



Valdoltra Orthopaedic
Hospital

•Transregionalno omrežje za inovacijo in prenos tehnološkega znanja za izboljšanje zdravstva •Rete transregionale per l'innovazione ed il trasferimento tecnologico per il miglioramento della sanità •Transregional Network for Innovation and Technology Transfer to Improve Health Care •

VALDOLTRA ORTHOPAEDIC HOSPITAL



2007-2013
cooperazione territoriale europea
programma per la cooperazione
transfrontaliera
Italia-Slovenia
evropsko teritorialno sodelovanje
program razpredelnega sodelovanja
Slovenija-Italija



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Projezi sofinancirani Evropski sklad za regionalni razvoj

A Guide to the

»*Valdoltra Orthopaedic Hospital*«

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COOPERATION OPERATIONAL PROGRAMME BETWEEN ITALY AND SLOVENIA 2007-2013

Orthopaedic Hospital of Valdoltra has been successfully taking part in the cross-border cooperation programme between Slovenia and Italy as the strategic partner in two European projects, e-Health and Trans2Care (Transregional Network for Innovation and Technology Transfer to Improve Health Care). The aim of both projects is to establish a system that would enable a permanent two-way transfer of knowledge between the partners taking part in the project, companies from the industry sector and other groups of interest, in order to create innovative products and services for the improvement of public health.

GENERAL INFORMATION – The area of the Cooperation Operational Programme between Slovenia and Italy covers over 30,740 km², serving over 5.5 million inhabitants and including the following regions: Gorica County, Upper Carniola, Coastal Slovenia and the Karst, Central Slovenia and Inner Carniola; across the border in Italy, it includes the provinces of Udine, Gorizia, Trieste, Venice, Padua, Rovigo, Ferrara and Ravenna, and, based on the flexibility clause, also the Pordenone and Treviso provinces. The main objective of the cooperation programme between Slovenia and Italy for the 2007-2013 period is, above all, to increase the potential for recognition and competitive advantages of the programme's target area, which it aims to achieve by meeting the following specific objectives (*Source: www.ita-slo.eu*):

- *To ensure sustainable spatial integration;*
- *To increase the capacities for competition and development of knowledge-based society;*
- *To improve communication systems as well as social and cultural collaboration between Slovenia and Italy;*
- *To enhance the programme's rate of efficiency and success.*



TRANS2CARE STRATEGIC PROJECT

»THE ROLE OF EACH PARTNER«

The role of each partner in the project is to achieve the critical mass of knowledge, human resources and infrastructure. The Trans2Care Project involves:

5 healthcare institutions whose specific expertise and experience in gastroenterology, cardiology, orthopaedics and cancer pathology draws attention to the need for technological advances in the treatment of illness with an emphasis on social impact.

7 research institutions with world-class knowledge and experience in applicative chemistry, which promote state-of-the-art and innovative technological solutions in the fields of biocompatible materials, biochemistry, molecular biology, genetics and neurosciences.

1 technology transfer agency that deals with research and promotion of strategies for the transfer on innovation into products and services.

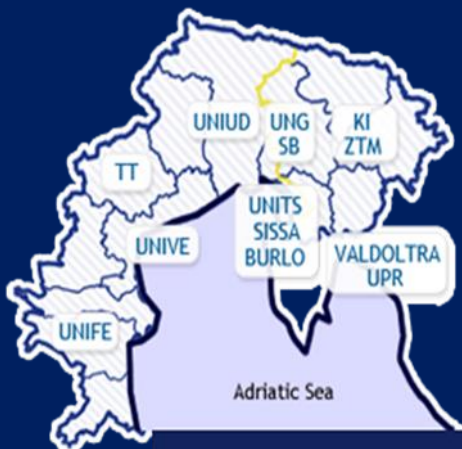
GEOGRAPHICAL AREA OF CROSS-BORDER COOPERATION BETWEEN SLOVENIA AND ITALY 2007-2013 FOR THE TRANS2CARE PROJECT

