



Medical Oncology Status in Europe Survey (MOSES)

Phase III

Prepared by
The ESMO MOSES Task Force
September 2008



Abbreviations

GCT	Germ Cell Tumor
GP	General practitioner
MO	Medical Oncology/Medical oncologist
PC	Palliative Care specialist
RO	Radiation Oncology/Radiation oncologist
SO	Surgical Oncology/ Surgical oncologist

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MOSES III Highlights

Background

With this third report, the MOSES survey (an initiative launched by ESMO 9 years ago) reaches its maturity and endeavors to provide key information for the political action of ESMO, the premier, European, Medical Oncology society and the daily activity of oncologists throughout Europe.

Since the first pilot project began, our major aim has been to develop an acceptable methodology from the outset, based on the direct involvement of ESMO National Representatives (NR). This was substantially improved in MOSES II, with the establishment of an active Task Force, the collaboration of a high-quality group of statisticians and a deeper involvement from the ESMO NR's. This effort led to a broad analysis of the status of Medical Oncology in Europe, which was published in a booklet, presented at the 31st ESMO Congress in Istanbul in 2006 and widely distributed throughout Europe to oncologists, media, politicians, administrators and advocacy groups. The comments about this survey were largely positive and prompted ESMO to continue the project.

Purpose

The purpose of the MOSES III survey is to investigate two areas which are considered crucial for ESMO:

- the teaching of the discipline, both for undergraduate students and post-medical graduates and,
- the multidisciplinary approach to cancer treatment, which nowadays represents a largely recognized benefit for the optimal treatment of cancer patients.

In order to achieve these two objectives, a sound methodology was developed and the final results are now ready for presentation.

Survey Process

Several improvements were made to the methodology of the questionnaire, taking into consideration feedback from MOSES II.

- The nature, structure and connection between questions was reviewed with the source of information becoming a mandatory field.
- Questionnaires received were first reviewed by selected ESMO National Representatives as the primary source of data collection.
- National Medical Oncology societies and when needed Ministries of Health were asked to collaborate and certify the data.
- The Survey was sent to 42 countries in Europe. 41 countries compiled the questionnaire, including all EU countries. A detailed list of countries is available on page 34.

Data Control

The accuracy of the data was overseen by the MOSES Task Force and verified by an automated, online, data control system. The MOSES Task Force, data manager, epidemiologist and statistician were involved in the analysis and aggregation. On the basis of the analysis and aggregation, the MOSES Task Force produced this report.

Summary Results

After reviewing the data, some very important issues are evident:

- teaching of Oncology for undergraduate students is foreseen in 85% of the countries, but Medical Oncology in only 50%; there is also a considerable lack of uniformity across the different national settings
- in the same setting, Palliative Medicine is slowly being recognized as a fundamental component of the multidisciplinary teaching for medical students (in 50% of the countries versus 28% as reported in the MOSES II report)
- the credits in Multidisciplinary Oncology for undergraduate students are recognized only in one third of the countries
- postgraduate specialization and/or sub-specialization in Oncology is present in the vast majority (82%) of the countries surveyed, however, Medical Oncology is foreseen with a uniform postgraduate training in only half of the countries; the situation within each country is reported as heterogeneous in several national settings
- the Continuous Medical Education (CME) system is far from being satisfactory in several national settings, and there is also a lack of uniformity among the different countries
- the pattern of cancer care and multidisciplinary collaboration was deeply explored in this survey. The general consideration is that the role of medical oncologists in the multidisciplinary team is important and improving over time. Organ specialists (i.e. gastroenterologists, pulmonologists, urologists, gynecologists and others) still play an important role, but this may vary from country to country

As an overall comment, we can therefore conclude that the status of Medical Oncology in Europe in 2007 is characterized by:

- an evident, but slow, increase in the level of education in Medical Oncology and in the role of medical oncologists
- a persistent lack of homogeneity within the different national settings
- considerable room for improvement in the organization of the discipline
- an important, and ever increasing role for ESMO political action on a continental and national level.

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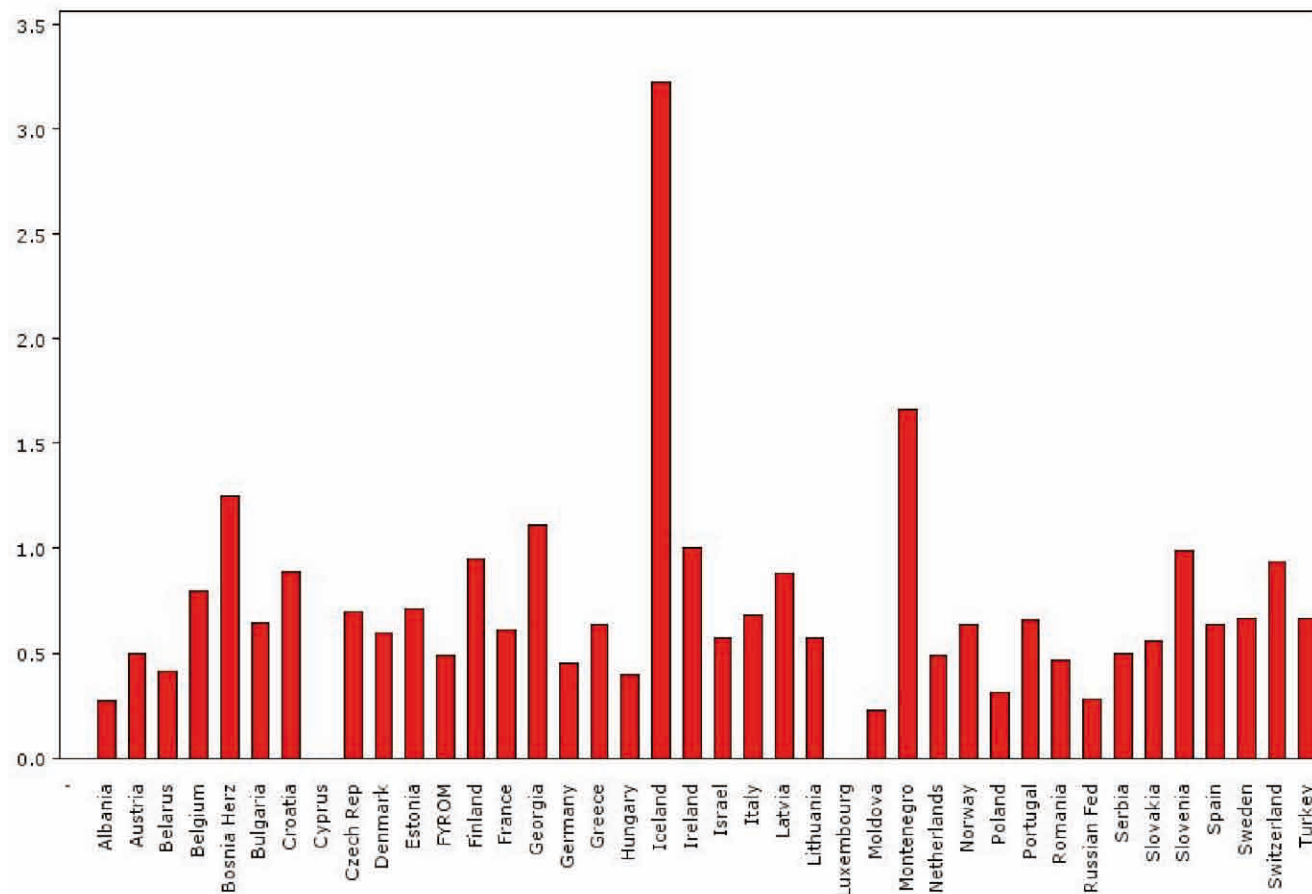
SECTION 1 – GENERAL INFORMATION

Number of medical faculties (schools) - undergraduate studies

The number of medical faculties related to the number of inhabitants is variable as seen in Figure 1.1. This variation is due to countries with small population (<500,000 inhabitants) that have either one medical faculty or none.

The average is 1 medical faculty per 1,646,000 inhabitants (+/- 909,759) with a median of 1 per 1,548,000 inhabitants. Interestingly, there are only 6 countries with ≥ 1 medical faculty per million inhabitants.

Figure 1.1: Total number of medical faculties per million inhabitants in each country



Not reported: United Kingdom.

Luxembourg and Cyprus do not have medical faculties

In most countries, the duration of medical undergraduate studies is 6 years (in 37 countries, 92.5 %), which is in agreement with the European Union Directive. Exceptions are: Belgium (7 years), Ireland (5 years) and United Kingdom (5 years). The above information shows the uniformity of undergraduate medical education across Europe, highlighting the need for similar developments in specialist and postgraduate teaching.

Cancer registry activity

In the majority of countries there is some form of cancer registry activity. However, National Cancer Registries exist in 75% of countries (30 countries), while regional cancer

registry activities are reported in several countries. Finally, local or loco-regional activities also exist in 3 more countries. Romania reported no cancer registry activity at all.

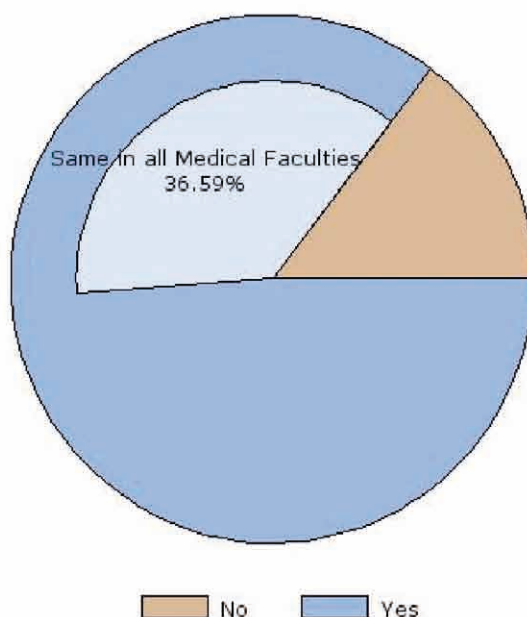
The situation regarding the development of cancer registry activities across Europe seems to be improving compared to the previous MOSES II report, since 4 countries that had then reported no cancer registry, have now developed at least local and regional activities (Greece: local, Bosnia-Herzegovina, Italy, Switzerland: regional). This represents a significant step, however, the need for unification of registration and access to cancer data across Europe is underlined.

