERVICES



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## HOSPITAL TREATMENT

### CARDIO SURGERIES IN ADULTS

Cardiac Revascularization - Aortic Coronary Bypass  
 Valve Surgery - Aortic / Mitral Valve, Replacement / Reconstruction  
 Combined Surgery - Cardiac Revascularization / Valvular Surgery / Left Ventricular Aneurysm  
 Re-surgery - Cardiac Revascularization / Valvular Surgery  
 Surgeries of ascending thoracic aorta - acute aortic dissection / aortic aneurysm / chronic aortic dissection  
 Surgeries of the whole thoracic aorta - "Elephant Trunk" procedure / "Frozen elephant trunk" procedure  
 TAVI procedure - transcatheter aortic valve replacement  
 TEVAR procedure - endovascular treatment of aneurysm / dissection of thoracic aorta.  
 Heart tumor removal surgeries  
 Pericardiectomy  
 Sternum refixation

### CARDIO - VASCULAR CONGENITAL SURGERY HEART DEFECTS IN CHILDREN AGE 0 - 18

Correction of atrial septal defect  
 Correction of ventricular septal defect  
 Coarctation of the aorta (narrowing of the aorta)  
 Correction of pulmonary stenosis  
 Treatment of existing ductus arteriosus  
 Correction of the great blood vessels transposition  
 Correction of congenital heart defect  
 Double right ventricle (DORV)  
 Fallot tetralogy

### VASCULAR SURGERIES

Surgery of the head and neck large blood vessels - carotid endarterectomy / carotid artery kinking resection  
 Subclavian artery reconstruction - vertebral artery surgery / subclavian - carotid bridging / subclavian - subclavian bridging  
 Abdominal aortic surgery - abdominal aortic aneurysm replacement / occlusion (Lehrish syndrome) with aortobifemoral bypass  
 Surgery of the lower extremities' arteries - Iliac artery surgery / femoro - popliteal bypass / femoral - crural bypass / lower extremity artery aneurysms  
 Lower extremity varicose vein surgery  
 Large vein surgery - porto - caval shunt / spleno - renal shunt

Surgical preparation for dialysis - creation of arteriovenous bridging (shunt)  
 Pulmonary embolectomy

### THORACIC SURGERY

Thyroid gland surgeries - Total / partial thyroidectomy  
 Thymus removal - thymoma / myasthenia  
 Sternum deformity surgeries - by-procedure / Ravitch  
 Breast surgeries - Quadrantectomy / Radical Mastectomy / Breast Reduction / Implants  
 Open chest surgeries - segmentectomy / pulmectomy / bulectomy / tumor mediastinum  
 Tracheal surgeries - narrowing post-intubation / stent trachea  
 Thoracoscopic chest surgeries - tumor resection / pleura / segmentectomy / bulectomy  
 Thoracoscopic diagnostic procedures  
 Thoracoscopic treatment of pleural diseases - emphysema

### ABDOMINAL SURGERIES

Pilonidal sinus and fistula surgery (classical and laparoscopic)  
 Appendectomy (classical and laparoscopic)  
 Hernia surgeries (inguinal, ventral and hiatal hernia)  
 Gallbladder and bile duct surgeries  
 Gastric banding placement (laparoscopic)  
 Surgery of hemorrhoids (classic and THD method)  
 Stomach, duodenum and esophagus surgeries  
 Ileus, small and large intestine surgeries (with anastomoses / and with stoma removal)  
 Splenectomy (classic and laparoscopic)  
 Surgery of the liver and the pancreas  
 Palliative surgeries of stomach, pancreas, small and large intestine

### UROLOGICAL SURGERIES

Phimosis / Partial resection and aesthetic correction of the penis  
 Vasectomy - ligation of the seminal ducts (sterilization)  
 Testicular surgery - Hydrocele, varicocele and testicular cysts / Descent of a retained testicle / Removal of a testicular tumor / Placing of testicle implants

Exploratory cystoscopy with transurethral (TUR) biopsy  
 Transurethral resection of bladder tumor  
 Transurethral and transvesical prostate

resection / Radical prostatectomy  
 Ureter and pyelon surgery / Ureterorenoscopy  
 Kidney cyst removal (laparoscopic and classical)  
 Kidney stone removal (classical and laser)  
 Kidney surgeries (removal of a kidney or part of a kidney)  
 Adrenal gland removal (classical and laparoscopic)

