Institution’s name:
Academician F. Todua Medical Center, Research Institute of Clinical Medicine (13 Tevdo Mghvdeli st., 0112, Tbilisi, Georgia)

Website:
http://www.clinicalmedicine.ge

Institution’s pictures and logo
Description of the institution

Research Institute of Clinical Medicine is one of the biggest diagnostic and treatment center in Georgia. The Institute was founded in 1991. It is equipped with unique modern diagnostic and treatment equipments and is acknowledged in various trends of radiology, oncology, surgery and laboratory medicine, endoscopy and endoscopic surgery. It is the leading scientific institution in radiology and oncology. The institute has scientific and clinical co-operation with many leading university clinics of the world, Austria, Belgium, Germany, Switzerland, Russia, Turkey, Israel and USA, also with leading companies of the world producing medical equipments.

Institute has great experience in management of clinical trials and participation in the number of international trials.

Institute has very pleasant and comfortable atmosphere. On the walls of the institute the visitor can get acquainted with the original works of modern Georgian painters and enjoy classical music, that creates a special mood.

Oncology is one of the priorities of the Scientific Research Institute of Clinical Medicine. Patients are able to obtain all the components of the combined and complex treatment:

- surgical oncology
- chemotherapy/endocrine therapy/immunotherapy/target therapy
- radiotherapy

Detailed examination and the selection of the treatment strategy is individually made for each patient by the multidisciplinary team.

Since 2015 Institute is involved in National Cancer Screening Program.

Scientific Program Overview

The scientific-research work of the Institute is coordinated by the National Academy of Sciences of Georgia. Its scientific activity is led by the
Scientific Council. The main scientific trend of the Institute is the Early Complex Diagnostics and Treatment.

The scientific and clinical research is one of the main occupations as well. The newest technologies and methods of treatment are permanently implemented here. On the base of the Institute several professional associations are functioning (Georgian Association of Radiology, Surgery and Endoscopy). The Georgian Association of Radiology was founded in 1997 which became a member of the European Association of Radiologists, the first among the CIS countries. Since then the Association and the Georgian National Academy of Sciences have been publishing the joint scientific journal “Georgian Journal of Radiology”.

Under the aegis of the Institute International scientific conferences and symposia are held every year, where if needed the participants are able to watch operations in live from our operational blocks (for the first time in Georgia). The International Congresses of Georgian Radiologists were held in 1997, 2003, 2013, 2016, 2018 and following International Symposia took place in Tbilisi:

- Radiology at the Beginning of the Millennium (2000).

The results of the researches that have been accumulated since the foundation of the Institute are published in more than 3000 scientific articles and monographs:

- Internal and External Biliary and Internal Hepatic Fistulas (Tbilisi, 1991);
- CT Atlas of the Abdomen (Moscow, 1991);
- Diagnostics and Treatment of Liver Abscesses (Budapest, 1993);
➢ Ultrasound Diagnosis of Surgical Diseases of Liver and Biliary Ducts (Tbilisi, 1993);
➢ MRI of the Brain Diseases (Tbilisi, 2001);
➢ MRI of the Spine and Spinal Cord (Tbilisi, 2001);
➢ Endoscopy Atlas of Esophagus, Stomach and Duodenum Diseases (Tbilisi, 2001);
➢ CT Atlas of the Brain (Tbilisi, 2006);
➢ Noninvasive Imaging of Cerebrovascular Pathologies (Tbilisi, 2007);
➢ Clinical Neuroradiology (2013);
➢ Noninvasive Diagnostics of the Extracranial Vessel Pathologies (2014);
➢ Colposcopy in Diagnosis and Management of Cervix, Vagina and Vulva Diseases (2014).
➢ Diagnosis and Treatment of Portal Hypertension (2015).