SECTION 2 – TEACHING OF ONCOLOGY FOR UNDERGRADUATE STUDENTS

The quantity and quality of information regarding the education of Oncology gathered from the current Phase III analysis is significantly improved compared to the previous Phase II MOSES report, allowing further comments and conclusions. The teaching of Oncology is overall foreseen in the curriculum for undergraduate medical students in the majority of countries (35/41 countries; 85%). Teaching is reported as consistent across medical faculties within the same country in 36% of the countries. However, several countries (48%; 20/41 countries) have reported that the national situation is heterogeneous, with significant differences on the content and structure of undergraduate teaching between universi-

ties in the same country. Several countries reported that medical faculties are independent and autonomous regarding the planning and structure of curricula. The considerable lack of uniformity of the undergraduate teaching among the different medical faculties or schools of any specific country was also highlighted in the previous MOSES II report. Again, in the present analysis no clear trend is evident in the different areas, which certainly reflects a lack of general European guidelines for undergraduate Oncology training. Only Poland has reported that “there is initiative to unify the undergraduate teaching of Oncology”.

Figure 2.1: Teaching of Oncology for undergraduate students (Is the teaching of Oncology foreseen in the curriculum of undergraduate students?)



More details regarding undergraduate Oncology teaching are given below, only for countries in which the teaching of Oncology is foreseen in the same way in all faculties.

Medical Oncology

Medical Oncology is included in the program of undergraduate studies in 53% of the relevant countries (8/15). It is a separate and/or a mandatory course in 6/15 countries, included in the program of the last years of the graduate teaching (4th 6th, year 3 in Austria). Information on the planned total course hours for Medical Oncology is limited and reflects the considerable differences that exist (from 8 to 62 planned hours reported, median 30 hours). The situation regarding undergraduate education is still not completely satisfactory, since only half of the surveyed countries

include Medical Oncology in their faculty programs. There is significant room for improvement, and the need for development of more uniform conditions across Europe and of general EU guidelines is stressed.

In the previous MOSES II report limited information was reported regarding teaching of Oncology other than Medical Oncology. In the phase III MOSES, however, more data were collected for the current analysis with regards to undergraduate teaching of other than Medical Oncology specialties, such as Surgical Oncology, Radiotherapy, Clinical Oncology, Hematology and Palliative Medicine. This information is presented below and is very important as it reflects the current situation and initiatives for multidisciplinary Oncology teaching across European countries even since the undergraduate years.

Surgical Oncology

The situation regarding undergraduate teaching of Surgical Oncology is similar to Medical Oncology; Surgical Oncology is foreseen in 60% of the countries (9/15) and in half of them it is a separate course. In some countries it is part of the undergraduate program for General Oncology, part of Onco-Hematology courses or taught together with Oncology and Radiotherapy. It is a mandatory course in 6/9 countries, included in the program of the last years (4th-5th). Limited information has been provided regarding the time devoted to Surgical Oncology (6-8 hours, median 7 hours).

Radiotherapy

Undergraduate teaching of Radiotherapy seems more uniform, as it is included in the undergraduate program in the majority of the countries (80%; 12/15), in 8 of them as a separate course. As for Surgical Oncology, Radiotherapy teaching is part of the undergraduate program for General Oncology or part of Onco-Hematology or Oncology and Radiotherapy courses. It is foreseen in the program of years 4-6 in most countries apart from Austria where it is taught in year 3. Planned total course hours vary from 6 to 30 to a maximum of 60 in the Russian Federation (median 10 hours).

Oncology/Clinical Oncology

In the previous report we had collected data regarding teaching of 'General Oncology'; for this analysis countries reported more specifically on courses of Oncology/Clinical Oncology. More detailed information is now available, demonstrating that European educational systems are rapidly integrating Oncology as an essential course in the undergraduate teaching program. However, the definition of Oncology/Clinical Oncology is not clear across countries and it includes different topics in different countries.

Oncology/Clinical Oncology is included in almost all countries with a unified undergraduate teaching program (93.3% of countries), as a separate course in 10 of them and, importantly, as a mandatory course in all 13 of them. The year of course is usually one of the last years of undergraduate teaching (4th year in 3 countries, 5th year in 4 countries, 6th year in 3 countries), with a significant number of planned total course hours devoted to Oncology/Clinical Oncology (varying between 10 and 87 hours; median 30 hours).

Hematology

Among specialties Hematology is very clearly identified and is frequently present in the undergraduate program, included in 80% of the programs (12/15). It is a separate and/or a mandatory course (in 11/12 countries) usually in the last years of university (4th-6th), in Albania in the 2nd year and in Austria in the 3rd. It is taught usually for 24 to 94 hours (median 36 hours).

Palliative Medicine

From the present analysis it is evident that Palliative Medicine is slowly being recognized as an indispensable part of multidisciplinary Oncology teaching of medical students, as it is now reported as part of the undergraduate teaching in 53.3% of the relevant analyzed countries, compared to only 28% of the MOSES II report. This is significantly better; however, there is still much room for improvement. It is well recognized as a separate course in some countries, and, interestingly, it is a mandatory course in the undergraduate programs of others. It is foreseen in years 4-6 and, wherever information is available, it is restricted to a few hours (4-10 hours, median 7.5 hours).

Credits in multidisciplinary Oncology

For the first time, in the current report data was collected regarding credits in multidisciplinary Oncology, only for countries in which Oncology is foreseen in the same way across faculties. Multidisciplinary Oncology credits are foreseen in a limited number of countries (35.7%, 5/14), reflecting, however, the current realization and at the same time the vital necessity for a change in the teaching 'mentality' across Europe, towards multidisciplinary management of the cancer patient.

SECTION 3 – POSTGRADUATE SPECIALIZATION AND/OR SUB-SPECIALIZATION IN ONCOLOGY

In general postgraduate specialization and/or sub-specialization in Oncology is foreseen in the majority of the surveyed countries (82.9%, 32/41 countries). It is interesting that 70.7% of countries provided data showing uniformity of postgraduate teaching of Oncology across medical faculties in the same country. However, the national situation is reported as heterogeneous within several countries, and content, planning and structure of postgraduate teaching is different as is undergraduate teaching.

More details regarding postgraduate Oncology teaching are given below, only for countries in which Oncology is foreseen in the same way in all faculties.

The situation regarding postgraduate education of Medical Oncology is again not completely satisfactory as only 53.6% of countries have Medical Oncology recognized in their postgraduate program. Among specialties, postgraduate teaching of Hematology is very clearly identified, while Palliative Care shows improvement but there is still a significant lack of specialists.

Medical Oncology

Specialization in Medical Oncology is foreseen or officially recognized in 53.6% of the countries with uniform postgraduate training (15/28 countries). Details regarding the postgraduate situation compared to recognized and/or certified specialty of Oncology across countries are provided in Table 3.1. In certain cases contradictory information between official recognition and national certification exists, which can only be explained by the different definitions of national certification (i.e. presence of official national examinations after the completion of specialty training). Previous official data are provided in the appendix “*Medical Oncology title and training in the Member States*”.

Table 3.1: existence of recognized specialty per country
(Data only for countries in which Oncology is foreseen in the same way in all faculties)

COUNTRY	foreseen/officially recognized Medical Oncology	foreseen/officially recognized Oncology/ Clinical Oncology	COUNTRY	foreseen/officially recognized Medical Oncology	foreseen/officially recognized Oncology/ Clinical Oncology
Albania	Yes	Yes	Italy	-	-
Austria	-	-	Latvia	Yes	Yes
Belarus	-	-	Lithuania	Yes	No
Belgium	Yes	No	Luxembourg	No	No
Bosnia and Herzegovina	No	No	FYROM	No	Yes
Bulgaria	Yes	Yes	Moldova	No	Yes
Croatia	No	No	Montenegro	-	-
Cyprus	-	-	Netherlands	Yes	Yes
Czech Republic	-	-	Norway	No	Yes
Denmark	-	Yes	Poland	No	Yes
Estonia	No	Yes	Portugal	-	-
Finland	No	Yes	Romania	Yes	No
France	Yes	No	Russian Fed	No	Yes
Georgia	No	Yes	Serbia	-	-
Germany	-	-	Slovakia	Yes	No
Greece	Yes	No	Slovenia	Yes	No
Hungary	-	-	Spain	Yes	No
Iceland	-	-	Sweden	No	Yes
Ireland	-	-	Switzerland	Yes	No
Israel	Yes	Yes	Turkey	-	-
			United Kingdom	Yes	Yes

In those countries with official training in Medical Oncology, the number of specialists graduating (in 2007) varied greatly (from 1 to 99). Postgraduate training is usually completed in 4-6 years in most countries, while full or partial training abroad is allowed in most (11/14).

Medical Oncology as sub-specialty of Internal Medicine

Medical Oncology is included in the Internal Medicine training program in a few countries (4/28; 14.3%), where 2 years of postgraduate Medical Oncology training is foreseen.

Surgical Oncology

Surgical Oncology as a separate specialization exists only in 3/28 (10.7%) of countries.

Surgical Oncology as sub-specialty of Surgery

Surgical Oncology as a sub-specialty exists in 28.6% (8/28) of the relevant countries. The number of graduated sub-specialists is very low (apart from Poland where 22 specialists graduated in 2007). A total of 2-4 years of postgraduate training is foreseen and, again, training abroad is generally allowed.

Radiotherapy

The situation regarding Radiotherapy as a separate specialization is more uniform among countries. Radiotherapy is foreseen in postgraduate teaching or is officially recognized in 78.6% (22/28) of countries, with a considerable number of specialists graduating in 2007 (from 1 to 50, median 6.5, corresponding to 1 per 1,210,000). The average duration of specialty training is 4-5 years, with exceptions for Albania (1 year), Russian Federation (2 years) and Switzerland (6 years). In many countries, full or partial training is allowed abroad.

Hematology

Postgraduate specialization and/or sub-specialization in Hematology exists in almost all the surveyed countries (totaling 96.4%, 27/28). Training in Hematology is developed in 2 up to 6 years in most of these countries. The number of specialists graduated in 2007 varies from 2 to 116. In most countries full or partial training abroad is allowed.

Hemato-Oncology

In most of the surveyed countries, postgraduate specialization and/or sub-specialization defined as Hemato-Oncology does not exist. Exceptions include Albania, Belgium, France and Israel (5/28; 17.9%).