### GYNECOLOGICAL SURGERIES

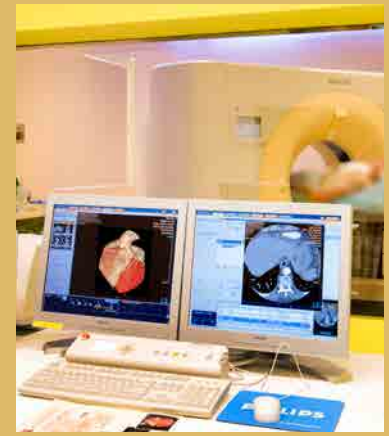
Hysteroscopy  
 Perineum correction  
 Vaginoplasty  
 Vaginoplasty with sub-urethral support  
 Conization  
 Fistula surgery  
 Myomectomy  
 Hysterectomy (benign and malignant processes)  
 Ovariectomy (benign and malignant processes)  
 Adnexectomy (benign and malignant processes)

### ORTHOPEDICS AND TRAUMATOLOGY

Surgical open biopsy of the musculoskeletal system / puncture of a bone cyst  
 Removal of benign and malignant soft tissue tumor  
 Hallux valgus surgery and correction of a congenital clubfoot  
 Joint repositioning  
 Removal of a benign bone tumor (with or without placement of artificial bone)  
 Synevectomy of knee / elbow / shoulder / hip  
 Extraction of osteosynthetic material  
 Bone osteosynthesis (with or without spongioplasty)  
 Femoral head decompression  
 Corrective osteotomy and limb with artificial bones

### IMPLANTATION OF PROSTHESIS IN HIP, KNEE AND SHOULDER JOINTS

Primary and revision prostheses  
 Subtotal and total prostheses  
 Cement, cementless and porcelain prostheses



## ARTHROSCOPIC SURGERY

Knee / ankle arthroscopy  
 Meniscectomy knee arthroscopy  
 Joint arthrodesis  
 Patella medialization and ventralization  
 Flat joint arthroscopy with acromioplasty  
 Cartilage allograft matrix treatment  
 Anterior cruciate ligament reconstruction  
 Arthroscopic reconstruction of joint cartilage in a regeneration system  
 Placement of b. pearls in bones and joints  
 Arthroscopic reconstruction of the flat joint instability and rotator cuff of a flat joint

## AMPUTATIONS OF EXTREMITIES

Disarticulation of a joint (foot / hand / hip / shoulder) in benign and malignant diseases  
 Limb amputation (total or subtotal)

## SPINAL SURGERY

Single and double discectomy  
 Spondylolisthesis posterior fixation  
 Decompression of spinal canal stenosis  
 Removal of bone tumor from vertebral body  
 Scoliosis treatment  
 Tumor extraction from the vertebral column and iliac bone

## OTHER SURGICAL INTERVENTIONS

Treatment of chronic wounds  
 Vacuum treatment (dressing) of a wound  
 Surgical treatment of a wound with silver ions and ozone  
 Keloid removal  
 Secondary closure of a surgical wound  
 Tirsh plastics  
 Extirpation of a lymph node  
 Implantation of artificial skin

## INTERVENTION HOSPITAL PROCEDURES

Treatment of chronic pain (malignant, inflammatory diseases and injuries)  
 Epidural catheter placement  
 Pericardial puncture  
 Pleural talc procedure  
 Temporary transvenous pacemaker  
 Urinary catheter placement  
 Dialysis catheter placement and dialysis process  
 Bronchoscopy  
 Percutaneous placement / removal of gastrostomy tube

Oxiris and Cytosorb filter hemofiltration  
 Application of levosimendan  
 Placement of extracorporeal membrane oxygenation (ECMO)  
 Placement of intra - aortic balloon pump (IABP)  
 Systemic ozone application

## HOSPITAL SERVICES

Hospitalization for further investigation  
 Accompanying a child  
 Ward room (double bed)  
 Ward room (single bed)  
 Room for semi - intensive care  
 Intensive care  
 Intensive care - isolation room  
 Suite - luxury room  
 Suite - high luxury room

