

# Catalan Institute of Oncology

A network model for a  
comprehensive approach  
to cancer

ENG



Generalitat de Catalunya  
Departament de Salut



ICO

Catalan Institute of Oncology







## 10 key points in the battle against cancer

The autonomous government of Catalonia (Spain) set up the Institut Català d'Oncologia (ICO – Catalan Institute of Oncology) in 1995 with the mission of **working to reduce the impact of cancer in Catalonia**

The comprehensive cancer centre model adopted by ICO has enabled it to provide cancer prevention programmes, palliative care, research facilities, and specialist training within the same organisation. It is the only centre of its kind in Spain.

**1** ICO is a **reference diagnosis centre which plays a key role in** the Catalan Government's Oncology Master Plan, its main health care planning instrument in this field. Therefore, ICO does not act alone or compete with other areas of the health system; rather, we network to create synergies.

**2** We offer a **comprehensive approach to cancer**, with a range of services, from primary prevention to palliative care and including diagnosis, surgery, and treatment. We also provide support services such as psychiatric counselling, physiotherapy, social work, dietetics, and nutrition.

Our network care strategy enables us to deliver our full range of services, either directly or through alliances with external partners.

Thus, we can concentrate on our core business while promoting strategic alliances to cover those areas that lie beyond our competence.



**3** Our vision of the population we serve and the territory we cover means that we can offer high-quality across-the-board care and ensure referrals for uncommon tumours. This model also provides professionals working in community health with access to the tertiary sector.

**4** Our concern for the patient and those close to them and our efforts to meet their needs and expectations are seen in the combination of quality, clinical excellence, and the human touch shown by all our professionals regardless of the field in which they work (doctors, nurses, administrative staff, assistants, customer service representatives). Our service vocation, which is expressed by working *for* people, is a prime component of our competitive advantage and is highly rated by our users.

**5** **Knowledge management.** A key area in the work of ICO, knowledge management covers identification of best practices, standardisation of clinical practice through therapy guides (**ICOPraxis**), clinical histories, and nursing care plans, in addition to health education for patients and relatives. Quality is guaranteed with systematic assessments of outputs (processes) and outcomes (survival and quality of life).

**6** **A care model based on clinical management,** which entails organisation by processes and transferring decision-making to the people in charge of each process, while at the same time requiring them to evaluate results in accordance with previously agreed goals.

The model is enhanced by the organisation of patient care into functional units, which are a qualitative leap forward with respect to traditional tumour committees. In these units, the specialists in a particular condition share space and time to map out the best diagnosis and treatment strategy starting right from the first visit.

**7** **Promotion of innovation in all the areas of our work,** from day-to-day operations to introducing cutting-edge technology, from stage I clinical trials to how we care for our users and manage our services. This commitment to continuous improvement has made ICO a pioneer in success strategies, as seen in the organisation of palliative care services.

**8** **Research and training, the pillars of quality oncology care.** Here at ICO we research to innovate, to build improvements into specific areas (eg, treatment, diagnosis, and public policy), and to generate evidence which changes clinical practice and makes it possible to move forward in cancer prevention.

As a result we nurture applied (clinical and translational), epidemiological, and public health research. We also invest in continuous training for our staff. Proficiency and specialisation in different fields have made ICO home to internationally recognised experts and a pioneering oncohaematological teaching centre, with innovative approaches such as the “virtual oncology school”, the only one of its kind in Spanish.

**9** **Emphasis on participative management** in the public health sector by setting objectives and providing incentives in a collective and individual assessment system, and through clearly defined career structures for all professional categories.

Fostering staff participation in decision-making continues to be a challenge in this area.

**10** **Confirmation** of the ICO model as the most appropriate one for effectively and efficiently combating cancer. We have stepped up our commitment to partnerships that will make it possible to extend this model to other areas, in particular Latin America.

## ICO in brief

**I**CO is a public centre that works exclusively in the field of cancer and reports to the Department of Health of the autonomous government of Catalonia (Spain).

Based on the comprehensive cancer centre model, ICO is a single-purpose institution which includes primary and secondary prevention programmes in its care services portfolio, carries out translational research, and implements specialist training programmes.

It delivers its services free of charge to a National Health System catchment area of 2.5 million people (40% of the adult population of Catalonia). In the case of primary prevention campaigns, this catchment area includes the entire population of Catalonia (7.2 million people).

ICO has its own territorial model: a multicentre organisation structured into a network in which three single-purpose oncology centres, three university hospitals, and 16 county hospitals work together.