Palliative Medicine

Palliative Medicine is recognized as a separate specialty in very few countries, Albania, Poland, United Kingdom and Moldova (4/28; 14.3%). There are no specialists at all graduating in 2007 and the number of training years is very limited (0.2 years in Albania, 3 in Poland and 4 in U.K.).

The current analysis again highlights the significant lack of specialists in this field across Europe and the critical need for development of postgraduate training programs in Palliative Medicine at a pan-European level. The current important role of medical oncologists in the provision of palliative care services to cancer patients is again underlined. International and national standards of training are urgently required.

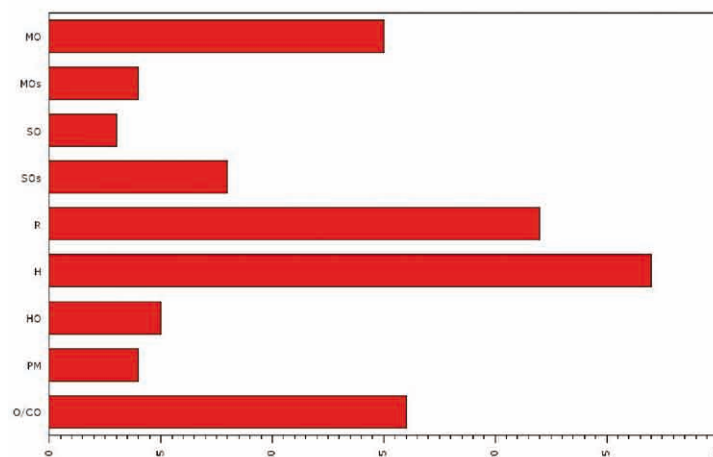
Oncology/Clinical Oncology

Overall postgraduate specialization in Oncology/Clinical Oncology is reported in 16/28 countries (57.1%) compared to 46% in the MOSES II report. A significant number of specialists graduated in 2007, varying from 1 to 155. An average of 4-5 years of training is usually foreseen, with exceptions (3 or 6 years in some countries). In the majority of countries full or partial training abroad is allowed.

Postgraduate specialization and/or sub-specialization in Oncology - Summary

Among all the different types of specialties organized as a postgraduate specialization, Hematology is almost uniformly present in all surveyed countries (96.4%), followed by Radiotherapy (78.6%) and Oncology/Clinical Oncology (57.1%) and Medical Oncology (53.6%). Medical Oncology as a sub-specialty exists, but not commonly (14.3%), while Surgical Oncology as a separate specialty or a sub-specialty is generally uncommon (10.7% and 28.6%, respectively). Palliative Medicine is still rarely seen as a separate specialty (14.3%).

Figure 3.2: Postgraduate specialization and/or sub-specialization in Oncology

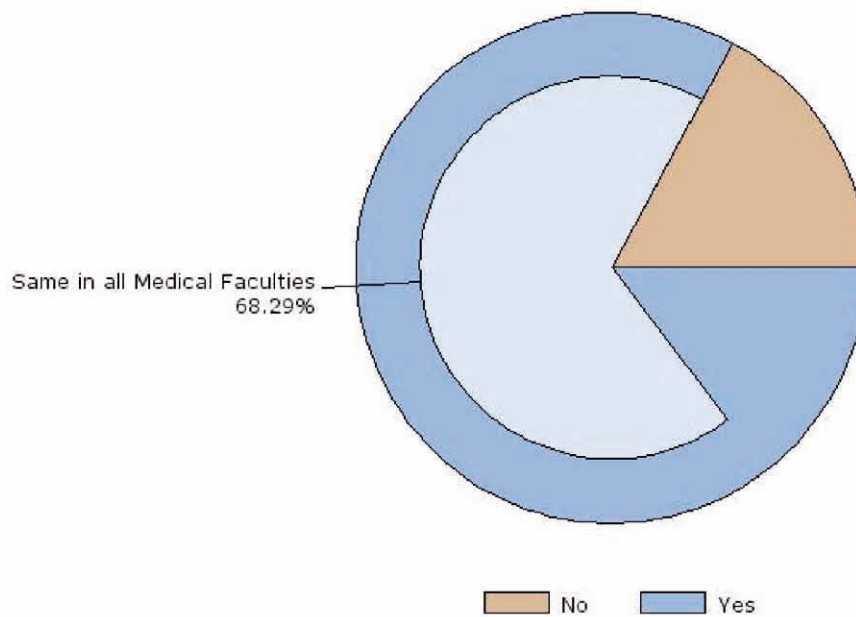


Specific qualifications required for specialization

Information regarding specific qualifications required for specialization was provided only from few countries. These usually include: MD degree and, in some countries, specialization in Internal Medicine, and admission exams. For example, in Switzerland for specialization in Medical Oncology, a medical degree is required as well as specific graduate

requirements, publications, 2-3 years of Internal Medicine and a course in communication skills. In Poland for specialization in Palliative Medicine, requirements include a medical degree, 2 year training in Internal Medicine, publications, foreign language exam and training in public health organization.

Figure 3.3: Postgraduate specialization and/or sub-specialization in Oncology



Special notes

- Albania: in Oncology/Clinical Oncology are included following (postgraduate specialties:); the Medical Oncology, the Radiotherapy, the Surgical Oncology and Palliative Medicine
- Croatia: since 1995 a specialization named Radiotherapy and Oncology is approved specialization which is licensed to order systemic therapy. There are classic radiotherapists, specialists of Radiotherapy and Oncology and medical oncologists and all of them are licensed to order systemic therapy. Hematology is sub-specialty of Internal Medicine
- Finland: The specialty in Oncology covers both Medical Oncology and Radiotherapy in Finland. These are not separated. Palliative Medicine is not a specialty in Finland, but since 2007 it has been possible to gain an expertise in Palliative Medicine (2 years education).
- France: Medical Oncology, Radiation Oncology, Onco-Hematology and Hematology are full specialties. No need for Internal Medicine training to become oncologist.
- Georgia: General Oncology, Hematology and Radiology are recognized postgraduate specialties in Georgia. General Oncology includes: chemotherapy, organ specific Surgical Oncology; Radiotherapy is sub-specialty of radiology; Hematology includes Onco-Hematology
- Luxembourg: Medical oncologists are recognized as internists in Luxembourg. most training is acquired abroad; some will actually carry a foreign degree, which will nationally not be recognized (i.e. hematologist , etc) probably all will carry a foreign degree since there is no medical school in Luxemburg
- Norway: there are no separate medical or radiation oncologists. All specialists are involved in both Radiotherapy, medical treatment and may also in palliative care.
- Poland: Gynecological Oncology - a sub-specialization after Gynecology & Obstetrics (3 years training)
- Russian Federation: The basic medical training is a 6-year course and the degree awarded is MD in General Medicine. Any doctor holding such an MD degree is eligible to join a postgraduate course in any of the broad or subspecialties of medicine available in various higher educational institutions throughout the country. The 2-year postgraduate specialization in Oncology comprises 2 certification cycles of 288 hours (100 hours of lecture course and 188 hours of active practical training). The training in basic statistic (144 hours) is an additional part of specialization. The postgraduate specialization in Oncology is common for Surgical Oncology and Medical Oncology. For those who are involved in Surgical Oncology an addition basic active surgical training (or specialization) is required. For those who are involved in Medical Oncology an MD degree and specialization in Oncology are required. There are not any special requirements or sub-specialization for Medical Oncology. Source of information: Academic Department of Oncology accredited by Federal Agency of Health Care.
- Slovenia: *Medical Oncology is recognized specialty in Slovenia since 2000, the first medical oncologist trained under this program passed the board exam in 2007. The curriculum for Medical Oncology is 2 years training in Internal Medicine and 4 years in Medical Oncology. Before 2000 there were 4 years of residency of internal medicine and residents who planned to work in Medical Oncology spent 2 years in the Oncology Department and passed the Board exam in Internal Medicine. As Medical Oncology is a relatively new specialty the majority of medical oncologists in the country who currently work with cancer patients are internists. ** Surgical oncologists in Slovenia are surgeons with Board exam in surgery who work with cancer patients and perform mainly oncological surgery *** Hematologists in Slovenia are internists (passed Board exam in Internal Medicine) who work mainly with hematology patients in Hematology Departments. The specialty of Hematology is new and was recognized in 2007. **** Palliative care and end of life care for cancer patients is offered mainly by medical oncologists, radiation oncologists and in some hospital by gynecological oncologists, there are also at least 3 so called analgesic outpatient clinics; only limited care, probably due to knowledge limitations on this topic, is given by general practitioners.
- Sweden: Sweden has one specialty for the medical and radiation treatment of gynecological cancer called gynecological Oncology and another for medical and radiation treatment of non gynecological tumors in adults called Oncology. It also has Hematology, pediatric Oncology and pulmonary medicine specialties providing cancer medication.
- United Kingdom: Postgraduate training of medical postgraduates in Medical Oncology is set to a nationally agreed curriculum to an agreed standard, and is externally validated. Some parts of the United Kingdom have different Medical Oncology courses of slightly variable content. Many but not all result in a postgraduate degree in Oncology.

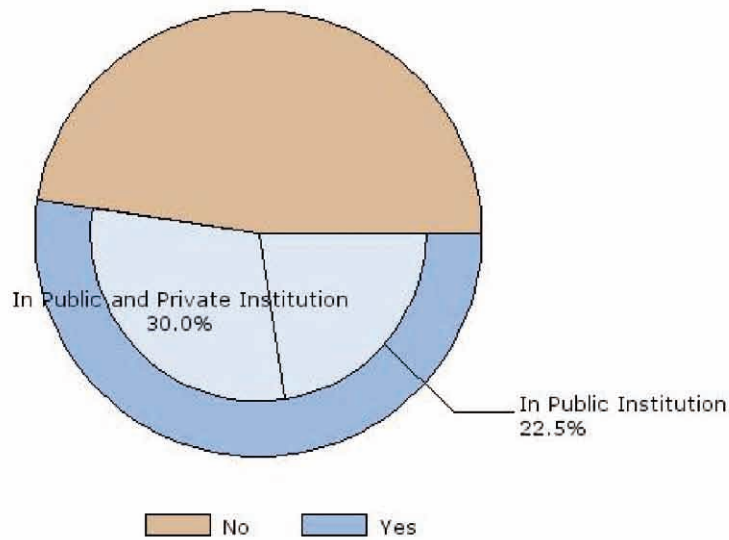
SECTION 4 - CONTINUING MEDICAL EDUCATION (CME)

Twenty one countries (52.5%) report that a medical oncologist working in a public institution is required to follow a CME process in order to continue practicing, while in 12 countries (32.4%) CME is also required for medical oncologists in private practice.