SLO PARTNERS:

- VALDOLTRA ORTHOPAEDIC HOSPITAL
- UPR - UNIVERSITY OF PRIMORSKA
- KI - NATIONAL CHEMISTRY INSTITUTE LJUBLJANA
- ZTM - BLOOD TRANSFUSION CENTRE OF SLOVENIA
- UNG - UNIVERSITY OF NOVA GORICA
- SB - DR. FRANC DERGANČ GENERAL HOSPITAL

ITA PARTNERS:

- UNITS - UNIVERSITA` DEGLI STUDI DI TRIESTE
- SISSA - SCUOLA INTERNAZIONALE SUPERIORE
- BURLO - ISTITUTO BURLO GARAFOLO TRIESTE
- UNIUD - UNIVERSITA` DI UDINE
- TT - TREVISO TECNOLOGIA
- UNIVE - UNIVERSITA` CA` FOSCARI VENEZIA
- UNIFE - UNIVERSITA` DI FERRARA



VALDOLTRA ORTHOPAEDIC HOSPITAL

»A HOSPITAL WITH TRADITION AND VISION«



Valdoltra Orthopaedic Hospital - OBV is the first **NIAHO**-accredited hospital in Primorska/Coastal Slovenia, the NIAHO standard being awarded by **Det Norske Veritas**, a Norwegian accreditation agency headquartered in the United States of America. Apart from the **Joint Commission** standard, this is the only standard recognised by two of America's top health insurance companies, **Medicare** and **Medicaid**. We chose it because it is based on the **ISO** family of standards that we have been implementing for certain activities within the hospital.



We put the greatest emphasis on comprehensive management of the hospital's quality systems and the management of risks allowing us safe treatment and care for our patients in all of the hospital's fields of expertise and healthcare units.

Therefore this certificate granted to the hospital is a sign of important recognition of the quality of our work, the right steps taken during our one-hundred-year-long path of existence and development, and it opens up the possibilities for us to compete in the common European market and elsewhere, enabling further development of the hospital.



With all of the above in mind we have partnered up with five of our Slovenian counterparts to establish a project under the Slovenia Medical brand with the sponsorship of the President of the Republic of Slovenia, our goal being to participate together in foreign markets and to offer a comprehensive array of healthcare tourism services.

The foundations of today's Valdoltra hospital were laid down a hundred years ago in a peaceful and pretty part of Slovenia's Adriatic coast between the towns of Koper and Trieste by a group of brave men and women, joined by their humanitarian desire to help those that suffer, at the time children with tuberculosis.





The area of Valdoltra (*Italian* Valle Oltra, Val d`Oltra - the valley across the bay as viewed from the Koper side) boasted a very pleasant climate, sheltered from the winds, which was very beneficial for the treatment of tuberculosis.

It is little wonder then that no less than two healthcare institutions were opened to treat tuberculosis - a children's seaside sanatorium at Valdoltra and a sanatorium for lung tuberculosis at Ankaran.

It is precisely this interplay of the location's natural energy and the positive charge of human endeavour and creation that is the essence of Valdoltra's survival through the decades, in spite of the most difficult of times and historic circumstances, and at the same time the secret behind its constant streamlined development.