### Every year...

→ People .....	13,750
→ Hospital admissions .....	7,000
→ Treatments in day hospital .....	63,500
→ Radiotherapy .....	5,000
→ Brachytherapy .....	800
→ Radiosurgery .....	165
→ Haematopoietic stem cell transplants .....	94

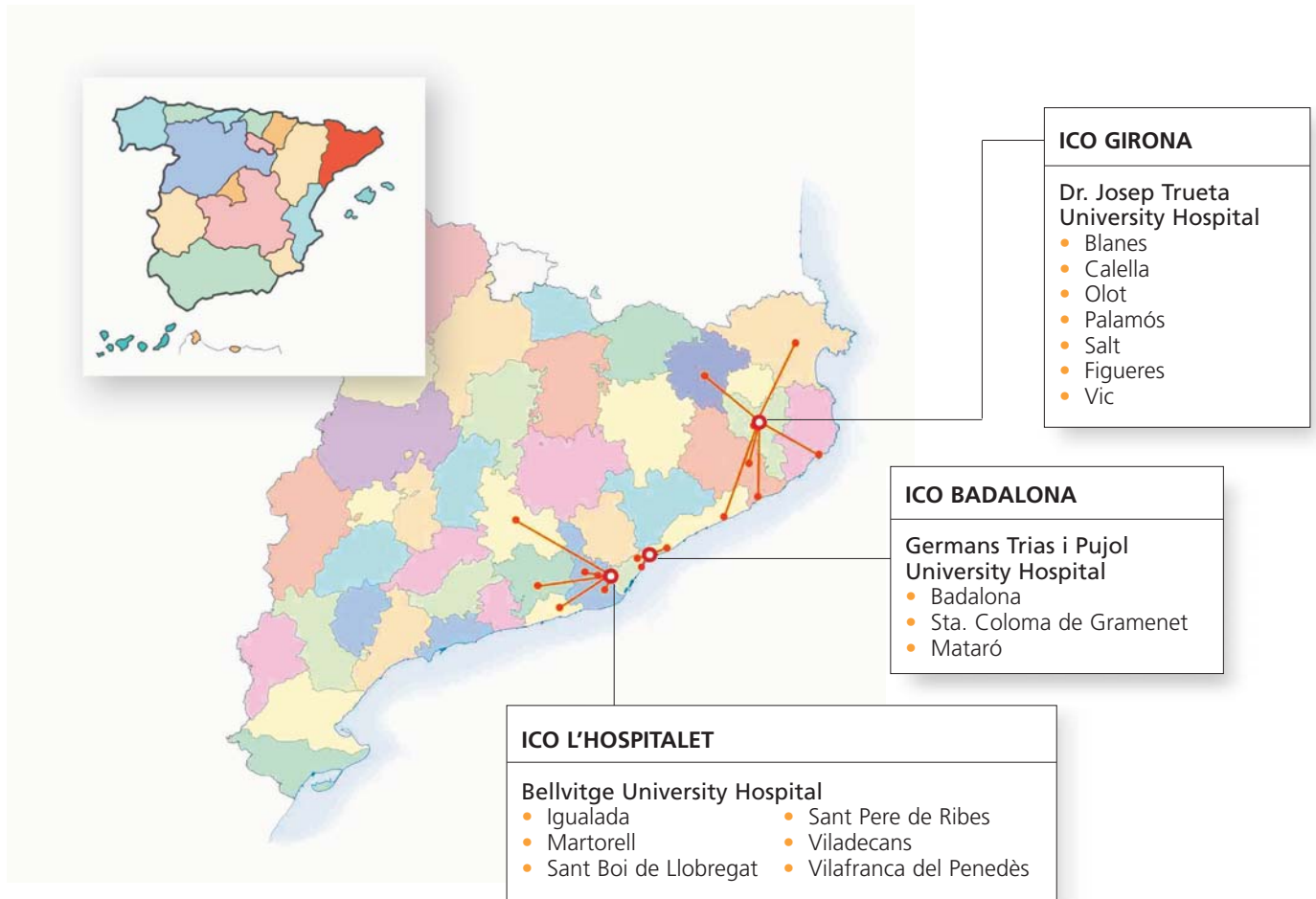
→ **Workforce:** 950 employees  
(657 in providing care; 200 researchers,  
working full or part-time)

→ **Budget:** €145 million

2008 figures



## One network and three oncology knowledge nodes



ICO Centre	General hospital (ICS - Catalan Health Institute)	County hospitals	University	Research foundation
L'Hospitalet	Bellvitge University Hospital	6	University of Barcelona	Instituto de Investigaciones Biomédicas de Bellvitge (IDIBELL)
Girona	Dr. Josep Trueta University Hospital	7	University of Girona	Institut d'Investigacions Biomèdiques de Girona (IDIBGi)
Badalona	Germans Trias i Pujol University Hospital	3	Autonomous University of Barcelona	Germans Trias i Pujol Research Foundation

➔ Biopol: health sciences scientific and technological park

# ICO and the World Health Organization (WHO)



## Epidemiological cancer research

### WHO-ICO Information Centre on Human Papilloma Virus and Cervical Cancer

The ICO, with the support of a grant from the Bill and Melinda Gates Foundation, provided the resources required to set up this information centre, which came into service in 2007 at the Hospital Duran i Reynals, our headquarters.

