Cancer Survival: Large Disparities in Europe

by Dr. Bernard Gouget
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Because of its prevalence and the extraordinary research effort to try to control it, cancer, as a symbol of modern disease, is emblematic of our hopes and our fears regarding scientific advances. Cancer survival is also a key measure of effectiveness of healthcare systems. According to the latest data from the EUROCARE-5 project recently published in the Lancet Oncology, cancer survival rates continue to improve in Europe, but there are large disparities for some types of cancer between the Eastern European countries and the rest of Europe. Much broader than the previous analysis made public in 2007, Eurocare-5, based on analyzing data from cancer registers in 29 countries covering 50% of the adult population and 77% of the pediatric population in Europe, compared five-year survival rates of 9 million adults and more than 60,000 children diagnosed between 2000 and 2007 and followed until 2008.

Relative survival five years after diagnosis has increased in all the European regions evaluated, with significant increases between 1999–2001 and 2005–2007, particularly for prostate cancer (73.4% to 81.7%), malignant non-Hodgkin’s lymphoma (53.8% to 60.4%) and rectal cancer (52.1% to 57.6%). The cancers showing the greatest five-year survival rates in the 2000–2007 period (>80%) are testicular, lip, thyroid and prostate cancers, melanoma and Hodgkin’s lymphoma. They represent one third of all cancer cases. Liver, esophagus, lung and pancreatic cancer, as well as pleural mesothelioma have the lowest survival rates, less than 15%. Despite this favorable progress, disparities remain among the European countries: survival rates in Eastern Europe remain below the European mean (colon: 49% vs. 57%, rectum: 45% vs. 55.8%, non-Hodgkin lymphoma: 50% vs. 59.4% and melanoma: 74% vs. 83.2%), the highest rates being in the countries of Northern and Central Europe.

France is particularly well situated for breast cancers (in second place at 86.1%, behind Iceland), non-Hodgkin lymphoma (second place at 65.9%), prostate cancer (sixth place, 88.9%) and kidney cancer (ninth place, 64.3%). It is in 10th place for lung cancer (13.8% survival) and 12th place for rectal cancer (57.9%). Lower survival rates are observed in the United Kingdom and Ireland (especially for lung cancer, 9%) and in Denmark, which could be due to later diagnoses and inequalities in access to some treatments.

Relative disparities in survival among the regions of Europe may be explained by differences in the stage of diagnosis and access to healthcare, screening practices and the biological type of the cancer as well as the type of treatment. Moreover, population disparities in socioeconomic status, lifestyle, and general health may also play a role. Five-year survival for children age 0 to 14 years is generally good, at 79% for the 2005–2007 period versus 76% for 1999–2001, as shown by a second study. The greatest increases are evinced in Eastern Europe (65% for 1999–2001 to 70% for 2005–2007), but the disparities persist, since survival is at least 80% in the Northern, Central and Southern European countries. For hematological cancers (such as leukemia) and non-Hodgkin lymphoma, which account for one third of cancer cases in children, five-year survival is decreasing by 4% to 6% per year. In contrast, according to this study, no increase in survival was observed in other pediatric cancers such as neuroblastoma, the most common solid tumor in young children related to the sympathetic nervous system, or osteosarcoma, a bone tumor that mainly strikes children and young adults.

The global cost of cancer—healthcare, medication, lost productivity due to premature death or inability to work, involvement on the part of family and friends—amounts to 126 billion euros in one year. But the disparities are substantial among the various EU countries. While Luxembourg and Germany spend the most in terms of healthcare and cancer drugs, Bulgaria ranks last. Lung cancer is the most expensive overall and is the cause of the greatest productivity losses. However, in terms of healthcare related expenses, breast cancer takes the lead.

This is the first reliable European-level study that can quantify the total cost of cancer in Europe and make comparisons among countries. We can hope that these results will enable decision-makers to distribute research funding better and make better use of the money invested in fighting these diseases. More effectively targeted investments will keep healthcare systems from reaching the breaking point. In some countries, better allocation of funding could even improve survival rates to better fight healthcare inequalities.

Laboratory medicine specialists contribute to improving diagnosis and conceiving the treatments of tomorrow. It is our responsibility to share ideas and cooperate in multidisciplinary networks—transnational research, industry, and practitioners of all specialties—to develop new concepts and tools far removed from traditional clinical practice. Our success depends on all specialties participating in European / International laboratory medicine federations.
4th Meeting of the EFLM Working Group For the Preanalytical Phase: A Report

The pre- and post-analytical phases of the laboratory testing process are now widely recognized as the major sources of laboratory errors. Preanalytical errors are the most common and account for up to 2/3 of the total number of errors. The risk of error in the laboratory testing process is underestimated in everyday clinical practice. The European Federation of Chemical Medicine (EFLM) working group on the preanalytical phase (WG-PRE) was established in 2010 to work on reducing the risk. Efficient indicators and educational tools are needed to order to implement the best preanalytical practices.

