

Surgical oncology in Europe

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The paper gives a short history of surgical oncology in Europe, beginning with the 17th century and presents the present state of this sophisticated field of medicine. The role of the different european medical societies and organizations devoted to surgical oncology is also discussed, including the European Society of Surgical Oncology (ESSO), European School of Oncology (ESO) and the European Organization for the Research and Treatment of Cancer (EORTC). The author completes the paper by discussing the future possibilities of surgical oncology in Europe.

Chirurgia onkologiczna w Europie

W pracy zawarto krótki rys historyczny, ilustrujący rozwój chirurgii onkologicznej w Europie poczynając od XVII wieku oraz przedstawiono obecny stan rozwoju tej złożonej dziedziny medycyny współczesnej. Obszernie omówiono rolę poszczególnych europejskich towarzystw i organizacji naukowych w rozwoju chirurgii onkologicznej – European Society of Surgical Oncology (ESSO), European School of Oncology (ESO) oraz European Organization for the Research and Treatment of Cancer (EORTC). W podsumowaniu autor zawarł swoje spostrzeżenia dotyczące dalszego rozwoju chirurgii onkologicznej.

Key words: surgical oncology, history of medicine

Słowa kluczowe: chirurgia onkologiczna, historia medycyny

When discussing Surgical Oncology in Europe and when we try to analyze the structures dealing with this specialty, we first have to go back to history; we shall then see that the surgical oncology work was and is organized quite differently in the European countries; it will be clear that the role of the surgical oncology societies is of great importance.

Surgical oncology is not a static technical science; we see topics and controversial themes change with the time.

Definitions

But first definitions; what is surgical oncology? Should not we start with oncological surgery?

Oncological surgery means specific technique and approach to tumourous conditions. It is technique adapted to and based upon our knowledge of tumour-biology. The great steps forward were seen in the second half of the 19th century.

Charles Hewitt Moore, surgeon of the Middlesex Hospital in London made already in 1865 statements which later were the background for the introduction of radical operations, such as the Halsted radical mastec-

tomy. He was aware of the importance of taking out tumors surrounded by a broad margin of healthy tissue to

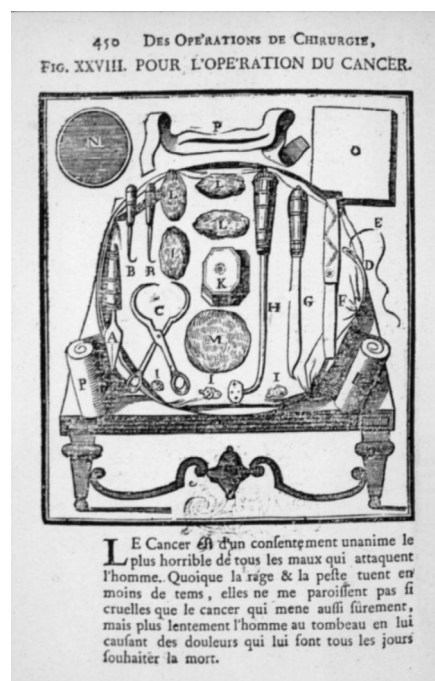


Figure 1. Illustration in *Armamentarium Chirurgicum*, posthumously published work by Johann Scultetus (1595-1645)

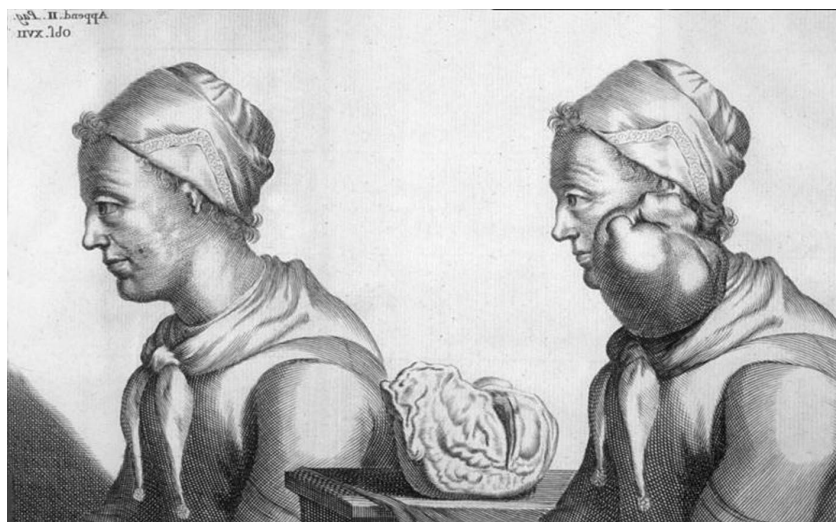


Figure 2. Illustration (engraving) in an early 18th century Dutch "case history" of a parotid tumour

avoid the risk of tumorseeding and to avoid local recurrence because of non resected overlooked tumor-extensions.