The centre is tasked with compiling, analysing and circulating information generated worldwide about the virus and associated cancer (prevalence, incidence, and mortality rate). It provides data for almost 200 countries on five continents so that health authorities can put in place appropriate campaigns.

[www.who.int/hpvcentre/en](http://www.who.int/hpvcentre/en)

The research team that studies the relationship between the virus and cancer has a long track-record going back to before ICO was set up. Some of its members have been collaborating for more than twenty years with the team headed by Harald zur Hausen, who was awarded the Nobel Prize in Medicine in 2008 for his work in making it possible to develop the first ever vaccination against a type of cancer, in this case cervical cancer. ICO currently coordinates international multicentre trials of these vaccinations in Spain.



## Palliative care: care model and health policy

### WHO Collaborating Centre for Public Health Palliative Care Programmes

In February 2008, the WHO formally designated ICO as a WHO Collaborating Centre for Public Health Palliative Care Programmes. This designation makes the ICO an international reference centre for the development of public health palliative care for the purposes of giving support to countries, identifying successful models, assisting the WHO with mapping out its programmes, generating evidence and spreading knowledge in this field. It is based on the experience of the WHO's demonstration project on palliative care implementation in Catalonia, which was designed in 1990 and has developed a comprehensive and diversified system of palliative care for people suffering from cancer and other diseases. This care system features high levels of public cover and has more than 180 facilities. In 2006 it received an institutional award from the International Association for Hospice and Palliative Care (IAHPC) for its contribution to the development of palliative care around the world.

ICO has provided this WHO project with a team of experts in order to support the governments of less developed countries in Europe and Latin America in the design, implementation and evaluation of public programmes which call for the organisation or enhancement of national palliative care systems. Countries which have received support from the WHO Collaborating Centre include Portugal, Turkey, Latvia, Georgia, Scotland (United Kingdom), Andorra and regions such as the Alt Pirineu and Aran (Catalonia) and the city of Melbourne (Australia).

[www.iconcologia.net/qualy](http://www.iconcologia.net/qualy)

# Reference lines

## Radiotherapy oncology

- **External beam radiotherapy.** The largest technological concentration in Spain (11 linear particle accelerators in three centres).
- **Brachytherapy.** Leaders in the south of Europe, especially for prostate cancer (800 interventions annually).
- **Radiosurgery.** We are the only public centre to carry out this type of surgery in Catalonia (165 cases annually).

## Cancer screening programmes

In 2000, ICO started the first colorectal cancer screening programme in Spain aimed at the general public. ICO coordinates and assesses the new primary care cervical cancer screening protocol for Catalonia, a pioneering protocol in Spain.

## Genetic counselling in cancer

Since 1998, we have been counselling people with suspected hereditary predisposition to cancer. To date, more than 8,000 patients from some 4,000 families have been counselled.

This programme is run in coordination with the molecular diagnosis programme, which interprets results and provides diagnoses, thus facilitating translational research in hereditary cancer.

## Psychological counselling

We set up the first Psychological Counselling Unit in Catalonia in 1998 to provide psychological care for cancer patients and their families.

This service is combined with teaching programmes aimed at clinical psychologists, medical residents (medical oncology, radiotherapy oncology, clinical haematology, and palliative care), and oncology nurses. The Psychological Counselling Unit has also carried out research into the emotional impact of cancer on patients cared for by the Oncology and Genetic Counselling services in order to optimise the psychological care provided.

## Uncommon tumours (Germ-cell tumours, sarcoma, and neuroendocrine tumours)

ICO is a reference centre in Spain for uncommon tumours, because it has the resources required for appropriate interaction between complex surgery, sophisticated radiotherapy, and innovative chemotherapy as a result of the work of the specialist interdisciplinary teams in the functional units.

## Haematopoietic stem cell transplants

ICO has had a haematopoietic stem cell transplant programme in place since it was founded. Between 90 and 100 transplants are performed annually at its centres in Badalona and l'Hospitalet. At present there are 72 transplant centres in Spain, of which only five have international JACIE certification; ICO is one of those five.

## Our care model is

**1 Patient-focussed.** When defining our protocols and operations, we first assess the patient's needs. When the condition is easily managed, we try to provide the patient with access to the most appropriate care in the centre nearest to their home. In more complex cases, we coordinate access to the hospital with the most appropriate level of care.

**2 Comprehensive.** Oncohaematological patients are assessed from the broadest medical and psychosocial point of view. Through the functional unit system, our interdisciplinary teams can provide fast and efficient care.

**3 Fair.** Our network model, which involves several hospitals following the same guidelines (ICOPraxis) and operating in a structured and coordinated fashion, provides the framework for ensuring equal access to treatment at the most suitable place.