While these percentages represent a significant improvement over the results of the MOSES-II survey, CME is

extremely important for medical oncologists, given the rapid advances in diagnosis, staging and treatment of cancer patients that result in increasing survival for cancer patients. Therefore, CME should be required for all practicing medical oncologists throughout Europe.

Figure 4.1: requirement of CME process to continue practicing



The CME accreditation is supervised by the National Health System in 11 of these 21 countries, by medical associations (including the Royal College of Physicians in United Kingdom) in 11, by universities in 5 and by scientific societies in 2 countries and by hospitals in 1 country. In 5 countries the CME accreditation is supervised by more than 1 institution. Physicians can choose their own CME activities in 15 countries (71.4%) while they are mandated and defined by the institution responsible for CME in 6 countries (28.6%).

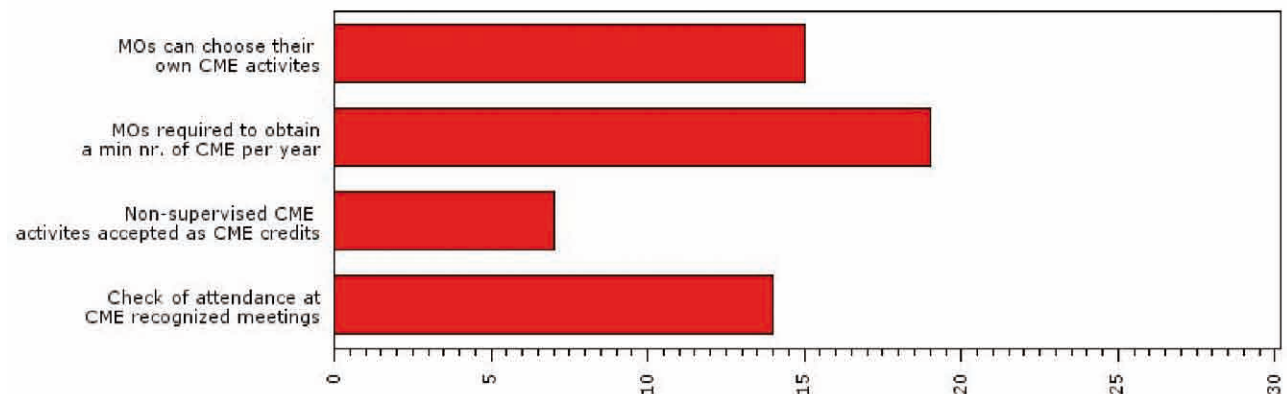
A minimum number of CME credits per year are required in 19 countries (90.5%).

In 14 countries (66.7%), non-supervised CME activities are not accepted as CME credits.

Actual attendance at meetings recognized with CME credits is checked in 14 countries (66.7%).

The Medical Oncology degree is valid for a limited period (5 to 7 years) in 10 countries (52.6%), while the CME accreditation is valid for 1 to 5 years in 13 countries (68.4%).

Figure 4.2: CME accreditation



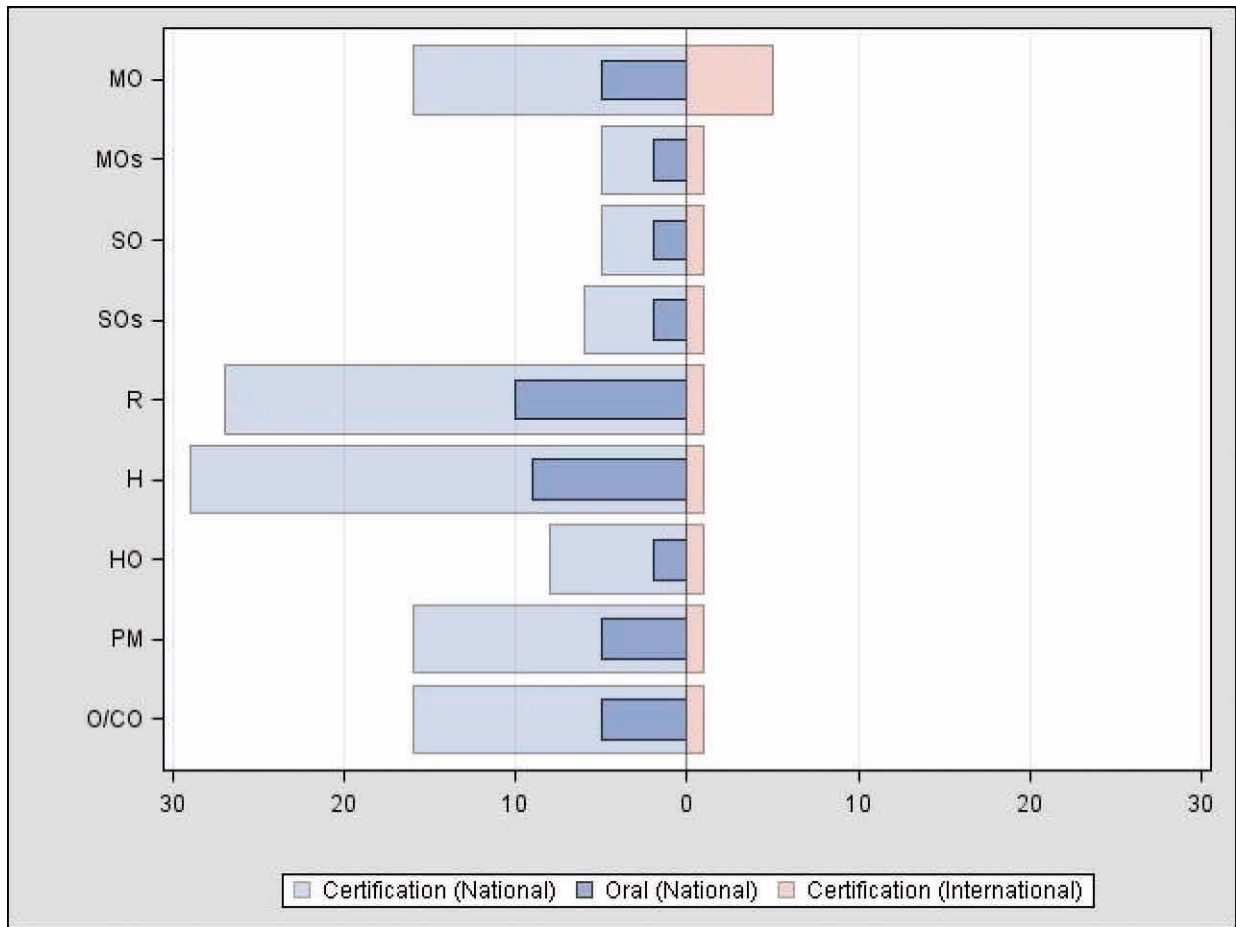
SECTION 5 - NATIONAL AND INTERNATIONAL CERTIFICATION

The national certification in Medical Oncology is acquired through an exam in 17 of 41 countries (41%) as is the international certification in 5.

In those countries where certification in Medical Oncology is foreseen, certification is required to practice as a medical oncologist in public institutions in 16 of 17 countries (94.1%) and for private practice in 11 of 14 (78.6%).

COUNTRY	National / International certification Medical Oncology	National / International certification Oncology/Clinical Oncology
Albania	Yes (national)	Yes (national)
Austria	-	-
Belarus	-	Yes (national)
Belgium	No	-
Bosnia and Herzegovina	-	-
Bulgaria	Yes (national+ESMO)	Yes (national)
Croatia	-	-
Cyprus	No	No
Czech Republic	Yes (national)	No
Denmark	-	Yes (national)
Estonia	-	Yes (national)
Finland	Yes (national)	Yes (national)
France	No	-
Georgia	-	Yes (national)
Germany	-	-
Greece	Yes (national)	-
Hungary	Yes (ESMO)	Yes (national)
Iceland	No	-
Ireland	Yes (national + ESMO)	-
Israel	Yes (national)	Yes (national)
Italy	Yes (national)	-
Latvia	Yes (national)	Yes (national)
Lithuania	Yes (national)	No
Luxembourg	-	-
FYROM	Yes	Yes
Moldova	No	Yes (national)
Montenegro	No	No
Netherlands	No	No
Norway	-	No
Poland	-	Yes (national)
Portugal	Yes (national)	-
Romania	Yes (national)	-
Russian Fed	-	Yes (national)
Serbia	No	No
Slovakia	Yes (national)	-
Slovenia	Yes (national+ESMO)	-
Spain	No	-
Sweden	-	Yes (national)
Switzerland	Yes (national+ESMO)	-
Turkey	-	-
United Kingdom	No	Yes (national)

Figure 5.1: certification and exam process



SECTION 6 - ONCOLOGY FACILITIES

The types of Oncology facilities that exist in each country are variable. The figure below shows the extreme variation in the number of Oncology facilities from country to country. Even taking into account special cases such as Iceland, a country with a small population and comprehensive facilities, there are countries with less than 2 facilities per million inhabitants and others with more than 10.

Facilities with medical oncologists exist in the following number of countries: University hospitals in 28 of 38 (73.7%); cancer centers in 25 of 39 (64.1%); referral general hospitals in 27 of 38 (71.1%); community hospitals in 13 of 36 (36.1%); private hospitals/ clinics in 18 of 34 (52.9%); private practice in 13 of 34 (38.2%)

The number of facilities where independent Oncology units (with ward + day clinic) exist also varies widely: University hospitals in 24 of 35 (68.6%); cancer centers in 21 of 36 (58.3%); referral general hospitals in 27 of 37 (73%); community hospitals in 11 of 36 (30.6%); private hospitals/ clinics in 15 of 34 (44.1%); private practice in 4 of 32 (12.5%).

Comprehensive cancer centers exist in 82.9% of countries. Radiation Oncology facilities exist in 36 of 40 countries (90%). Palliative care facilities exist in 34 of 39 countries (87.2%)

The number of practicing oncologists varies widely between countries. Oncologists take care of palliative care in 21 of 40 countries (52.5%).