PRESENTATION OF THE HOSPITAL ACTIVITIES

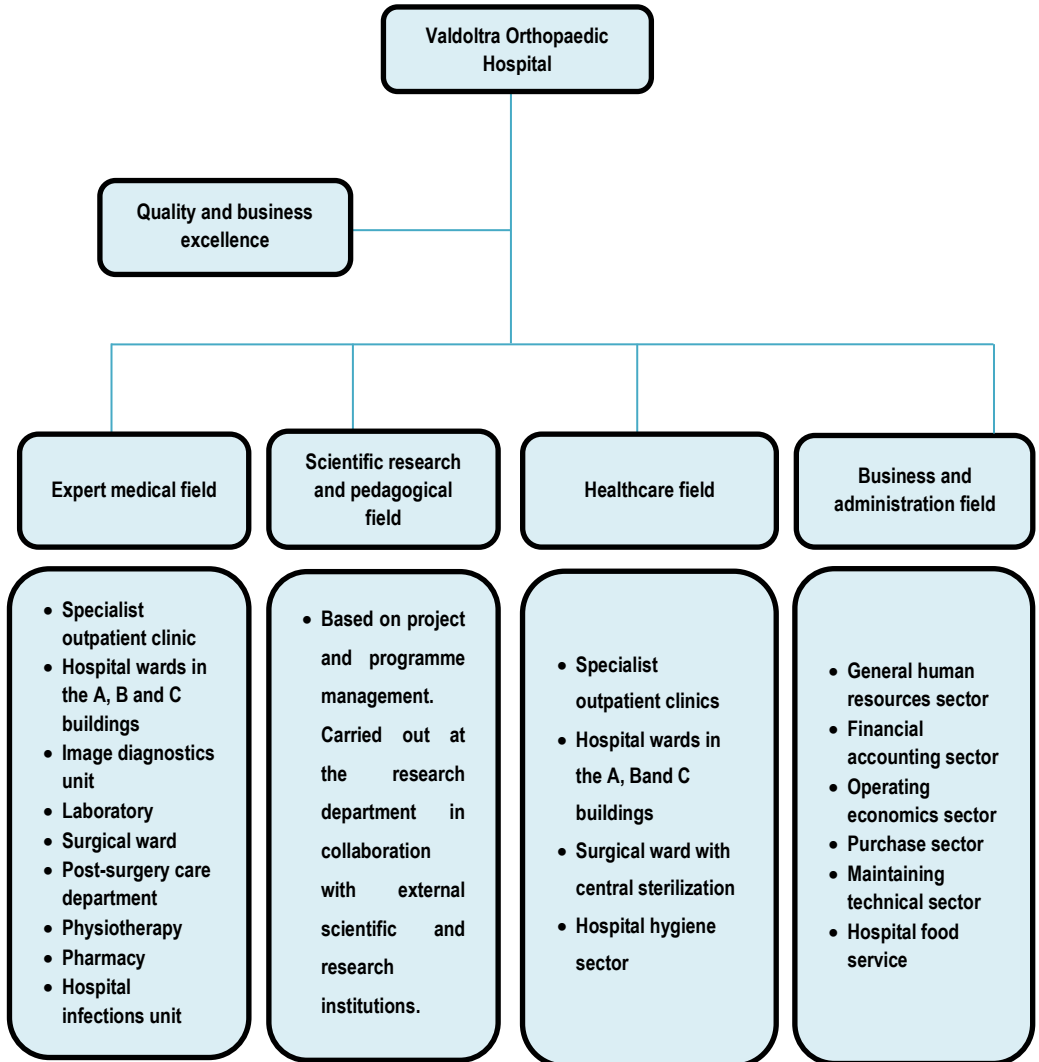


The area of the hospital's activities is wide and encompasses the following activities:

- *hospital healthcare activities,*
- *specialist outpatient clinic activity,*
- *educational activity,*
- *research activity,*
- *other activities of common importance organized to enable uninterrupted functioning of the hospital.*

According to official statistical data, on 31 December 2011 the hospital employed 318 people, working in various sectors of the hospital, as displayed in the organisation chart. The employee structure consists of specialist doctors, trainee specialists, healthcare personnel, pharmaceutical workers, medical staff with various professional profiles and non-medical staff from various fields, such as administration, catering, human resource and legal services, IT, research and technical maintenance, and other workers.

ORGANIZATION CHART OF THE HOSPITAL



The hospital makes a conscious effort to promote continuous professional growth of its staff, both those working in the field of expert medicine and those working in the field of scientific research activities, all with the aim of maintaining its renown of a reputable and internationally recognized medical institution.