**4 Continuous.** Our care model features 24-hour specialist emergency telephone backup and ensures continuity in the assessment and monitoring of our patients. Evaluations of this service show that, in addition to bringing clear medical benefits for patients, emergency care by phone also provides benefits for society at large, as it helps to improve the use of hospital A&E services.

**5 Efficient.** In order to ensure quality care, we need to be efficient. Therefore, our operations are based on three pillars:

- a. **Well-defined care goals** which make it possible to design the management indicators required to monitor our operations.
- b. **A continuous evaluation system** from which we can obtain operational indicators.
- c. **A work method that focuses on scientific evidence** which we have turned into clinical practice guidelines (ICOPraxis), thus enabling us to monitor quality parameters in clinical care.



## Strategic alliances for a comprehensive approach

ICO uses the comprehensive cancer centre model and adapts it to the health care requirements of Catalonia in order to maximise the resources of the public health system. Such an approach entails the establishment of an oncology care network based on strategic alliances with other public institutions.

The need for collaboration with other institutions led us to map out management mechanisms with the aim of facilitating coordination between different care areas and levels, some of which are ours and some of which are run by third parties.

These mechanisms function in compliance with a model for a comprehensive approach to cancer that goes from screening to palliative care and includes diagnosis and treatment (surgery, chemotherapy, and radiotherapy).

Thus, non-oncology medical specialty services, diagnostic processes, and surgery are essentially provided through university hospitals run by the Institut Català de la Salut (ICS – Catalan Health Institute) and the Institut de Diagnòstic per la Imatge (IDI – Diagnostic Imaging Institute), both of which are run by the Catalan government.

Care services provided by other organisations
Diagnostic imaging
Non-oncology medical specialty services
Surgery
Diagnostic tests

ICO treats all kinds of cancer and is a national reference centre in uncommon tumours (germ-cell tumours, sarcoma, and neuroendocrine tumours) and in techniques such as brachytherapy and radiosurgery.

Care services provided by ICO
Palliative care
Dietetics and nutrition
Hospital pharmacy
Medical physics and radioprotection
Physiotherapy
Clinical haematology (transplants, laboratory)
Medical oncology
Radiotherapy oncology (external beam radiotherapy, brachytherapy, and radiosurgery)
Second opinions programme
Psychological counselling
Social work
Permanent emergency oncohaematological care (ICO24hours)



## Oncology functional care unit

The involvement of a number of medical specialties in the diagnosis and treatment of cancer requires patients to make several trips to different specialists, and to undergo tests and pick up and hand in results.

Consequently, initiation of treatment is delayed and the patient has to follow a somewhat complicated route through the health system. In order to enhance the efficacy of care and patient comfort, ICO established its oncology functional care units.

These units form an organisational structure founded on the initial evaluation of the patient by interdisciplinary teams specialising in different types of cancer. Unlike traditional tumour committees, specialists share space during visits to the functional units. This means that several specialists can see a patient simultaneously and come to decisions on initial diagnosis and treatment.

The functional unit system ensures that patients and their families are supported during the entire process by nursing staff who manage the case and provide backup for the professionals involved in coordination tasks.

At present, there are ten oncology functional care units: breast, lung, gynaecology, bone tumours and sarcomas, neuro-oncology, head and neck, prostate, colorectal, lymphomas and oesophageal-gastric tumours.

The system of functional units has made it possible to provide fast and meticulous diagnoses, and has significantly enhanced diagnosis-to-treatment times. It has had a positive impact on patient survival and has provided patients and their families with more personalised global care. A good example of the recognition given to this procedure is that several Spanish cooperative groups are coordinated by ICO.

### Survival rates in diagnosed and/or treated patients

	ICO		SEER	Eurocare
	n	SR (95% CI)		
CRC	1027	61.8 (58.4-65.5)	64.7	50.0
Breast	585	88.8 (85.6-92.1)	88.2	77.0
Lung	560	23.1 (19.7-27.0)	20.1	13.0
CNS	342	29.4 (24.8-34.8)	37.5	21.0
NHBcL	288	67.7 (61.6-74.4)	61.7	55.0
CLL	247	62.7 (56.2-70.0)	75.2	39.0
MM	139	43.4 (35.0-53.8)	33.2	33.0