Only 16 countries (39%) report that there are national standards/minimum requirements for a Medical Oncology facility in that country, issued by the National Health System/ Health Ministry.

More details regarding Medical and Radiation Oncology facilities are given below, only for countries for which number of facilities was reported.

Fig 6.1: Total number of Medical and Radiation Oncology facilities per million inhabitants in each country

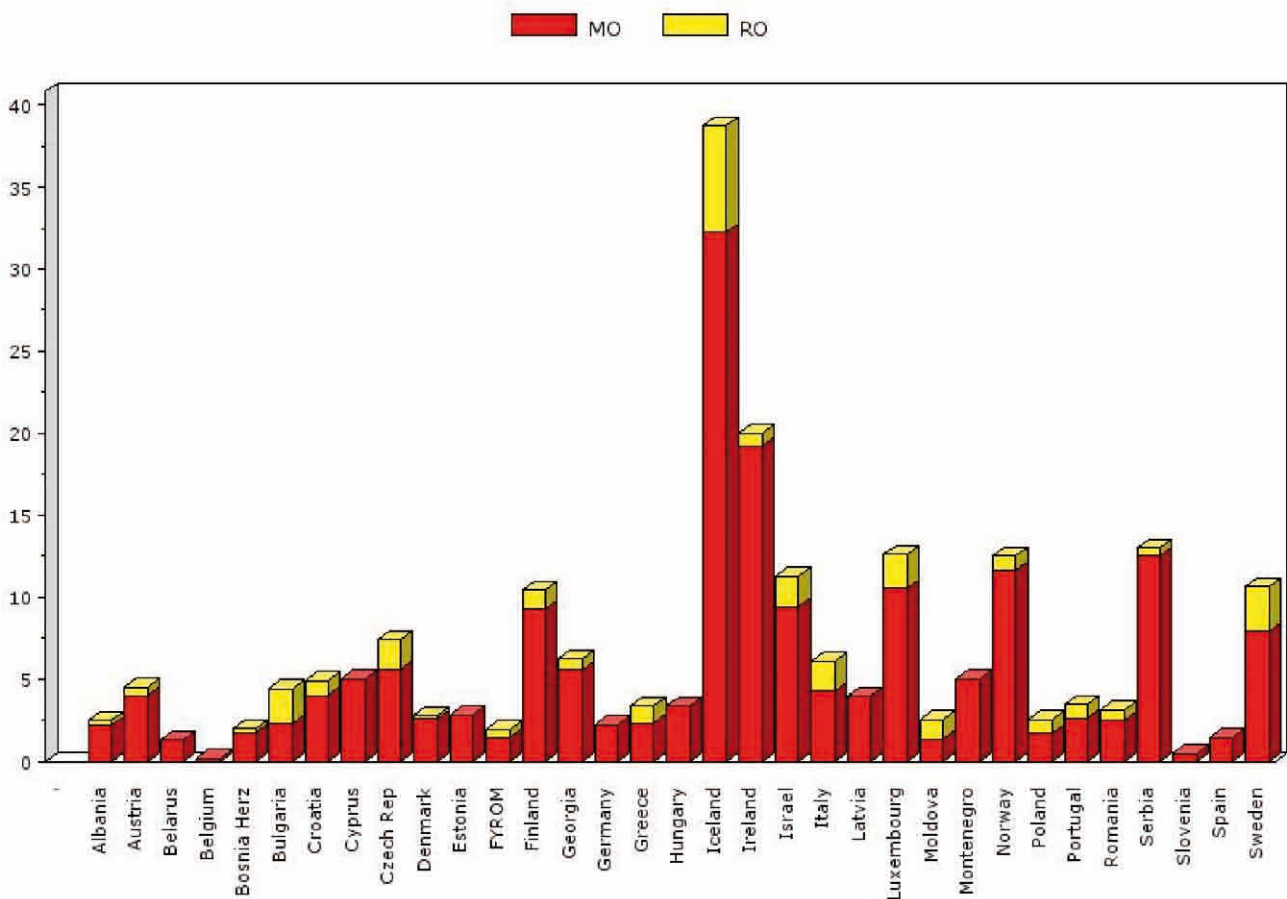


Fig 6.2: Total number of Medical and Radiation Oncology facilities in university hospitals per million inhabitants in each country

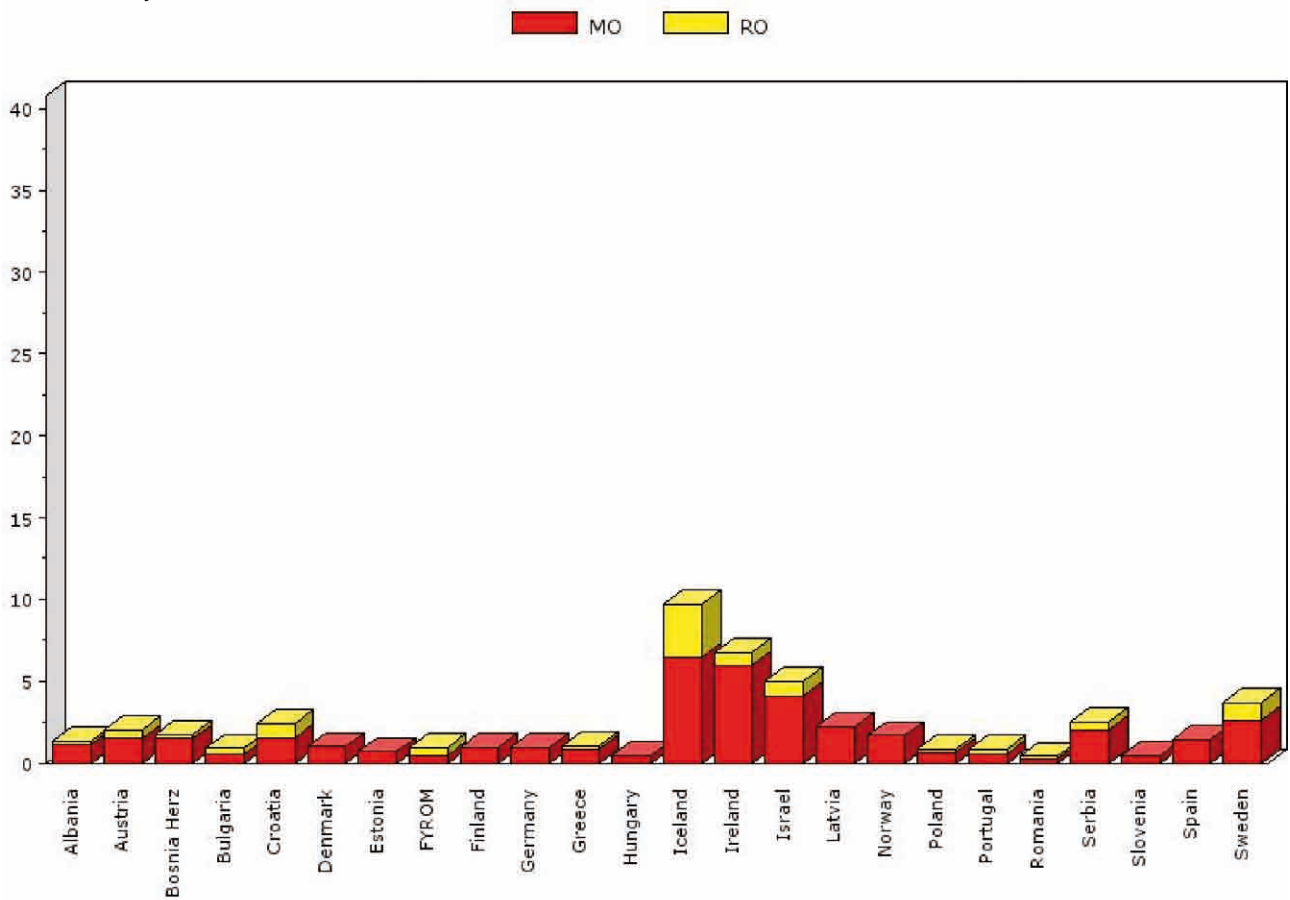


Fig 6.3: Total number of Medical and Radiation Oncology facilities in cancer centers per million inhabitants in each country