Alexander Hughes Bennett from Edinburgh mentioned even years earlier how important the examination of specimen margins is.

But already in the 17th century we find in books that specific surgical instruments were developed for tumorsurgery as is shown in one of the illustrations of the famous surgical textbook of Scultetus, that only after his death was published by his family, in 1679 (Figure 1).

From the same time is a report of a resection of a parotid tumor. The documentation is perfect with a detailed description of the tumor. On the engravings from the report the result of the operation is proudly shown (Figure 2). We should realize that it is a "short term" result. We are before the era of refined oncological surgery; I guess that the local recurrence risk is high in this case.

Surgical oncology covers a much wider field than oncological surgery: the role of the surgeon in the tumour treatment. Apart from the surgical act the activities are basic research, prevention and many other fields.

The roots of surgical oncology

We find the origin of this specialty in the cancer institutes, initially founded as radium institutes in many countries in the beginning of the previous century.

A most famous descendant of Poland played a pivotal role in this process: Marie Sklodowska-Curie discovered the radioactive power of radium, a few years after Röntgen found the X-rays in 1895. The healing effect of röntgenrays and of radioactivity was soon detected and institutes, where such treatments could be given, were built; the first in Buffalo, Moskou and Heidelberg. Soon it was realized that also surgeons should have important tasks in these cancer-centres;

So we might see Marie Sklodowska, who indeed always underlined the multidisciplinary line, also as mother of surgical oncology.

In Holland the Antoni van Leeuwenhoekhospital, the Dutch national cancer institute started in 1913 in an old canal mansion with 14 beds. In 1929 the move to an old military building was needed because of the demand for more beds. In 1979 the new hospital was built. Many of the Polish oncologists know this building from visits. Next year the new wing will make this institute still more useful to treat the cancerpatients in an optimal way. I mention this development of my institute because it is exemplary for the enormous expansion of the cancer centres in the last century. The surgical activities contributed certainly to the increase in size.

Also the Polish cancer centre in Warszawa was built as "Radium Institute".

Now Poland has the biggest Cancer Institute in Europe, for a great deal an achievement of the surgical oncologist Andrzej Kułakowski.

Multidisciplinarity

Back to the surgical oncology. To be strong in the clinical work the surgical oncologists need for the operation planning optimal contacts with imaging groups and pathologists.

Realizing that surgeons can as a rule not cover more than the locoregional area (surgery for distant disease is only exceptionally curative) the surgeons need to enlarge the scope of their treatment effects by intensive cooperation with medical oncologists; the radiotherapists help to create a locoregional cure.

Fundamental research in oncology, also being a major task, a continuous challenge for the surgical oncologists, likewise means intensive contacts with other specialties; multidisciplinary is essential.

Teamwork and “volume”

With the increase of activities and the turbulent developments of new techniques it was and is continuously necessary to enlarge the group of surgeons working in oncology centres and subspecialization became a logical development.

Teamwork, within these surgical groups, is important; competition and hierarchy should be minimized and we should be independent of economical constraints.

The increasing number of surgeons dealing with a certain number of patients creates the discussion on “volume”, the quantification of operations needed to reach sufficient expertise to produce good work. Recent publications suggest strongly that interest in oncology and knowledge of tumorbiology-based techniques and good organized follow-up, evaluating the results of the work, are more important than volume; nevertheless expertise needs a certain volume; many factors influence the actual size of such volume.

New techniques and conceptual changes

Over the years our armamentarium is enlarged and many new fields of activities were added, underlining the intensity and wide range of activities by surgical oncologists. The list is long: Microsurgery enabled the performing of free flaps, needed for difficult reconstructions. Endoscopic experience now culminates in minimal invasive surgery, with possible usefulness in oncology. Not only regional chemotherapy (perfusions and infusions), also the neoadjuvant approach and peroperative radiotherapy, all with specific technical aspects, are fields of research for surgical oncologists. Radioguided surgery is helpful e.g. in optimizing the regional surgery.

We have seen a change of many concepts: Work of surgical oncologists, tested in good clinical research made that the superradical approach is replaced by non mutilating surgery. The need of wide surgical exposure now is challenged by the supporters of the minimal invasive approach and we all are aware that the treatment of the regional nodes now is quite different from that in the 70's and 80's.