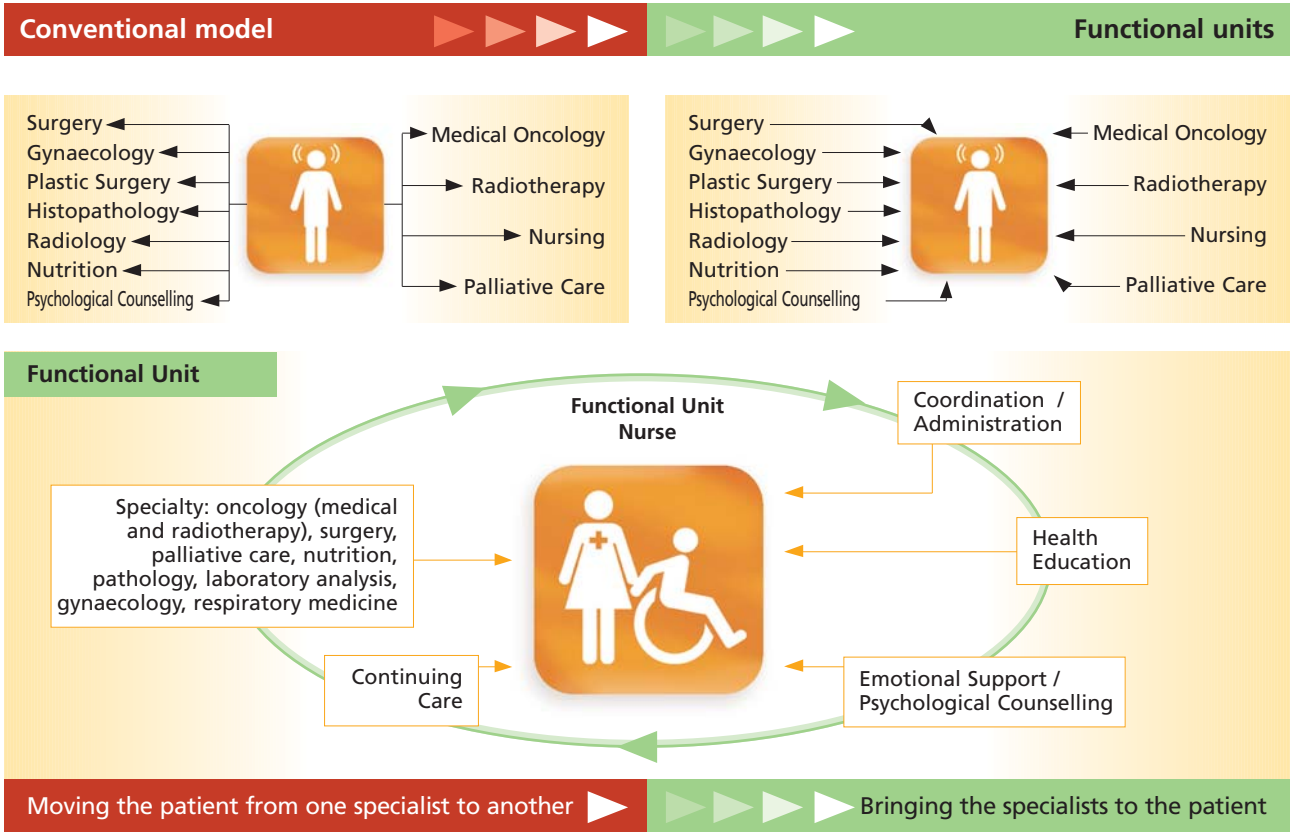
CRC – colon and rectum cancer  
 CNS – central nervous system  
 NHBcL – non-Hodgkin B cell lymphoma

CLL – chronic lymphatic leukaemia  
 MM – multiple myeloma



On the occasion of its tenth anniversary, ICO underwent an external audit involving more than 3,000 clinical histories from seven different tumour types to ascertain the 3-year and 5-year survival rates at the three hospitals which make up our network.

Compared with the SEER (USA) and EURO CARE (Europe) population registries, the results obtained by ICO's comprehensive model are extremely satisfactory.



The model has proven successful when applied at other centres and even in different health care environments.

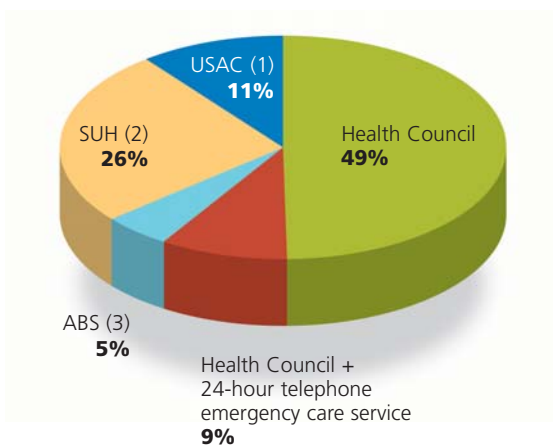


## Oncologic call centre **ICO24hours**

**D**ue to its network structure, ICO does not have its own emergency service; if necessary patients go to the general hospitals in the ICO network or to primary health care centres. Nonetheless, cancer patients present very specific problems which often cannot be dealt with appropriately through these channels.

In order to cater for the emergency needs of our patients, in 2007 we set up a continuous care service by consolidating a unit which had already been in operation for seven years. The unit was reorganised to enhance use of emergency care resources in the health system as a whole. The goal was that the only patients to go to hospital A&E departments would be those who needed to be visited by a non-oncology specialist, or were in a life-threatening situation. As part of the project, in January 2008 the first telephone emergency care service specialising in oncohaematological patients in Spain was started. It has achieved its goals.