## DIAGNOSTIC CENTER

### INTERNAL MEDICINE

#### CARDIOLOGY

Cardiovascular assessment  
 Transesophageal echo (TEE diagnostics)  
 Stress echo  
 Vascular check-up (carotids / Doppler of extremities)  
 Veins Doppler (phlebological check-up)  
 Transcranial Doppler  
 Consultation check-up with an electro physiologist  
 ECG - electrocardiogram  
 Coronary stress test (CST)  
 24 - hour ECG (electrocardiogram) Holter  
 24 - hour ABP Holter (blood pressure monitoring)  
 Electrical systems technical control (electrophysiology)

#### GASTROENTEROLOGICAL CHECK-UPS AND INTERVENTIONS

Gastroenterological check-up with abdominal echo  
 Gastroscopy with anesthesia (without or with biopsy, sclerosing, polypectomy)  
 Anoscopy  
 Manual dilatation of the anal fissure  
 Rectoscopy (without or with biopsy and / or polypectomy)  
 Sigmoidoscopy (without or with biopsy) and / or polypectomy)  
 Colonoscopy with anesthesia (without or with biopsy, sclerosing, polypectomy)

#### OTHER INTERNIST CHECK-UPS AND INTERVENTIONS

Pulmonological check-up  
 Spirometry with therapy  
 Bronchoscopy - outpatient  
 Abdominal echo  
 Thyroid echo  
 Internal endocrinology check-up  
 Nephrology check-up with echo  
 Polysomnographic test for sleep apnea



## ALLERGY TESTS

Allergy skin tests with nutritional allergens  
Allergy skin tests with inhalation allergens  
Allergy skin tests for analgesics and anesthetics

## DERMATOLOGY

### GENERAL DERMATOLOGY

Dermatological check-up  
Cryotherapy (with liquid nitrogen)  
Electro cauterization (hyfrecator)  
Dermoscopy and digital dermoscopy with FotoFinder  
Digital trichoscopy  
Capillaroscopy  
Skin biopsies - excision and punch

### AESTHETIC DERMATOLOGY

Ultherapy® treatment for non - surgical skin lifting and tightening  
HydraFacial (cleansing, peeling, extraction and hydration)  
Chemical peeling  
PRP treatment for rejuvenation and revitalization  
Biorevitalization with hyaluronic acid  
Biorevitalization for lifting  
Mesotherapy  
Hyaluronic fillers  
Botox

## NEURO - PSYCHIATRIC REVIEWS

Neurological check-up  
Psychiatric check-up  
EEG  
EMG  
Sleep deprived EEG  
EP (M - SEP, T - SEP, VEP, BAEP) evoked potentials  
M - SEP / T - SEP / VEP / BAEP

## PSYCHOLOGICAL TREATMENTS

Psycho diagnostics with psychological findings  
Antistress program  
Psychotherapy  
Autogenic training with shiatsu massage  
GDV recording, profile co - creation  
Psychological profiling

## PEDIATRICS

Basic pediatric check-up

Pediatric cardiology check-up with echo diagnostics

## NUTRITIONAL CHECK-UPS

Nutritional counseling

## SURGICAL CHECK-UPS AND OUTPATIENT INTERVENTIONS

### ABDOMINAL SURGERY CHECK-UPS

Abdominal surgical check-up  
Anal check-up with rectal touché  
Application of rectal enema

### UROLOGICAL CHECK-UPS AND OUTPATIENT INTERVENTIONS

Urinary tract ultrasound /  
Transrectal prostate ultrasound  
Placement of urinary catheter - outpatients / Urine flow measurement  
Dilatation of urethra  
Instillation of drugs into the bladder  
Cystostomy minima / Cystostomy catheter replacement  
Placement and removal of J - J probes  
Cystoscopy  
TRUS biopsy  
Testosterone application  
Urethral stone removal  
Testicular biopsy

### GYNECOLOGICAL - OBSTETRIC CHECK-UPS AND OUTPATIENT INTERVENTIONS

Gynecological check-up (colposcopy and gynecological ultrasound)  
PAP smear / HPV typing smear  
Obstetrical and ultrasound check-up of pregnant women  
CTG during pregnancy  
Diagnostic and interventional hysteroscopy  
Perineoplasty  
Insertion / removal of a pessary / spiral  
Biopsy of PVU  
Hysteroscopy  
Minor surgical interventions (removal of condylomas, polypectomy)