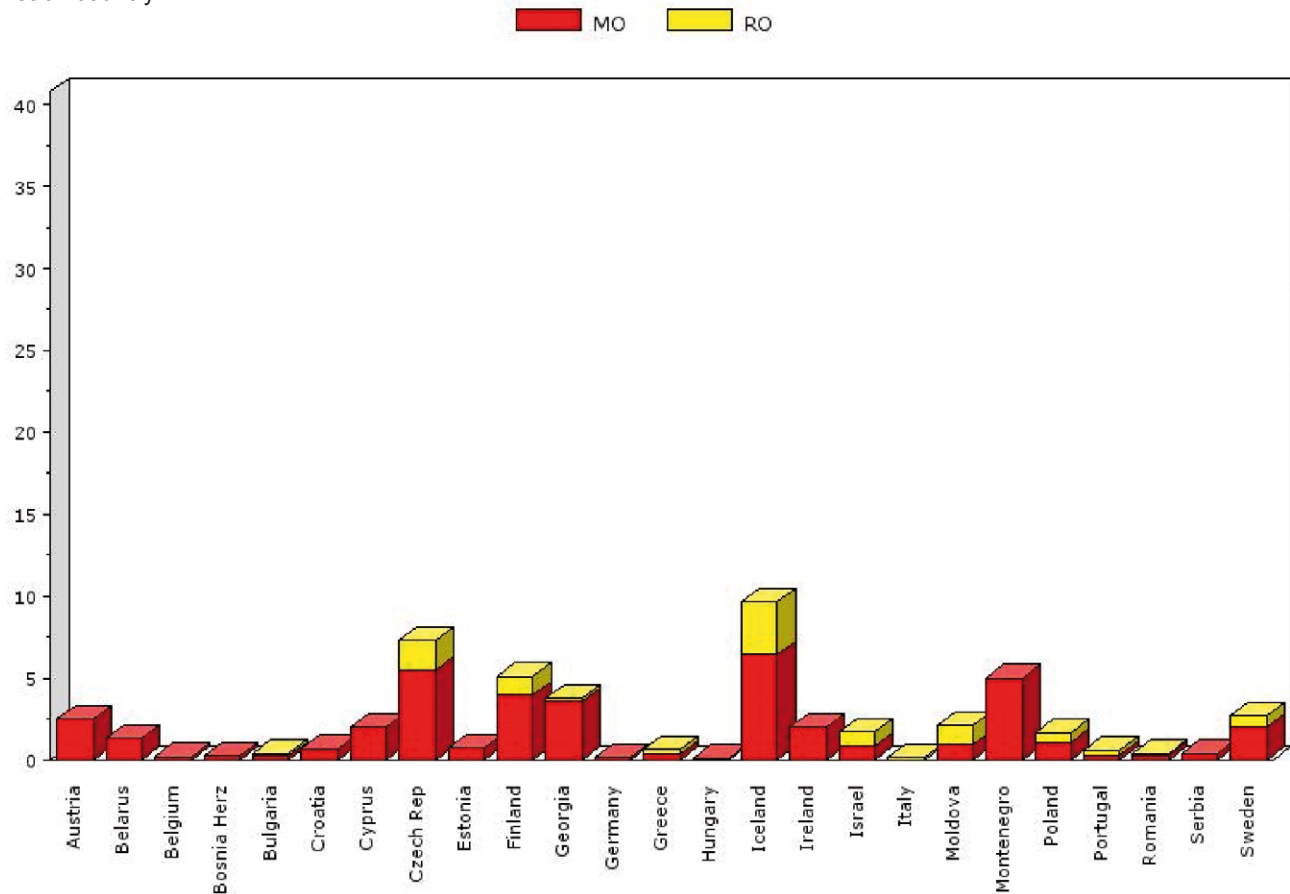


Fig 6.4: Total number of Medical and Radiation Oncology facilities in referral general hospitals per million inhabitants in each country

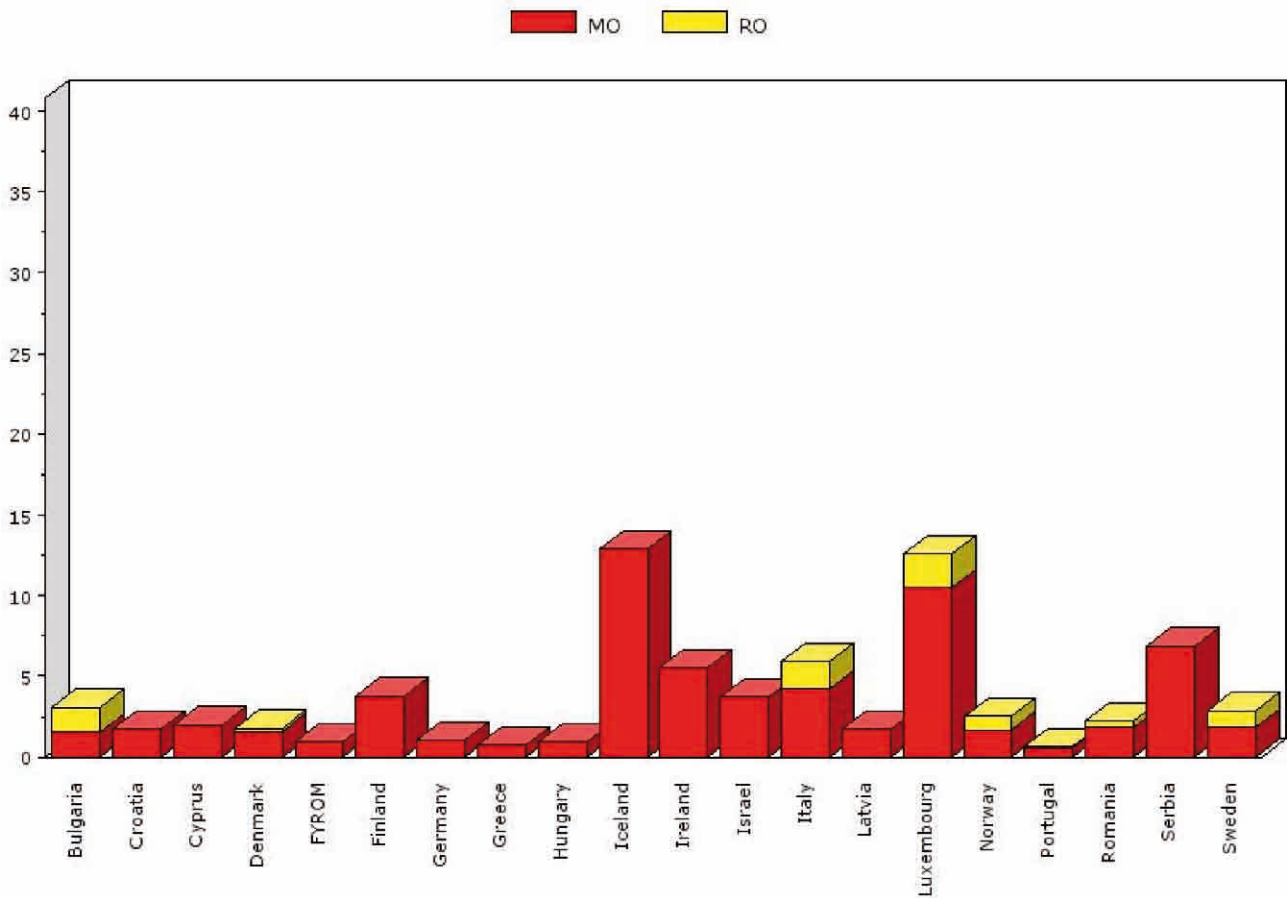
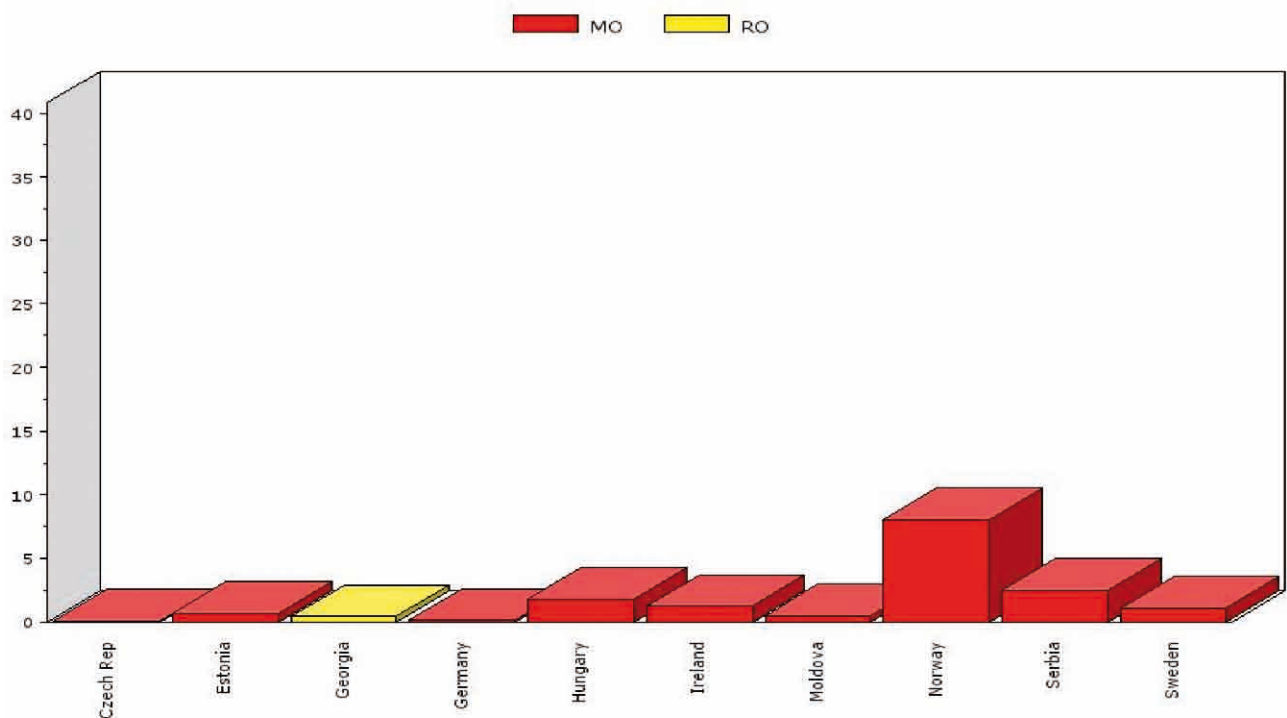


Fig 6.5: Total number of Medical and Radiation Oncology facilities in community hospitals per million inhabitants in each country