Destination of the calls received by the **ICO24hours** emergency telephone care service



**ICO24hours** is a 24-hour call centre. It is staffed by 70 general practitioners who have been trained in dealing with cancer patients and who follow protocols drawn up by ICO professionals. In its first year of operations, **ICO24hours** dealt with nearly 6,000 calls (around 15 per day), most of which were connected with queries on therapy and pain management in patients with mainly lung, breast, and colon cancer. Fifty-eight percent of these calls involved giving health advice (ie, the patient was not obliged to travel to another care level) and 26% were referred to the A&E department at the hospital nearest to the patient's home. Only in 11% of cases did patients have to visit an ICO hospital.

- (1) ICO continuing care support unit
- (2) Hospital A&E department (general or county hospital)
- (3) Basic health area (primary care)

## ICOPraxis, applying scientific evidence

New drugs, therapeutic targets, and technology are rapidly being introduced into oncology. Against this backdrop, ensuring fair administration of therapy to patients involves making good use of available resources, which is only possible by applying the best evidence. This is the goal of the ICO Drugs Policy, which is coordinated by the Pharmacy Service and involves the work of an interdisciplinary team whose tasks include drawing up guidelines for clinical practice.

ICOPraxis comprises a series of recommendations on medical therapy and radiotherapy for cancer patients. These recommendations are based on scientific evidence and have been developed to aid decision-making and thus provide evidence-based care aimed at fair administration of treatment. The guidelines are accompanied by indicators that enable their implementation to be evaluated.

Based on the *Oncoguies* (Oncology Guidelines) published by the Catalan Government's Department of Health, a dozen ICO professionals take part in drawing up each set of guidelines, with the support of external reviewers and collaborators.

The first four ICOPraxis guidelines (colorectal cancer, breast cancer, diffuse large B-cell lymphoma, and oncology pain management) were introduced in 2009, and work quickly began on three more (lung, head and neck, and multiple myeloma).





## Supporting patients and their families

**O**ur nursing staff have greater responsibilities than is the norm in their profession, which in turn means they have to undergo demanding and specialised training. In fact, this is one of the most characteristic – and exclusive – aspects of the ICO care model. It has also been one of the wisest when it comes to promoting quality and warmth in the treatment of our patients (see below).

In addition to the figures which show the efficiency and excellence of our care activities, a fundamental indicator of the quality of a service offered by a health centre is, without doubt, the opinion of its users. In this respect, and as part of our policy of quality and continuous improvement, we survey our users every two years to identify areas requiring further attention.

The results of these surveys show that some of the aspects most highly rated by patients are directly connected with the work done by our nursing staff. These professionals are the case managers in the functional units. They are responsible for coordinating the medical teams and giving support to patients and their families.

The nursing staff are also a fundamental source of information on the care process through the nursing clinics which operate in the day hospital, the functional units, and the radiotherapy department. Their contribution makes it possible to monitor treatment and advise about possible side effects.

**More than 97% of our patients – and their families – are satisfied with the technical and human quality of ICO professionals and would recommend their services.**

### Satisfaction among ICO users and their relatives

	Percentage of patients	Percentage of relatives
Manner and friendliness of nursing staff	98.4	99.3
Match between care given and needs	97.7	98.3
Willingness of nursing staff to listen and deal with discomfort	97.3	98.2
Manner and friendliness of medical staff	96.9	97.4
Willingness of medical staff to listen and deal with discomfort	95.8	97.1
Would recommend the services	97.4	97.7
Feeling of being in good hands	95.5	96.9
Team coordination	95.3	96.2
Adequate information about radiotherapy	98.7	100.0
Adequate information about chemotherapy	97.0	97.3



The **Health Education Programme**, which is aimed at patients and their relatives or carers, seeks to foster participation in decision-making, coping, and healthy life styles.

The Programme runs information sessions and workshops which cover a wide range of issues associated with cancer, treatment, possible side effects and how to cope with them, improving physical appearance, and using complementary therapies which, together with medical treatment, can help to relieve some symptoms and to improve side effects, mood, and quality of life.

These sessions are held on a monthly basis and provide an opportunity to exchange and share experiences with other people. The Programme also draws up written information to be given to patients as the need arises.

People who come to ICO are sometimes physically disabled or may have mobility problems and/or social problems. As a result, in 1996 the Home Care Programme was set up to administer chemotherapy and provide support and complementary treatment in the patient's home.

In recent years other activities have been added to the Programme. These include replacing infusers in pain treatment and continuous infusion pumps in chemotherapy for patients who have mobility problems. The programme also provides catheter-administered treatment in the patient's home and performs control analysis and cross-matching for patients who find it hard to come to our centre.