The place of surgical oncology within the frame of general surgery

Surgical oncology is an important subdivision of surgery. There is, however, a major concern when we discuss the place of our field within the organization of surgery. Surgical oncology is disease based, whereas most other surgical organizations are organ based. This is also one of the explanations of the fact that in many countries surgical oncology not yet is recognized as a specialty.

Surgical oncology was born in the cancer centres; continued fostering from such institutes is essential for further developments. In a number of general surgery departments flourishing surgical oncology subgroups vanished away with a change of the boss, when the head

of the department was followed by someone with interests other than oncology. We have recently seen such lack of continuity in Groningen and in Edinburgh. Such a loss will never be seen in cancer centres.

The twofold roots: surgery and oncology have complicated and organizationally hybrid consequences.

National organizations

The national organizations are differently organized: An independent society, or as subgroup of either the surgical society or oncology society. In some countries the surgical oncologists prefer to function as a group under the umbrella of the European Society of Surgical Oncology.

The first of such national organizations was the James Ewing Society (later named the SSO), in the USA. In Europe, in the United Kingdom, Ronald Raven and Ian Burn founded already in 1971 the British Association of Surgical Oncology (BASO). In 1976 Italy followed. Most countries, including Poland and The Netherlands, had their surgical oncology organization founded not before the 90's.

The task of the National Societies is manifold. The formation of studygroups for clinical research is important. Participation in large clinical trials is stimulated. Meetings are used to diffuse progress; education and quality control is given great attention.

European cooperation

How can we work together in Europe? The link can be organized by the societies, by the cancer centres or by trial organizations and researchgroups. Four European organizations are important for us: The European Society of Surgical Oncology (ESSO), our Journal, the European Journal of Surgical Oncology (EJSO), the European School of Oncology (ESO) and the European Organization for the Research and Treatment of Cancer (EORTC), with its most important goal the running of clinical trials.

Already in the twenties cancer centres organized international meetings to exchange information. One of the first of such meetings was organized in Amsterdam (Figure 3). Surgical themes were prominent on the agenda. It is curious to know that during that conference an International Leeuwenhoek Society was founded. Some years later this group changed name and became the UICC, the Union Internationale Contre le Cancer, still the most important oncology organization in the world.

The European Society of Surgical Oncology (ESSO)

In the beginning of the 80's it was felt that European cooperation was essential to reinforce surgical oncology in this continent. Umberto Veronesi, famous surgeon and pathologist from Milano took the initiative to found the ESSO. Since long he dominates the European spirit among the surgical oncologists. From this background