SECTION 7 - PATTERN OF CANCER CARE AND MULTIDISCIPLINARY COLLABORATION

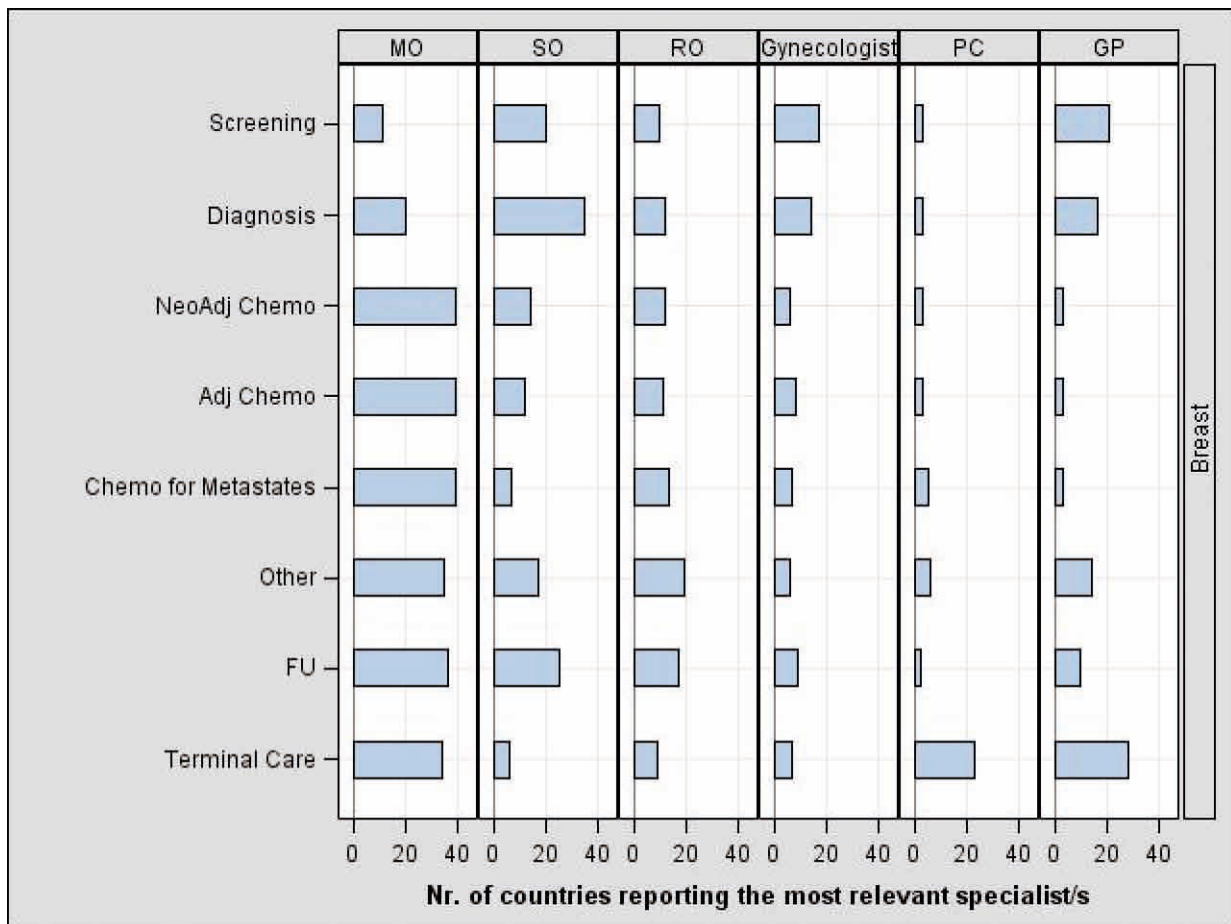
This section summarizes patterns of care and collaboration between different specialties in the screening, diagnosis, administration of chemotherapy and other medical treatments, follow-up and terminal care of cancer patients according to disease stage.

Breast cancer

Survey results show that in the screening of breast cancer primarily participate general practitioners (GPs) and surgical oncologists. In one-third of European countries gynecologists are also involved in screening. Surgical oncologists are the most relevant specialists in establishing the diagnosis of breast cancer. Medical oncologists are mainly responsible for different types of medical treatment in breast cancer patients. After the active treatment, medical oncologists continue with follow-up of the patients, together with surgical oncologists and radiotherapists. In the terminal care of breast cancer patients medical oncologists, GPs and palliative care specialists are mainly involved.

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Figure 7.1. Pattern of cancer care and multidisciplinary collaboration in breast cancer

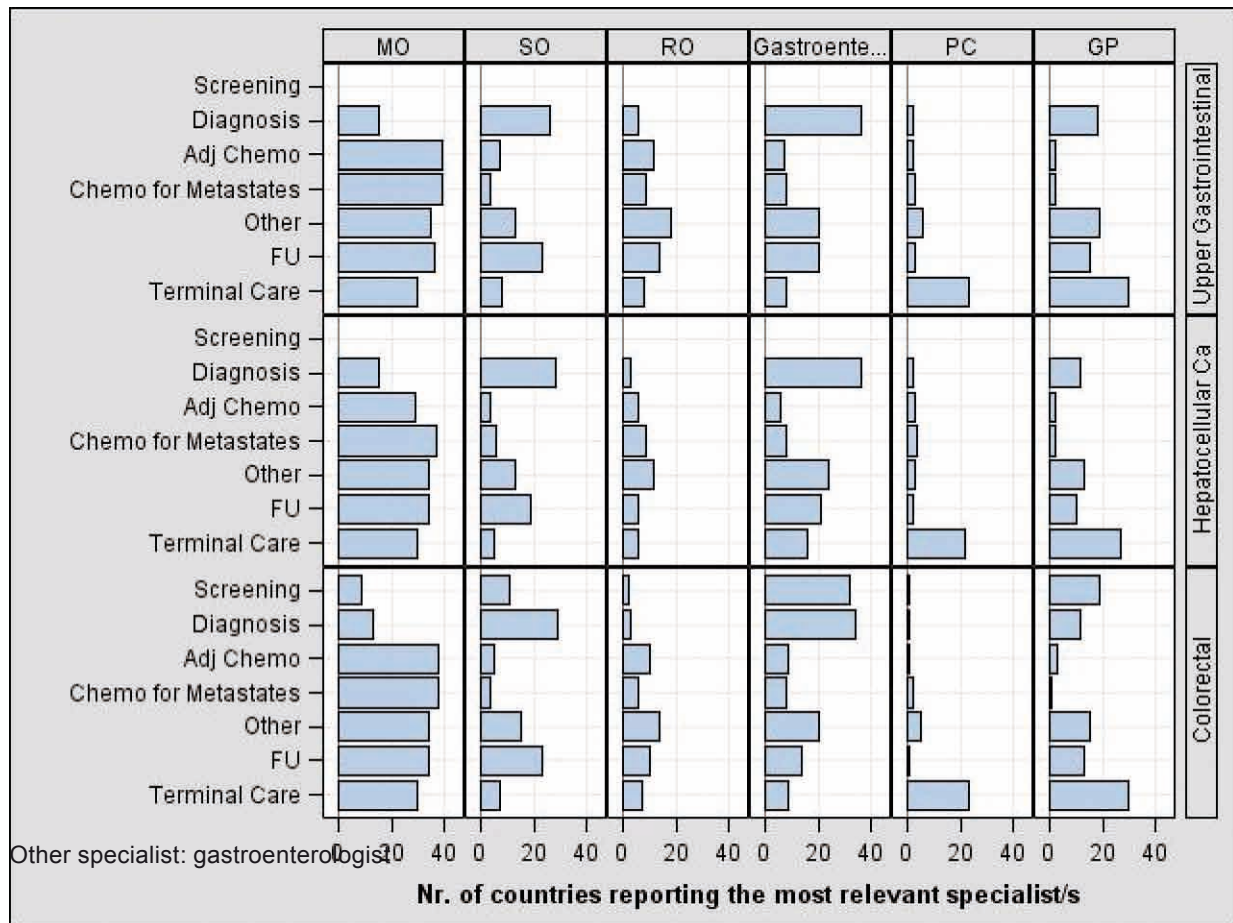


Gastrointestinal malignancies

By looking at the data in the group of gastrointestinal (GI) malignancies, gastroenterologists together with GPs are mainly involved in the screening of colorectal cancer. Gastroenterologists are mainly involved in the diagnosis of all types of GI cancers with significant contribution from surgical oncologists. In some countries, GP's play a role in the diagnosis of upper GI malignancies too. Medical oncologists are key specialists in the administration of chemotherapy in GI malignancies but in some countries (e.g. France, Belgium and Germany) gastroenterologists administer chemothera-

py as well. In upper GI and hepatocellular carcinoma, gastroenterologists are consulted in many countries with other types of medical co-treatments. A similar situation exists for colorectal cancer and radiotherapists and for some forms of upper GI cancers. Medical oncologists are mainly involved in the follow-up of GI cancer patients and to some extent, so are surgical oncologists. In upper GI cancers and hepatocellular carcinoma, patients are followed also by gastroenterologists in almost 1/3 of European countries. Similarly in other types of cancer, Medical Oncologists, GPs and palliative care specialists are involved in terminal care.

Figure 7.2: Pattern of cancer care and multidisciplinary collaboration in gastrointestinal malignancies

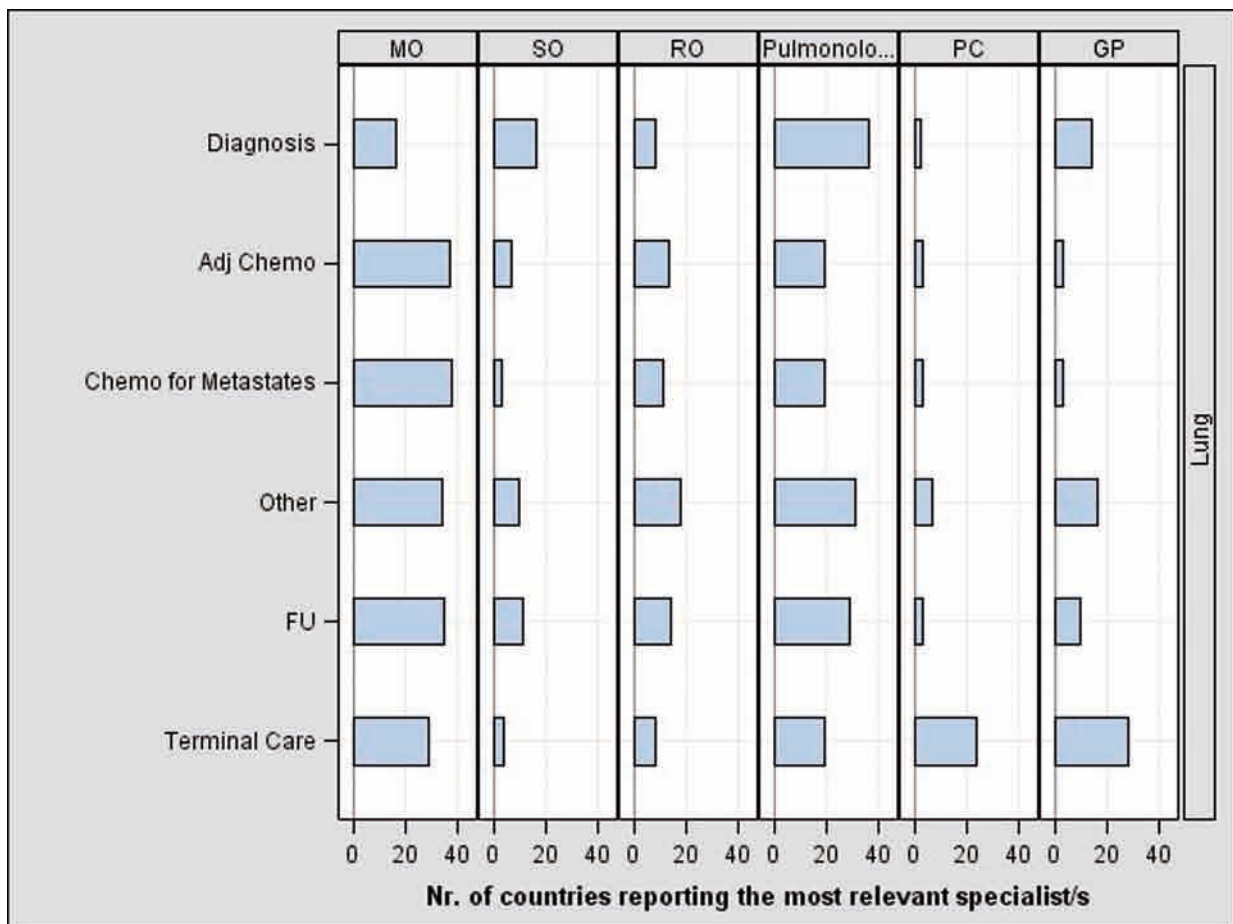


Lung cancer

Pulmonologists are mainly involved in the diagnosis of lung cancer patients. Medical oncologists are the key physicians administering chemotherapy—which is also provided by pulmonologists in one-third of the surveyed countries. In providing other types of medical treatments, Medical oncologists and pulmonologists participate equally but such

types of treatments are also delivered by radiotherapists and GPs. In the follow-up of lung cancer patients, medical oncologists are slightly more represented than organ-based specialists. Lung cancer has many different syndromes and thus, all cancer specialties participate, almost equally, in terminal care.