### ORTHOPEDIC CHECK-UPS AND

## OUTPATIENT INTERVENTIONS

Ultrasound orthopedic check-up / Spinal check-up  
Application of corticosteroids and anesthetic / Application of hyaluronan  
Puncture of wrist  
Placement and removal of cast  
Application of Go - On injection / Optivisc inj. 3% / Ostenil inj. 2%  
Local therapy with Arthrum 2 / Arthrum 2.5  
Local therapy with PRP (platelets - rich plasma)  
Closed joint reposition  
Superficial nerve decompression  
Soft tissue biopsy - outpatient treatment  
Small joint disarticulation - outpatients' treatment

## OUTPATIENTS SURGICAL TREATMENT OF WOUNDS

Dry dressing  
Small wound suture  
Lavanid dressing  
SUPRASORB dressing  
Surgical treatment of chronic wounds

## ANESTHETIC CHECK-UPS

Anesthesiology check-up  
Pain treatment  
Peripheral nerve blockade

## OZONE THERAPY

Treatment with ozonized water (250 ml)  
Treatment of myofascial syndrome with local ozone application  
Treatment of wounds with ozonized water or ozonized gas  
Local application of ozone  
Application of ozone in a joint  
Systemic application of ozone therapy  
Rectal application of ozone therapy  
Treatment of lumbago with ozone injection

## RADIOLOGY

### X - RAYS AND ECHOCARDIOGRAMS

X - rays (chest, urinary tract, abdomen, head, sinuses, cervical spine, thoracic spine, lumbar spine, pelvis, hips, shoulder, upper arm, elbow, forearm, wrist, hand, thigh, lower leg, knee, ankle, foot)  
panoramic X - ray  
thyroid echocardiogram  
breast echocardiogram  
abdomen echocardiogram  
soft tissues echocardiogram  
echo-guided fine-needle biopsy  
echo-guided core-needle biopsy

### MAMMOGRAPHY

2D mammography  
3D mammography - tomosynthesis

### MR (MAGNETIC RESONANCE IMAGING)

MRI of single region (without visualization of blood vessels)

MRI of single region with contrast (with visualization of blood vessels)

AREAS on which MRI is performed: heart, brain, pituitary gland, entire spine, cervical spine, joints (sports injuries, shoulder, elbow, wrist, hand, foot, hip, knee, pelvis, ankle, temporomandibular joint), upper abdomen, cholangiopancreatography, enterography (small intestine, female pelvis (uterus, ovaries), colon - rectum, prostate, breasts)

### MSCT (COMPUTER TOMOGRAPHY)

Computer tomography of individual regions without contrast (without depiction of the blood vessels)  
Computed angiography (with contrast) of all blood vessels in the body (blood vessels of extremities, abdomen, chest, heart, aorta, head and neck)  
Computer tomography of the whole body in polytrauma  
Cardiac MSCT according to a cardio protocol  
    Coronarography  
    Graftography / heart blood vessels and heart bypasses post surgically)  
Virtual colonoscopy  
MSCT for calcium score  
MSCT of the aorta according to cardio protocol  
Intravenous urography  
MSCT consultative check-up - second opinion of a recorded check-up from another institution  
PRT (CT guided periradicular therapy for disc herniations)  
Computer-guided application of ozone in an intervertebral joint  
Computer-guided fine needle biopsy  
Computer-guided tissue biopsy

## ANGIOGRAPHIC SERVICES AND INTERVENTIONS

### CORONAROGRAPHIES AND INTERVENTIONS ON OTHER

#### VISCERAL - INTERNAL BLOOD VESSELS

Coronary angiography  
Peripheral (visceral) angiography  
Balloon dilatation of coronary and other arteries  
Balloon dilatation of peripheral veins  
Balloon dilatation with stent - implantation with a metal stent  
Coronary intervention with Drug Eluting Stent / DES / coated stent  
Stenting with thrombus aspiration DES  
Lytic therapy (streptokinase, atepase)  
Peripheral stent implantation  
Cardiac catheterization (right and left heart, oximetry, hemodynamics, ventriculography)  
Angiographic removal of a foreign body from the heart and blood vessels  
TEVAR (endovascular reconstruction of the thoracic aorta)