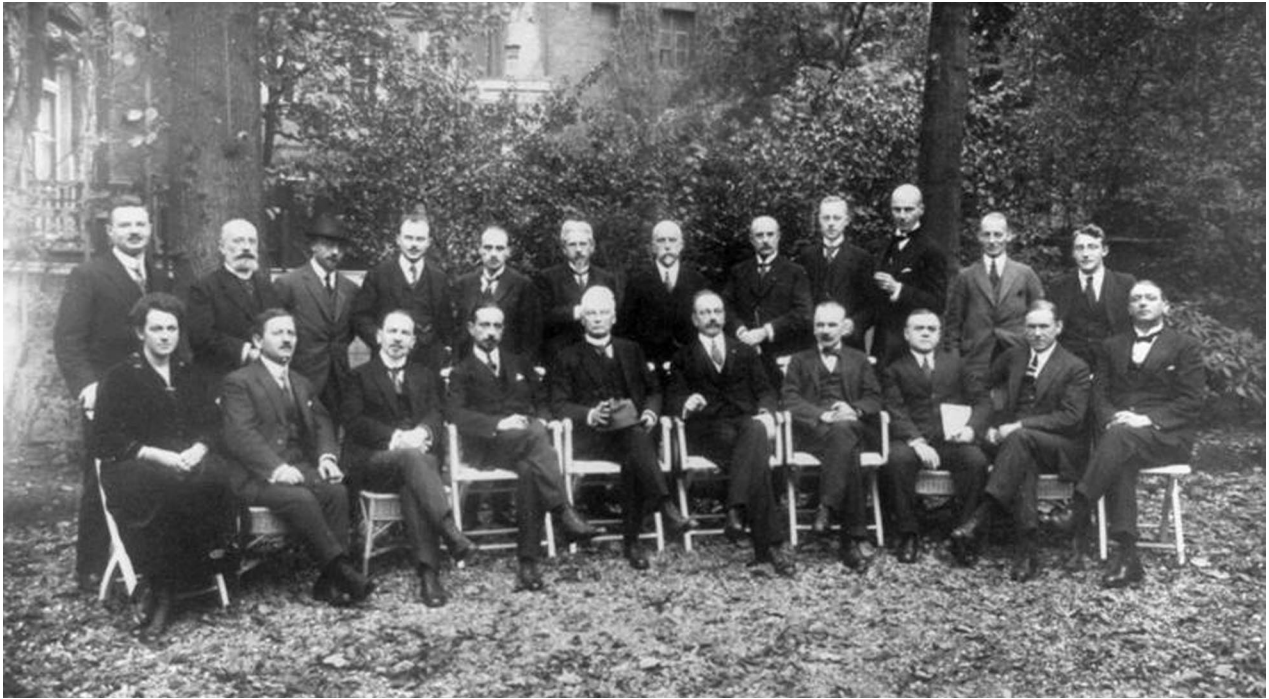


Figure 3. International Cancer Conference, 1922, in Amsterdam; Fibiger (Copenhagen) and Leitch (London), both famous pathologists, were among the participants

he founded also the European Institute of Oncology in Milano, now competitive with the famous Istituto di Tumori, which he headed so many years. Also the European School of Oncology is one of his children.

In the list of the ESSO founders figure representatives of almost all European countries.

ESSO is an active member of the Federation of European Cancer Societies (FECS) and of the World Federation of Surgical Oncology Societies (WFSOS) illustrating that contact with other oncology-specialties and with colleagues from outside Europe is considered to be highly important.

The main goal from our European Society is to promote and improve the surgical part of tumour-treatment: Education through meetings, fellowships, awards and, most important, through the European Journal of Surgical Oncology (EJSO).

Figure 4 shows a recent meeting of the Executive of ESSO, with Bin Kroon in the chair and, among others, the representative of Poland Janusz Jaskiewicz, the editor-in-chief of our journal Irving Taylor and to the right the actual president-elect Luigi Cataliotti.



Figure 4. A recent meeting of the ESSO executive committee. From left to right Irving Taylor, editor-in-chief of the EJSO, Janusz Jaśkiewicz and Schlomo Schneebaum, councillors, Bin Kroon, the now past-president and Luigi Cataliotti, president-elect



Figure 5. Henri Tagnon (1911-2000), founder of the EORTC and founder-editor of the *European Journal of Cancer*

The European Organization for the Research and Treatment of Cancer (EORTC)

The EORTC is the other European organization in which surgical oncologists are active. Founded as GECA, Groupe Européen de Chimiothérapie Anticancéreuse, it soon became multidisciplinary. Also Polish Institutes participate actively in the EORTC activities.

The founder, Henri Tagnon (Figure 5), a medical oncologist, was working for the idea of the European Union “avant la lettre”. He was a great visionary of even global cooperation in oncology. He created the European Data Centre in Brussels, but in the same time he organized close links with the National Cancer Institute of the United States. Being the founder and first editor of the *European Journal of Cancer*, one of the oncology journals with already soon a high impact factor, he stimulated to report on all new findings of the studies in an own European, multidisciplinary cancer journal. Also the surgeons are indebted to him for all these achievements.

The main task of the EORTC is to perform prospective randomized trials.

Also in our surgical part of tumour treatment we need this type of investigations to give our therapy choices a solid background and to answer the many still open questions. The work in the studygroups of the EORTC is highly stimulating and everybody who sofar had no contacts is invited to join one of these cooperative groups.

Problems in the European cooperation

An open eye for the problems in european cooperation is needed.

A main point is the lack of internationally, generally accepted definitions in still many fields. We need manuals, like the manual published by the Breast Cancer

Cooperative of the EORTC group. This relates to diagnostics, to treatment-principles, to operation types, and also to ethical principles.

Many still existing differences in the interpretation of words and treatment principles between countries make that the creation of European treatment protocols often is difficult; here the text of a protocol can be hazy in some aspects (with incidentally impact on the strength of the outcome). So we have to work strong on the uniformity of interpretations.

Future

The Cancer Institutes should keep their active role in leading the surgical oncology. Surgical oncology in the universities and regional hospitals needs a solid organization; The “comprehensive cancer centre” structure is the most productive form and is a safeguard for continuity. We have to work together, internationally, within the ESSO and the EORTC; these organizations need the support of all. Within these groups and within the national societies manuals and guidelines should be worked out, improving the quality of the work; the educational task is of great importance and should be part of the work of all surgical oncologists.

We all have to submit our most important publications to the EJSO, our own surgical oncology journal; the constantly rising impact factor is an extra stimulus! Conferences should be organized, like now by the Polish surgical oncology society, with a focus on a specific theme, which then can be explored in depth.

For all this work, now and in the future, one is recompensed by making friendship with many colleagues, just as has been the experience of the author, who is happy to meet again his many Polish friends.

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