The terms of reference of the group are:
1. To promote the importance of the preanalytical phase of laboratory medicine
2. To define the best practices and provide recommendations for some critical activities in the preanalytical phase
3. To design and validate questionnaires for assessing the current practices related to some preanalytical variables
4. To conduct surveys using validated questionnaires with the aim to assess the current preanalytical practices.
5. Organizes, symposiums, workshops, webinars, or training courses on preanalytical phase issues

This latest meeting of the EFLM-WG-PRE held in November in Oxford, UK, addressed four main topics. First, plans were finalized for the Walter Güder Preanalytical Award, which is to be presented by the EFLM and sponsored by Becton Dickinson. The aim of this award, which will be presented biennially at the Eurolab meeting, is to promote excellence in research in the preanalytical phase and it will be awarded to a young researcher from an EFLM member country. The award will officially be announced in January 2014 with the first award given at EuroLabFocus in Liverpool in October 2014.

The second part of the meeting involved looking at the data from a European wide survey of compliance of staff performing phlebotomy with CLSI guidelines. This survey was a follow up to the group’s first survey, which looked at the differences in training of staff performing phlebotomy across Europe. Data from the second survey, which looked at competence of staff in primary care, on medical wards, in outpatient locations and in the emergency department, will be published in 2014. The paper will complement the first paper in highlighting the poor standardization of the phlebotomy processes across Europe and will discuss what should be done to rectify this.

In the afternoon, the EFLM-WG-PRE discussion moved to planning the Third Biennial Conference on the preanalytical phase (http://www.preanalytical-phase.org). This one-and-a-half-day conference will follow highly successful meetings in Parma (2011) and Zagreb (2013), and it will be held in Porto in spring 2015. Currently there are six sessions planned and these are:
1. Communication between the laboratory and the clinic
2. Patient preparation
3. Standardization of the preanalytical phase in Europe
4. Sample handling and workflow
5. Quality assessment in the preanalytical phase
6. Safety

These sessions will be complemented by a poster session and case studies if the schedule allows.

The final session concentrated on the future direction of the group, in particular how best to disseminate the knowledge obtained by the EFLM-WG-PRE to improve the state of the preanalytical phase across Europe, with a particular emphasis on standardizing practices. It was decided that an opinion paper looking critically at all aspects of the phlebotomy process in an evidence-based approach would be the best way of highlighting any problems with current guidelines. The group decided to investigate the idea of launching a campaign to promote good phlebotomy practice across Europe at the Porto conference.

Overall, the meeting provided a good mixture of discussion around the current state of the preanalytical phase and how best to improve it, as well as engaging both staff and the public to ensure improved and standardized practice.


EFLM CORNER

EFLM Executive Board for 2014-15 Term Announced

It is a pleasure to inform you that the new Executive Board of EFLM for the term of office 2014-2015 is composed as follows:

Prof. Mauro Panteghini, president (Italy); Dr. Ian Watson, past president (United Kingdom); Prof. Sverre Sandberg, resident elect (Norway); Prof. Ana Maria Simundic, secretary (Croatia); Dr. Hubert Storm, treasurer (The Netherlands); Prof. Grazyna Sypniewska, member-at-Large (Poland); Prof. Tomas Zima, member-at-Large (Czech Republic)

We take this occasion to inform you also on changes to the following Committee Chairs:

Prof. Elvar Theodorsson, Science Committee (Sweden) replacing Prof. Sverre Sandberg; Dr. Gilbert Wieringa, Profession Committee (UK) replacing Dr. Simone Zerah.


At a time when demand for highly qualified professionals across the EU is increasing and the labor force is declining, EFLM welcomes the passage in December 2013 of Directive 2005/36/EC (The recognition of professional qualifications) through the EU’s Parliament, Council and Commission. In supporting professional mobility across borders, the Directive is a catalyst to ensuring a more equitable distribution of knowledge and skills across the community’s member states. EFLM’s Prof- fession Committee will be at the forefront of shaping a common training framework for specialists in laboratory medicine and defining the equivalence of standards that ensures patients receive high quality, safe and equitable services wherever they are in the Community. The consolidated text for the Directive can be accessed at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:354:0132:0170:FR:PDF.