#### ELECTROPHYSIOLOGICAL PROCEDURES

Implantation of a single - chamber electro stimulator / Pace Maker  
Replacement of Pace Maker  
Implantation of a two - chamber Pace Maker  
Electrophysiological study without catheter ablation  
Electrophysiological study with radiofrequency catheter ablation  
Electrophysiological study with anesthesia in pediatric patients  
Replacement of pacemaker for cardiac resynchronization (CRT - P)  
Implantation of pacemaker for cardiac resynchronization (CRT - P)  
Implantation of cardioverter defibrillator (ICD)  
Implantation of pacemaker for cardiac resynchronization with defibrillator (CRT - D)  
Re-implantation of cardiac electrical stimulation

#### INTERVENTIONS ON HEART DEFECTS - STRUCTURAL HEART DEFECTS

PDA coil implantation  
Balloon angioplasty of aorta and pulmonary artery with a stent  
Balloon valvuloplasty of pulmonary and aortic valve  
Implantation of endovascular or intracardiac prosthesis (device)  
Closure of the ductus arteriosus / persistent foramen ovale / atrial and ventricular septal defect / PDA / PFO / ASD / VSD with intracardiac prosthesis (device)

## OTHER ANGIOGRAPHIC SERVICES

TACE (transarterial chemoembolization)  
Embolization of arterial vessels or arterio - venous malformations or fistulas  
Phlebography of peripheral veins  
Fistulogram  
Retrograde pyelography (RPG)  
Micturition cystourethrography  
Varicoceles embolization  
Central vein venous port implantation  
Stenting of the bile duct (ductus choledochus)  
Osteodesitometry

## PHYSIOTHERAPY TREATMENTS

CPAP therapy  
Kinesis therapy  
Kinesio taping  
Manual lymphatic drainage  
Electrotherapy  
Respiratory therapy  
Kinemat (CPM) with electro stimulation  
Functional magnetic stimulation

## MEDICAL TRANSPORTATION

Transport of patients throughout Skopje with or without medical escort  
Transport of patients throughout Macedonia with or without medical escort  
Transport of critically ill patients abroad

## PHARMACY

SCAN HERE



## LABORATORY SERVICES

### BIOCHEMISTRY

Sedimentation of erythrocytes  
Five-part differential blood count  
Serum iron / Ferritin / Vitamin B12  
Glucose / Insulin / «C» - Peptide / HbA1c  
oGTT, Oral glucose tolerance test / Insulin  
oGTT  
Cholesterol (total HDL - cholesterol, LDL -  
cholesterol) / Triglycerides  
Sodium / Potassium / Calcium (total  
and ionized) / Chlorides / Magnesium /  
Phosphorus  
Alkaline phosphatase / Alpha - Amylase  
/ GGT, Gamma - glutamyltransferase /  
Lipase  
AST (GOT) / ALT (GPT)  
CK, Creatine kinase / LDH, Lactate  
dehydrogenase  
Urea / Creatinine / Uric acid  
Total proteins / Albumin  
Bilirubin - total / conjugated (direct) /  
unconjugated (indirect)  
Cardiac markers - CK - MB / Troponin I /  
BNP  
Tumor markers - AFP / CEA / CA 19 - 9 /  
CA 72 - 4 / CA 125 / CA 15 - 3 / Cyfra 21 - 1  
/ PSA  
Sex hormones ACTH / LH / FSH / estradiol  
/ prolactin / progesterone / DHEA - SO<sub>4</sub>,  
testosterone / SHBG (sex - hormone  
binding globulin) / AMH (Anti - Müllerian  
Hormone) / beta HCG  
PRISCA 1 / PRISCA 2 / PRISCA 3  
Bone metabolism - Vitamin «D» (25,OH  
D<sub>2</sub>+D<sub>3</sub>) / Calcitonin / Parathormone  
Thyroid hormones - TSH / T<sub>4</sub> (FT<sub>4</sub>) / T<sub>3</sub>  
(FT<sub>3</sub>) / Thyroglobulin (TG) / Anti - TPO Ab  
/ Anti - TG Ab  
Immunoglobulins - IgA / IgG / IgM / IgE  
Complement - C<sub>3</sub> / C<sub>4</sub>  
Inflammatory markers -CRP / Procalcitonin  
/ Interleukin - 6 (IL - 6)  
RF, Rheumatoid factor / ASO, Anti-  
streptolysin - O  
Antinuclear antibodies - Anti ds - DNAANA  
/ ANA - 17 Pro  
Medicines - Carbamazepine / Valproic acid  
/ Digoxin / Vancomycin / Gentamicin  
Allergy Panel 1 - 4 / Allergy Panel 3TR /  
Allergy Panel 1 HVEN  
Helicobacter pylori IgG  
IgG Quant At - SARS - CoV 2 - «Spike»  
Protein / IgM At - SARS - CoV 2  
URINE - biochemical analyzes with  
sediment