LAYOUT OF THE HOSPITAL

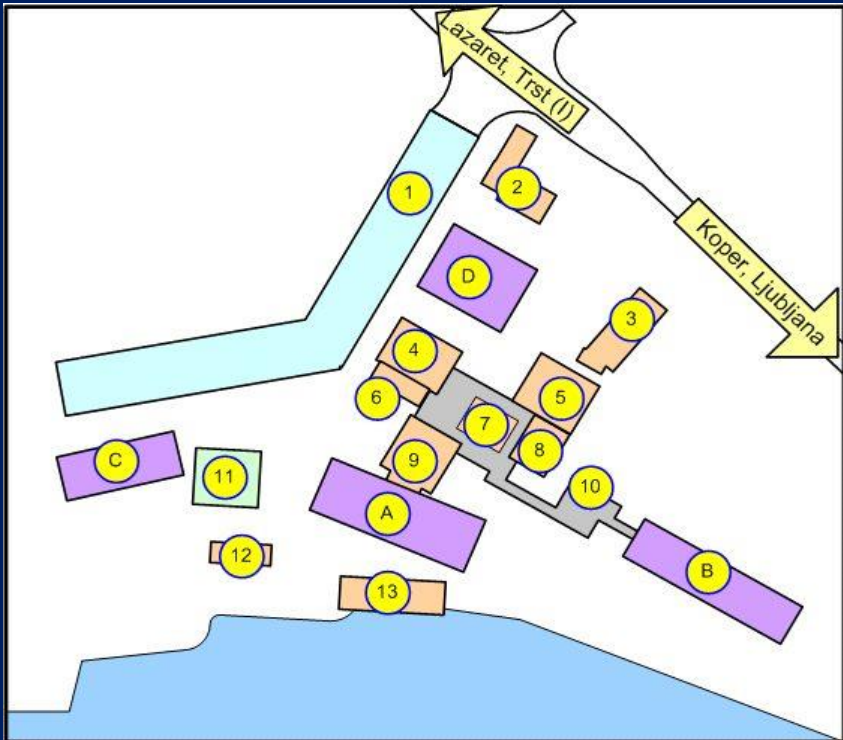


A tradition spanning one century has transformed what was once a simple seaside sanatorium (*Italian Ospizio marino di Valdoltra*) into the modern hospital of today that takes pride in being a dynamic and technologically advanced orthopaedic centre, the largest of its kind in Slovenia, well-known and widely recognised in its wider European region, ready to embrace expert challenges posed by the relentless development in orthopaedics.

Valdoltra is a patient-friendly hospital, which is proven by the constant inflow of patients coming mainly from Slovenia and Croatian Istria, as well as from former Yugoslav countries and the West, predominantly from nearby Italy.

Hospital activities take place in various buildings. The core hospital activity is centred in Pavilions A, B and C, while the Diagnostic Centre (DC) welcomes specialist examinations and certain diagnostic activities and research. (*See the hospital's building layout schematic.*)

BUILDING LAYOUT SCHEMATIC



Legend:

A - Pavilion A

B - Pavilion B

C - Pavilion C

D - Diagnostic centre
Research department

1 - Car park

2 - Management

3 - Garages, work offices

4 - Central kitchen

5 - Boiler room

6 - Hall intended for educational purposes, a chapel on the ground floor

7 - Laboratory, pharmacy

8 - Sawing facility

9 - Surgical ward with central sterilization

10 - Central storage and laundry depot

11 - Rose garden

12 - Gym



The therapeutic units consist of:

The surgical ward where surgeries are performed

The post-surgery healthcare department

The physical therapy department where patient rehabilitation using physiotherapy takes place.

The diagnostic units are as follows:

Specialistic outpatient clinics

- Clinics (admission and specialist)
- Anaesthesiology clinic
- Electromyography - EMG
- Radiology - RTG
- Ultrasound - US

Image diagnostic department

- Radiology - classic RTG
- Tomography - CT
- Magnetic resonance - MRI

Laboratory for haematological and biochemical examination

Other hospital facilities and services include a pharmacy, a hospital infection service and the hospital catering (food and beverage) sector.