Since its foundation the medical personnel of the Institute regularly participate in the International Congresses and Conferences every year, such are:

-- Europian Congress of Radiology (1991–2014);

Educational Program of the Institute:

The Institute is the University clinic. On the base of the Institute are functioning:

➢ Department of Medical Radiology and Endoscopy of Ivane Javakhishvili Tbilisi State University.
➢ Department of Medical Radiology of Tbilisi State Medical University.
➢ Postgraduate scientific courses for PhD degree.
➢ Residency programs in Radiology, Oncology and Radiation Therapy.
➢ Computed and Magnetic Resonance Tomography Training Center, where students, postgraduate students and physicians take theoretical and practical training courses.
➢ Training Center for Doctors qualification.

Since its foundation 85 theses for the degree of Doctor of Medical Sciences were defended in the Institute; more than 300 hundred radiologists have been trained here; 21 inventions received patents.

A number of scientists of the Institute has been awarded 4 State, 5 National and 9 prizes of the National Academy of Georgia.

Over the years employees of the Institute have been awarded with the State Prize in Science for the following works:
➢ “Creation of a New Type of the Research Institute and introduction of New Methods of Diagnostics and Noninvasive, Organ Sparing Operations in Case of Hepato-Pancreatic Diseases in Medical Practice of the Republic” (1996).

Prize of the Georgian National Academy of Sciences for the monograph:
➢ “The Diagnosis and Strategy of Treatment of Hepato-pancreatic Zone Disease and the Complications of Portal Hypertension” (2010).

National Prize of Georgia for the series of scientific articles:
➢ “The Strategy for Overcoming the Stroke in the Conditions of the Developing of Modern Medical Technologies” (2010);
➢ “Organ Sparing Operations at the Locally Spread Lung Cancer and at the Tumoral and Cicatrical Damages of Tracheobronchial Tree” (2011);
➢ Problem of Tuberculosis in Georgia (2012);
➢ Cochlear Implantation in Georgia: Basic Researches, Approbation in Practice (2012);
➢ The Elaboration of the New Strategy of Diagnosis and the Modern Methods of Treatment for Leukemia and Lymphomas and Their Implementation for the Optimization of the Results (2012).
Description of the RO department

In the department of radiation oncology treatment method selection, target volume definition and decision about the dose to be delivered is performed by individual approach considering available advanced technologies. The staff is trained in the most advanced clinics of West Europe and USA. High qualification enabled them to perform radiotherapy according to latest international standards and guidelines during more than 10 years.

Radiotherapy department performs radiotherapy for primary and metastatic malignant diseases of different tumor localization.

Radiotherapy is performed for tumors of CNS, head and neck, lung, breast, prostate, organs of gastro-intestinal tract, urinary system, bones, soft tissues and other localization using following up-to-date treatment technologies:

- 3DCRT - 3D conformal radiotherapy
- IMRT-Intensity Modulated Radiotherapy
- RAPIDARC- Volumetric Arc Therapy
- SRS/SBRT Stereotactic Radiosurgery/Stereotactic Body Radiotherapy
- RPM Gating-Breathing synchronized Radiotherapy
- Radiotherapy with intra-fractional Image verification (AUTO Beam Hold Technique)

Radiotherapy is also successfully used to treat some non-malignant tumors, such as Pituitary adenoma, meningioma, nerve sheath tumor/schwannoma, arteriovenous malformation (AVM) and others.

The Research Institute of Clinical Medicine also performs brachytherapy treatment for skin and cervical cancer and plans to start HDR prostate brachytherapy in the nearest future.

Equipment used in RO department

3 linear accelerators, 2 TrueBeams and 1 EDGE Radiosurgery System (Varian Medical Systems Inc)
All linear accelerators are equipped with kV CBCT to perform IGRT and with a gating system (control of body motion during irradiation)

1 GammaMedPlus IX afterloader (Varian Medical Systems Inc) for brachytherapy

Treatment planning system Eclipse version 13.7

Planning CT (Siemens Definition AS) with 4D option

Staff of RO department

6 Radiation Oncologists
6 Medical Physicists
11 Radiotherapy Technicians

Head of Department – Natalia Jankarashvili, MD, PhD
Chief Medical Physicist – Maia Topeshashvili, MD