### TRANSFUSIOLOGY

Anticoagulation therapy regimen

INR (capillary blood anticoagulant therapy  
regimen)  
Blood grouping  
Hemostasis screening tests  
D - dimers  
Platelet aggregation - P<sub>2</sub>Y<sub>12</sub> receptor  
antagonist  
Platelet aggregation - ASPIRIN  
Platelet aggregation - platelet function  
Fibrinogen  
DAT (Direct Antiglobulin Test)  
IAT (Indirect Antiglobulin Test - Coombs)

### MICROBIOLOGY

Nasal vestibule swab  
Nasopharynx swab  
Pharynx swab  
Tongue and oral cavity swab  
Cough-out (sputum)  
Tracheobronchial aspirate  
Pneumoslide IgG, IgM  
External ear swab  
Conjunctival swab - bacteriological  
Conjunctival swab for Chlamydia  
trachomatis  
Skin swab  
Wound swab  
Piece of tissue - bacteriological  
Punctate - bacteriological  
Blood for blood culture with antibiotic  
inhibitor  
Urine for urine culture  
Urethral swab - bacteriological  
Urethral swab for Chlamydia trachomatis  
Praeputium swab  
Semen (ejaculate) - bacteriological  
Vulvar swab  
Cervical swab - bacteriological  
Vaginal swab - bacteriological  
Mycoplasma / ureaplasma test  
Cervical swab for Chlamydia trachomatis  
Stool (feces) - bacteriological  
Stool (feces) - parasitological  
Cellophane print out

### GENETICS AND PERSONALIZED MEDICINE

#### Corona virus

COVID-19 antigen rapid test  
PCR test for COVID-19 (SARS - CoV - 2)  
Direct PCR test for COVID-19  
(SARS - CoV - 2)  
Rapid PCR test for COVID-19  
(SARS - CoV - 2)  
Coronavirus + flu A / B

#### Infectious diseases tests

Respiratory pathogens 33 simultaneously  
Respiratory pathogens 35 simultaneously

(with SARS - CoV - 2)  
Rapid respiratory panel 22  
Rapid gastrointestinal panel 24  
HPV detection  
HCV, HBV and HIV detection

#### Polymorphisms

Thrombophilia ( F<sub>2</sub>; F<sub>5</sub>)  
MTHFR gene mutations  
Thrombophilia and folate metabolism  
Clopidogrel sensitivity  
Statins sensitivity - 1 mutation

#### New Generation Sequencing methods (Diagnosis of rare diseases and / or Personalized medicine):

Genome sequencing  
Trio genome sequencing  
Exome sequencing - cardiovascular  
diseases, cancer or specific diseases  
Exome sequencing  
Trio exome sequencing

#### Nutrigenetics

Nutrigenetics 5  
Food intolerance by testing antigens from  
90 food products  
Gluten intolerance  
Lactose intolerance  
Golden nutri package (Nutrigenetics  
5+ intolerance 90 + gluten / lactose  
intolerance)  
Silver nutri package (Nutrigenetics 5+  
intolerance 90)

#### Cancer

Targeted cancer therapy (324 genes,  
bTMB, MSI, IHC)  
Hereditary breast cancer (BRCA1 and  
BRCA2) with NGS sequencing  
Hormonal status - breast cancer  
Cancer detection in hematuria

#### Prenatal non - invasive diagnostics

Verifi prenatal test

#### Other

Paternity/kinship testing (Short Tandem  
Repeats, STR)

## PHI ZAN MITREV DIAGNOSTICS

#### Strumica

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#### Bitola

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e-mail: infobitola@zmc.mk

## PRIVATE HEALTH INSURANCE THROUGH INSURANCE COMPANIES