Info panels helping visitors find the desired department or unit are placed at several locations within the hospital complex.



EXPERT MEDICAL FIELD



ADMISSION TO THE HOSPITAL

Patient admission is a carefully planned procedure. Each person is initially thoroughly examined by specialist doctors - an orthopaedist and an anaesthesiologist - and then admitted to hospital to undergo surgery. Upon admission, the patient is first directed to his/her room, where the ward nurse provides information on the house rules.



This is then followed by a medical assessment performed by the ward doctor and basic examinations - blood and an X-ray scan, which is a precondition for subsequent surgery of the afflicted joint.

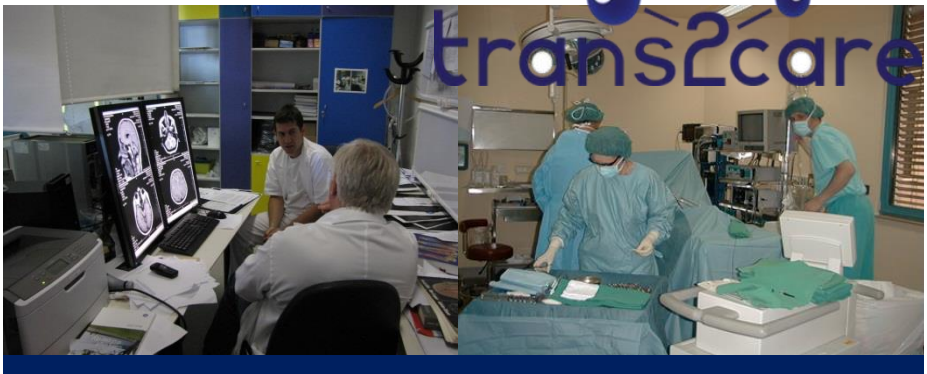


IMAGE DIAGNOSTICS

Before the surgical procedure, the afflicted joint must be examined further using the following diagnostic methods:

- X-ray scanning,
- Computer tomography (CT),
- Magnetic resonance imaging (MRI) and
- Ultrasound diagnostics (US).

Based on the findings, the doctor orthopaedist decides on further treatment, either for non-surgical or conservative treatment, or for surgical treatment.



TREATMENT METHODS

Conservative - non-surgical treatment depends on the intensity of the pain and the degree of the affliction of the patient's joint. In the case of chronic problems, the doctor might prescribe physiotherapy, which includes stretching exercises and electrotherapy.

Surgical treatment consists of a surgical procedure prescribed by the orthopaedic surgeon. In order to carry out a surgery, the patient and his/her immediate family members must submit consent.

ANAESTHESIOLOGIST`S EXAMINATION

An examination carried out by an anaesthesiologist prior to a surgical procedure is required because it allows the doctors to determine whether a patient's health allows him/her to successfully undergo surgery. It is crucial that during the pre-surgery period the patient's body contains no sources of infection.



Before the surgery, the anaesthesiologist decides whether to apply local or general anaesthesia. The preparation for anaesthesia takes place in the surgery room prior to the placement of the patient onto the operating table.

A SURGICAL PROCEDURE is a carefully planned process managed by an orthopaedist and an anaesthesiologist. Other specialist and trainee specialist doctors also assist during the operation, along with other medical staff, such as surgical nurses and technicians.

The duration of the surgical procedure depends on the type of procedure or implant that is to be implanted or replaced, and usually takes up to about two hours.



The orthopaedist always opts for the procedure that corresponds best to the patient's medical condition, age and body weight, as well as to the patient's anticipated activity after the surgery.

Surgical treatment encompasses the field of ***open large joint surgery*** (arthroplasty, osteosyntheses), **spinal disease and deformity**, **children's orthopaedic surgery** and **endoscopic surgery**, which is normally used to treat sports injuries.

The field of open large joint surgery includes:

- hip and knee replacement with an artificial joint (prosthesis),
- prosthesis of the shoulder joint, elbow and ankle,
- other open surgeries of large joints and the foot.