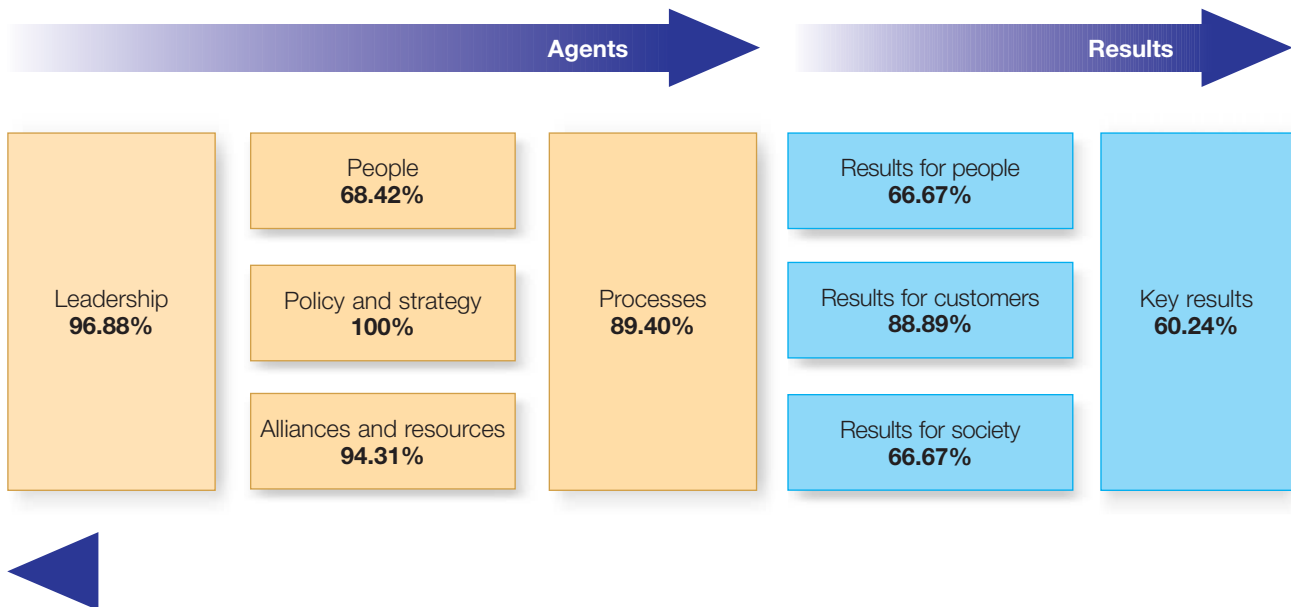
## Quality

**O**ur quality policy seeks to promote care based on continuous assessment and improvement. Its main strategic lines are safety, continuing care, participation by patients and their families in decision-making, fairness, accessibility, efficiency, and user satisfaction.

This policy is structured by the Quality Unit, which works with care services to map out improvement plans, provide methodological support, draw up protocols and guides, and audit professional practice.

## Acute care hospital

Hospital certification is a requirement of the Catalan Government's Department of Health and has proved to be an effective tool for evaluating and enhancing the services delivered by the centres. This accreditation certifies a specified level of quality and skills. ICO passed its hospital certification with 83% global compliance in the 350 standards assessed.



## Certified by the International Standards Organisation (ISO)

The Radiotherapy, Oncology, and Medical Physics Service at the three ICO centres, the Haematology Laboratory at the ICO centre in Badalona, and the Pharmacy Service in the l'Hospitalet centre have been certified under current ISO standards.

## Joint Accreditation Committee of the ISCT and the EBMT

The Haematopoietic Stem Cell Transplant Programme at the ICO centre in Badalona received JACIE accreditation in 2008 and the l'Hospitalet centre followed suit in 2009.

## Organization of European Cancer Institutes (OECI)

As a member of this lobby for cancer centres, ICO is to take part in the design and piloting of accreditation of centres as comprehensive cancer centres.

## Patient safety

In 2005, ICO set up its Patient Safety Programme to prevent and reduce any potential adverse effects of care. It is aligned with the WHO's International Alliance for Patient Safety, as promoted in Catalonia by the Department of Health. It includes actions in the areas of:

- Falls and injuries
- Unambiguous identification of patients
- Adverse effects and mistakes in medication
- Blood products, ulcers, and nosocomial infections



## Research

**W**e are committed to research and enhancing knowledge transfer. With an annual average budget of € 3.5 million, our scientific productivity is expressed in more than 200 publications indexed on the ISI Web of Knowledge. Most (207) are published internationally, with a total impact factor of 1,157.31 (average impact factor, 5.20).