For EFLM/EC4 national societies, the passage of the Directive represents an opportunity for nine EU member states to work with their governments to present the framework to the EU Commission. EU national societies are encouraged to liaise with their EC4 representatives for guidance on becoming a candidate state. In developing a common training framework EC4’s syllabus will be at the fore- front for education, training, knowledge and competency expectations represent the building blocks to which the input of all relevant stakeholders (profession@efc-clm.eu) will be also welcomed as we work to support the transposition of the Directive into national law.

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The reform of medical biology in France consists in two fundamental principles: the accreditation of medical laboratories, both private and public. Reinforcement of the role and greater responsibility for the medical biologist in the overall management of the patient, and more stringent evaluation of the competence of medical labs through a mandatory accreditation process.

The law of 30 May 2013, ratifying the order of 13 January 2010, establishes that no medical laboratory that is not accredited, as per article L. 6221-1 of French public health law, will be able to operate after November 1, 2013, unless it complies with the conditions defined by the decree of the Minister for Health attesting to its effective engagement in an accreditation process.

The decree of October 17, 2012, defined the conditions for attesting this engagement in the accreditation process. Depending on the option chosen by the laboratory, the decision by the French accreditation committee (Cofrac) establishing the administrative admissibility of the application for accreditation (option A1) or the decision concerning approval of the specific application (options A2 and B1) acts as proof of the laboratory’s effective engagement in the accreditation process.

The deadline of October 31, 2013, was therefore a first important deadline for medical labs and for Cofrac.

In total, Cofrac received 1,386 applications. 70% of which were submitted in May 2013. Out of these 1,386 applications received, 456 medical labs chose option A1, 212 chose option A2, and 718 chose option B.

As of October 31, 2013, 1,379 of the 1,386 medical labs that had filed their application were informed of the decision attesting to their effective engagement in the accreditation process. Incomplete applications, for which the medical labs submitted additional documents before 31 October, are still being processed in agreement with the Regional Health Agencies.

More generally, Cofrac has been working closely with the French Ministry for Health and Regional Health Agencies, in particular throughout the month of October, to keep them informed of the progress status of the process and provide the necessary information concerning pending applications.

At the same time, Cofrac boards, and in particular its Healthcare Section Committee, have continued to be active in involving all parties concerned in adjusting accreditation criteria and thus facilitating the conditions for initiating the process for medical labs.

The Healthcare Section Committee, whose composition has been revised to increase the number of representatives from accredited laboratories (from 5 to 7 members, of whom 4 are representatives from private laboratories), has once again, in particular, changed the specific requirements for the accreditation of medical labs (document SH REF 02), in compliance with standard NF EN ISO 15189 and French public health law, and has additionally created doctrine notes (document SH REF 04), with a view to harmonizing assessments and making them more operational, in the interest of the medical labs, pending establishment of additional decrees.

All this work and progress in the accreditation process has been regularly presented to the Cofrac Board of Administrators on which the authorities responsible for the medical biology reform and the laboratories are represented, and before the Government Commissioner and the State Economic and Financial Controller, which ensures that Cofrac does not operate in an absence of accountability.

In the aftermath of October 31, the result has been positive. Without forgetting the extent of the work this engagement has represented for the medical labs, one cannot but conclude that they have made the requested effort. Cofrac has also done its part with regards to the laboratories and to the Regional Health Agencies.

Now this first step has been completed, it is time to move on to the next one, which will involve all laboratories having an accreditation for half of the medical biology examinations they carry out, by November 1, 2016. The work undertaken to facilitate initiation of the accreditation process for medical labs and the ongoing recruitment of technical assessors will ensure that Cofrac, with the active participation of all parties concerned, to fulfill its mission and meet the objectives set by the legislation.

References:
1. A2: laboratories accredited for some of the medical biology examinations they carry out – B: laboratories, which had a former recognition from the professional organization BioCard.

Article published in the Magazine “Competences” No. 58.

The EFLM working group cardiac markers (EFLM-WG-CM) was originally constituted in 2010 with the brief to undertake an audit of current practice in cardiac biomarker testing in EFLM members via the national Clinical Chemistry/Biochemistry Societies. To date, we have undertaken three such surveys. On behalf of the WG-CM members, we would like to extend our sincere thanks to all of those who have participated in the surveys. We all know that everyone is forever bombarded with surveys so we are very grateful to all who have participated.

To those of you that have not, we would ask you to consider participating next time. We try to keep the surveys simple and the times this engaging in the accreditation process.

The results of the surveys – the Cardiac Marker Guidelines Uptake in Europe (CARMAGUE study) have been presented at meetings, presented as posters and published in journals [1-6]. For those of you that were unable to attend the meetings you can find information on the Working Group on EFLM website.