The treatment of spinal disease and deformity:

- surgery of spinal disc herniation,
- surgical treatment of scoliosis,
- surgical treatment of spinal stenosis,
- surgical treatment of spondylodiscitis.

Children`s orthopaedic surgery includes:

- epiphysiodesis,
- elongations,
- surgery of children`s feet.



Endoscopic surgery includes:

- arthroscopic washout of knee, shoulder, ankle, elbow,
- arthroscopic surgery of cruciate ligament,
- arthroscopic glenohumeral reconstruction,
- arthroscopic patella alignment,
- Achilles tendon surgery.

After the surgery, the patient is transferred to the **post-operative care ward** managed by an anaesthesiologist. Once the patient no longer requires intensive monitoring, he/she is transferred to the medical ward.

MEDICAL WARD

The patient remains at the medical ward until he/she is ready to leave the hospital, which is normally two weeks after the surgery. Until the release from the hospital, the patient at the medical ward is cared for by the **ward doctor**, **nurses** and **physiotherapists**, whose task is the patient's successful recovery after the surgical procedure.

The **nursing care staff** ensures the provision of constant nursing of the patient, key to the patient's wellbeing at the hospital until he/she is ready to return home.



A nurse is responsible for the 24-hour nursing process that includes independent assessment and coordination of the patient's needs for nursing care. If required, she will consult with other specialists.



Quality treatment of each patient also requires the involvement of the hospital's **pharmacy, medical laboratory and hospital catering (food) service.**

Our **clinical pharmacist** is regularly present at the hospital's medical wards, checking and coordinating the patient's treatment with pharmaceuticals. He also manages the pharmaceutical care for the patient once he/she is released to the home environment if prolonged antibiotic treatment has been prescribed.



The **medical laboratory** operates as an independent expert unit where various biochemical and haematological examinations and analyses are being carried out. An important indication of the quality of medical diagnostics for the laboratory is the precision of the performed work.

PATIENT RELEASE After recovery and rehabilitation, the patient is ready to leave the hospital. The date of release is set in accordance with the course of the treatment and is set by the doctor in charge.

During their stay at the hospital, patients are free to stroll every day along the well-maintained footpaths of the hospital's park, which further contributes to the patient's wellbeing.

SCIENTIFIC RESEARCH AND EDUCATIONAL FIELD



The scientific achievements in the field of materials, biomedical engineering and medical science follow, but also help direct the requirements for the increasingly frequent use of orthopaedic implants. We are aware of the fact that the advances in all of these sciences are mutually dependent and therefore try to include them as much as possible in our daily clinical practice, as the ultimate goal of our expert and scientific research work is to prolong the service life of each artificial joint and consequently improve our patients' quality of life.

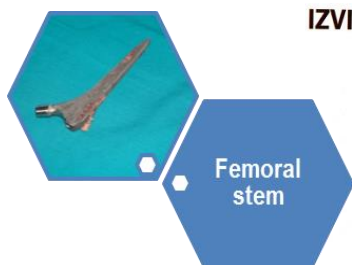
The priority task of the hospital's research and educational activity is to devise and carry out research studies at the hospital and to link them with similar groups in Slovenia and abroad.



This is why the scientific research activity of the hospital pursues the following goals:

- to organise international and domestic conferences and seminars;
- to publish the achievements of scientific research work in the form of scientific papers, articles and discussions in eminent international and national scientific periodicals and in the form of participation at expert and scientific meetings and conferences;
- to train researchers at postgraduate courses;
- to organise, manage and carry out courses, lectures, seminars and scientific-professional meetings with certain educational and professional aims;
- to keep the Arthroplasty Register of Orthopaedic Hospital of Valdoltra.

The findings of research work performed at OBV have been published in reputed international press, such as the Journal of Bone and Joint Surgery, Journal of Orthopaedic Research, and Acta Orthopaedica. The year 2012 saw the publication of the book entitled *Joint Replacement Technology*, which contains the chapter entitled *Metal for joint replacements*, authored by dr. Ingrid Miloševa in dr. Rihard Trebše, members of the Research Group of Orthopaedic Hospital of Valdoltra.