ICO has the required structure to carry out phase I-IV clinical trials and can also perform pharmacokinetic and pharmacodynamic studies. It has more than 400 active trials

### Pharmacogenomics of lung cancer

The group headed by Rafael Rosell has been working for a number of years on the molecular classification of lung cancer so that genetic characteristics can be used to individualise treatment. The team has been a pioneer in identifying the role of EGFR mutations in lung adenocarcinoma, and in analyzing the response to treatment with tyrosine kinase inhibitors. At present, ICO is the only centre in Spain carrying out this type of research.



## Metabolic alterations and breast cancer

The group headed by Javier Menéndez focuses on metabolism and its association with breast cancer. The group studies the possibilities of new treatments based on identifying the way in which the growth of breast tumour cells depends on the activation of the FAS enzymatic system.

## Diet and cancer

Carlos Alberto González heads a team which coordinates EPIC (European Prospective Investigation on Cancer) cohort in Spain, a study of 500,000 Europeans which is designed to provide greater understanding of the relationship between diet and lifestyle and the risk of developing cancer. The team coordinates gastric cancer studies in this cohort, and analyses genetic characteristics and their interaction with other factors such as *Helicobacter pylori* infection.

## Colorectal cancer

This programme, headed by Víctor Moreno and Gabriel Capellà, studies the molecular epidemiology of colorectal cancer and the diagnostic utility of genetic and epigenetic determinations of faecal DNA. It also works on the identification and validation of new prognosis markers associated with the development of metastasis, and new predictive markers for response to specific treatments.

## Angiogenesis

The group headed by Francesc Viñals carries out research into the molecular basis of tumour vasculature, evaluates the clinical utility of molecular markers as predictors of response to new angiogenesis treatments, and studies the mechanisms of resistance to these treatments and their association with the aggressiveness of the tumour.

## Virotherapy

Ramon Alemany leads a group whose goal is to create new therapeutic agents based on the selective modification of oncolytic viruses which infect and lyse cancer cells. These new viruses are developed in partnership with biotechnology companies. Pilot studies are currently under way in patients.

## Nursing care

ICO encourages research by nursing professionals as a means of validating and enhancing nursing care for patients with cancer and their relatives. Alliances have been established with groups both in Spain (the Instituto de investigación en ciencias de la salud Carlos III [Carlos III Health Science Research Institute] at the University of Barcelona and the Sociedad Española de Enfermería Oncológica [Spanish Oncology Nursing Society]) and abroad (eg, the European Oncology Nursing Society [EONS] and the Multinational Association for Supportive Care in Cancer [MASCC]).

## Palliative care

Xavier Gómez Batiste and José Espinosa coordinate research into the efficacy of organisational systems in care provision, management, and planning. Their priorities are consultancy, epidemiological research, and service and programme assessment. Another major area is clinical research, which is carried out by the Palliative Care Service at the ICO centre in l'Hospitalet. This Service's priorities are evaluation of care practice, analysis of the outcomes of interventions (handling pain management, opioids, symptom control), and clinical trials of new drugs for symptom control.



# Primary and secondary prevention programmes

## Genetic counselling in cancer programme

- Evaluation of the risk of developing cancer
- Planning risk reduction measures
- Monitoring high-risk patients

## Cancer screening programmes

- Mapping out strategies to enhance the quality, cover and effectiveness of preventive action, such as review and evaluation of the cervical cancer screening protocol used in Catalonia
- Running and assessing cancer screening programmes in the ICO's catchment area (breast and colorectal)
- Providing training and information for health professionals and the general public

## Smoking

- Mapping out programmes for intervention against and evaluation of exposure to tobacco smoke
- Coordination of the European Network for Smoke-Free Hospitals (which runs prevention campaigns and programmes to help staff and users stop smoking) and of the Catalan Network for Smoke-Free Hospitals

## Information campaigns

- Promotion of healthy lifestyles designed to reduce the risk of cancer, with special emphasis on giving up smoking and preventing skin cancer
- Advice and backup for mutual support groups



# Specialised education and training in oncology

## Undergraduate

Education for medicine and nursing students at three Catalan universities: the University of Barcelona, the Autonomous University of Barcelona, and the University of Girona.

## Residency

Training for doctors specialising in medical oncology, radiotherapy, clinical haematology, medical physics, and hospital pharmacy.

## Postgraduate

We offer a training programme featuring 84 teaching activities, all of which have academic and ministerial accreditation through an agreement with the University of Barcelona, the Institute for Lifelong Learning (IL3), and the National Health System's accreditation bodies. Average satisfaction with the courses is 8 out of 10.

### Master's programme

- Palliative care
- Oncologic nursing
- Family care and health

### Postgraduate programmes

- Palliative care
- Methodology, design, and development of clinical trials in oncology
- Caring for oncology patients

### Semi-distance learning and online programmes

- 59 semi-distance learning refresher programmes
- 19 online programmes as part of the E-Oncologia platform.



[www.e-oncologia.org](http://www.e-oncologia.org)









**Institut Català d'Oncologia**  
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