Why do the studies? There has been a paradigm shift in the role of cardiac biomarkers in the diagnosis and management of patients with cardiovascular disease. The definition of acute myocardial infarction (AMI) now includes biomarker measurement as an essential diagnostic criterion [7-9]. Guidelines for clinicians now include cardiac biomarker measurement [10]. In the laboratory, there has been an evolution of the methods used for biomarker measurement, with new methods available for markers that were not routinely measured and for novel biomarkers. It has been a period of great and exciting change reaffirming the role of the clinical laboratory as core to patient diagnosis and management.

What were the key findings? It will come as no surprise to find that cardiac troponin measurement is the biomarker of choice for the diagnosis of acute myocardial infarction. Despite this, many laboratories continue to measure other biomarkers. Sometimes these are well-established biomarkers such as creatine kinase or its MB isoenzyme or measurement with one purpose (including keeping clinicians happy). A few laboratories continue to measure markers that have been superseded as cardiac biomarkers, such as aspartate transaminase and lactate dehydrogenase, although the number of laboratories offering these as cardiac biomarkers is falling. Measurement of B type natriuretic peptides (BNP) is measured more than one purpose (including keeping clinicians happy). For those laboratories (perhaps for a variety of reasons) are unable to participate in external quality assurance. In a small number, internal quality assurance appears to be insufficient.

There is wide variation in the cut offs used for diagnosis of AMI and from where they are derived. The other interesting finding is that the engagement between the laboratory and the clinician is not as strong as it appears to be variable with a lack of agreed protocols or laboratory-clinician discussion. As we move into the era of more rapid diagnostic protocols and more sensitive troponin methods, this lack of regular clinician-laboratory interaction is a concern. Clinicians do not understand all the benefits of the new generation tests or the traps for the unwary [11]. They need education and it is the role of us in the laboratory to do so.

Finally, again a thank you to those who have contributed, and a gentle chiding to those who did not. We are positive next time we will have the means of each survey for those of you that want more detailed information.

References:
Bilbao Hosts 7th Spanish National Congress

by Josefina Mora Brugués, Liaison to the IFCC eNewsletter

From October 23 to October 25, 2013, Bilbao proudly hosted the seventh National Congress of Clinical Laboratory, organized by the Spanish Society of Clinical Biochemistry and Molecular Pathology (SEQC) together with the Spanish Association of Medical Biopathology (AEBM) and the Spanish Association of Pharmaceutical Analysts (AEFA).

The Congress venue was the Euskalduna Conference Center and Concert Hall in the very heart of Bilbao, only minutes away from the Guggenheim Museum.

The Congress had a particularly active participation with more than 1500 delegates and the pleasing feature of a high number of young attendees. The high-quality scientific program was distributed in four pre-congress courses, three plenary lectures, ten symposia, eight workshops, and two sessions of oral communications for the top ten posters, in addition to meetings for residents and tutors. As many as 938 digital posters were accepted and three poster awards were given to support the participation of young investigators. The pre-congress courses provided updates on a wide range of topics, such as anemia, secondary hypertension, neurological hereditary diseases, and patient safety. The plenary lectures were delivered by three international experts, Elena Arzak, best world female chef 2012 who reviewed similarities between the kitchen and the laboratory, Prof. Khosrow Adeli, Chair of IFCC Public Relations Committee (IFCC C-PR) who emphasized the idea of improving laboratory visibility and assessing the value of the laboratory in clinical outcomes, and Prof. Jose Maria Mato who covered more theoretical aspects such as the metabolomic contribution to the clinic. The symposia and workshops covered the most recent scientific and technological advances in clinical chemistry and laboratory medicine, focusing on the contributions of new biomarkers in ovarian cancer and in erythropoiesis, advances in the diagnosis of celiac diseases and familial hypertrophic cardiomyopathy, and updates on urine-culture and endocrine diseases during pregnancy. The symposium on new organization models in clinical laboratories, led by experts in health economics, aroused a great deal of interest. The cost of the laboratory from the industry’s point of view as well as how these new organization models are applied in different Spanish autonomic communities were extensively debated.

The contribution of diagnostic companies was crucial to the success of the Congress. The commercial exhibition, which covered a total floor space of 1,000 m², attracted 26 enterprises, including one gold sponsor, three silver sponsors, and five bronze sponsors.

In short, three days of intense activity providing participants with a wonderful opportunity to learn and hear from experts, to develop and strengthen relationships with peers, and to take home enjoyable and valuable memories.