Femoral stem

IZVIRNI ČLANEK/ORIGINAL ARTICLE

Vstavev kolenske proteze s pomočjo računalniške navigacije v primerjavi s klasičnim inštrumentarijem: Študija primera s kontrolo

Computer-assisted surgery versus manual total knee arthroplasty: A case-controlled study



Metal for joint replacements, leto 2012.



A part of total hip replacement with metal-on-metal bearings

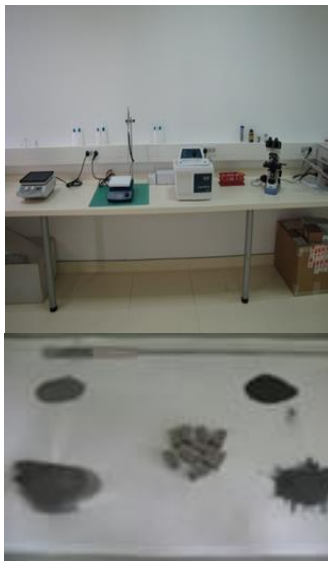
In terms of spatial layout, the Research Department consists of three parts: an office and two laboratories where work is done exclusively for research purposes. The image below shows a computer-controlled **coordinate measurement** used to measure the wear on the implant head surface.

The measurement device is an important acquisition for the Research Department as it presents an excellent tool to gain information of wear on the implant head surface of primary and revised prostheses.



Parts of a endoprosthesis for analysis

Implant surface wear measuring device



The preparation laboratory has also become an indispensable part of the Research Department. It boasts modern equipment and is suited for research work in the field of applicative materials, especially nanoparticles for biomedical purposes.



VALDOLTRA ARTHROPLASTY REGISTER

At the initiative of OBV's Research Group and following the example of Scandinavian registers, an Arthroplasty Register was established at Valdoltra in 2006, its aim being to obtain objective results of treatment and to enable the monitoring of long-term clinical results of patients with orthopaedic implants.



The Register lists all primary and revision surgeries of hip and knee prostheses. Among the numerous advantages of the Register, the most important is the possibility of long-term monitoring of individual types of artificial joints and the ability to determine potential deviations from expected results and quick reaction.



EDUCATIONAL ACTIVITY HALL

As part of its educational activities, Orthopaedic Hospital of Valdoltra takes part in the organisation of events, seminars and expert meetings from the field of orthopaedic medical science intended to inform both the professional and the lay communities.

Let us mention a few of the most important events held at Orthopaedic Hospital of Valdoltra:

- symposium on »Implant infections«,
- international symposium to mark the 100 years of healthcare at OBV,
- arthroscopy symposium of international participants
- *Live Arthroscopy Festival*,
- the AOTravma course on the treatment of foot and ankle injuries,
- orthopaedics lectures for the recipients of the EFORT scholarships,
- the »Banič days« meeting focusing hospital infections, and
- OBV Research day.



An exhibition of prosthetic implants. In November 2011, OBV opened to the public its exhibition of orthopaedic implants - »Proteze skozi čas« (*Prosthetics: Then and Now*), which displays implants for the large joints and the spine dating from various periods.





trans2care



trans2care

Progetto Rete Transregionale per l'innovazione ed il Trasferimento Tecnologico per il Miglioramento della Sanità finanziato nell'ambito del Programma per la Cooperazione Transfrontaliera Italia-Slovenia 2007-2013, dal Fondo europeo di sviluppo regionale e dai fondi nazionali.

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The content of the present brochure is the sole responsibility of the project partner PP11 – Orthopaedic Hospital of Valdoboltra. The content of the present brochure does not necessarily reflect the stance of the EU. The Brochure is also available in Slovene, Italian and Russian.



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Ministero dell'Economia e
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IN EVROPSKO KOHEZIJSKO POLITIKO