Figure 7.3: Pattern of cancer care and multidisciplinary collaboration in lung cancer



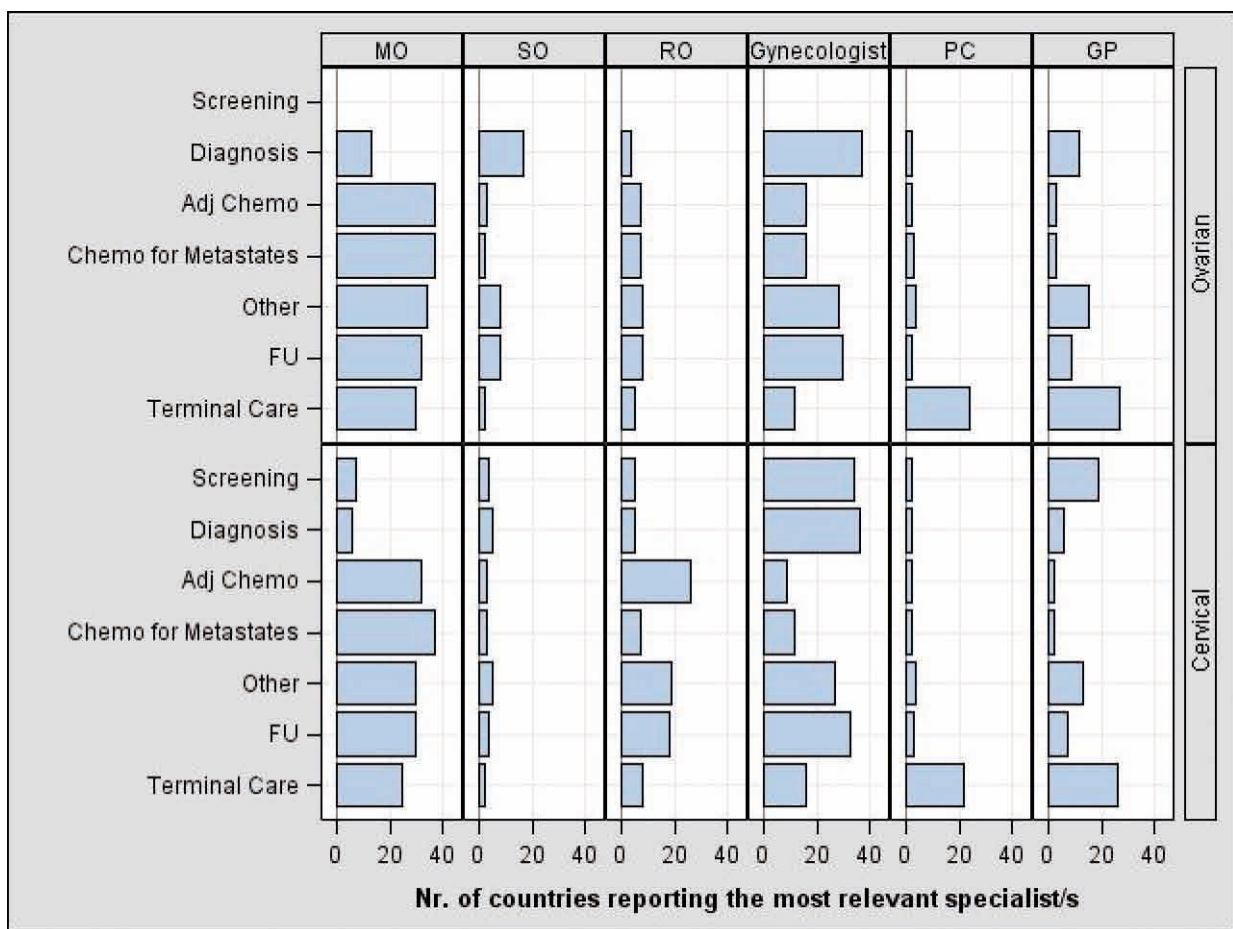
Gynecological malignancies

Gynecologists are mostly involved in the diagnosis of ovarian cancer and chemotherapy is delivered for the most part by Medical Oncologists and in some countries by gynecologists. Both specialists deliver other medical treatments almost to the same extent.

Although gynecologists are mainly involved in the screening of cervical cancer, it seems that the role of GPs is also quite valued in some countries. In applying adjuvant che-

motherapy medical oncologists are the key specialists, followed by radiotherapists, because concomitant application is common practice in this cancer. In metastatic disease medical oncologists are the predominant specialist type in addition to gynecologists. For other medical treatment, survey results showed that radiotherapists are also involved.

Figure 7.4. Pattern of cancer care and multidisciplinary collaboration grouped by type of cancer in gynecological cancers

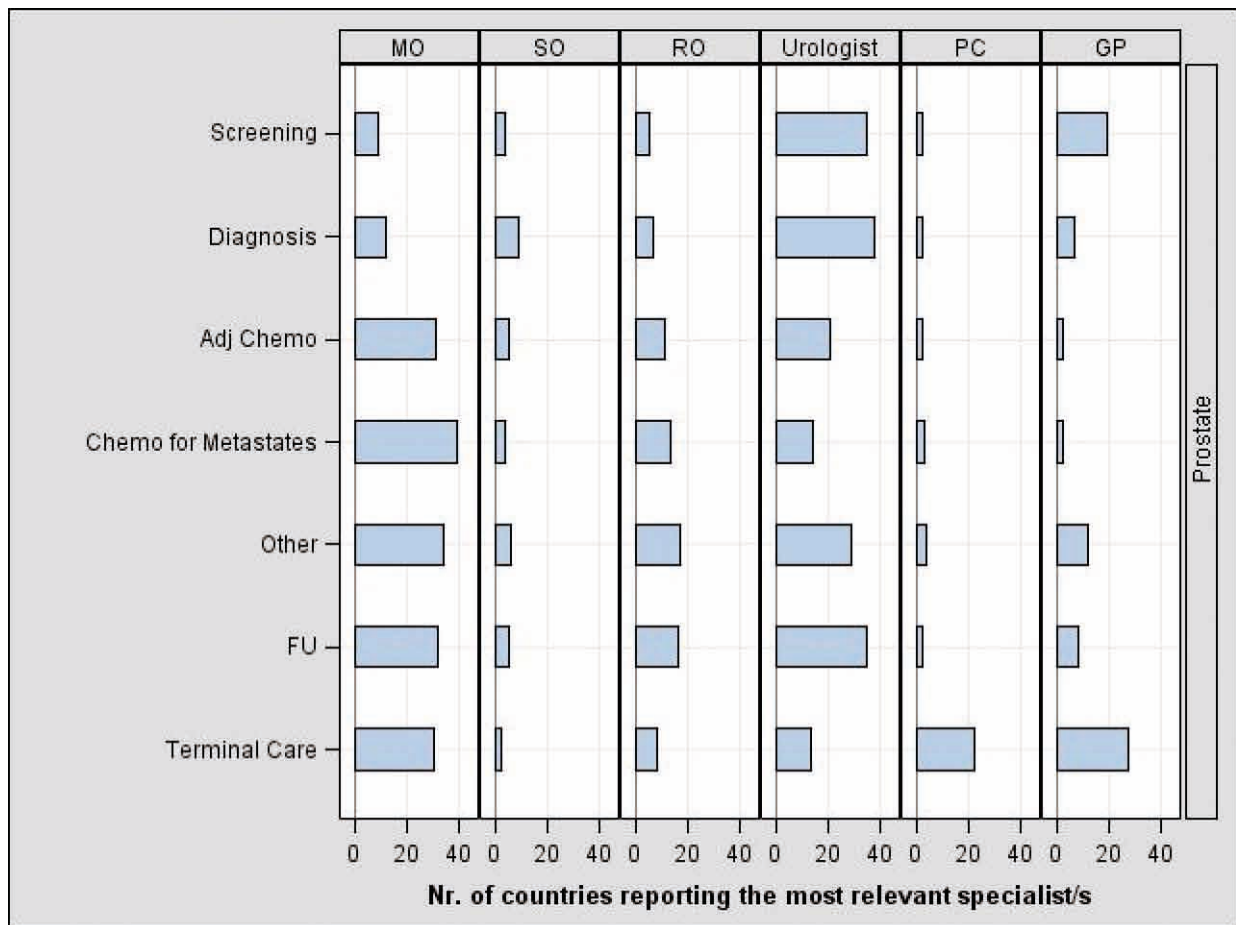


Genitourinary malignancies

Urologists are the key specialists in the screening and diagnosis of prostate cancer. In almost one third of the countries, GPs are also involved in the screening. Chemotherapy is mainly administered by Medical oncologists. Urologists are

involved in the hormonal treatments in half of the countries and radiotherapists to a somewhat lesser degree. Prostate cancer patients are primarily followed by urologists, medical oncologists and in some countries radiotherapists.

Figure 7.5: Pattern of cancer care and multidisciplinary collaboration in prostate tumors



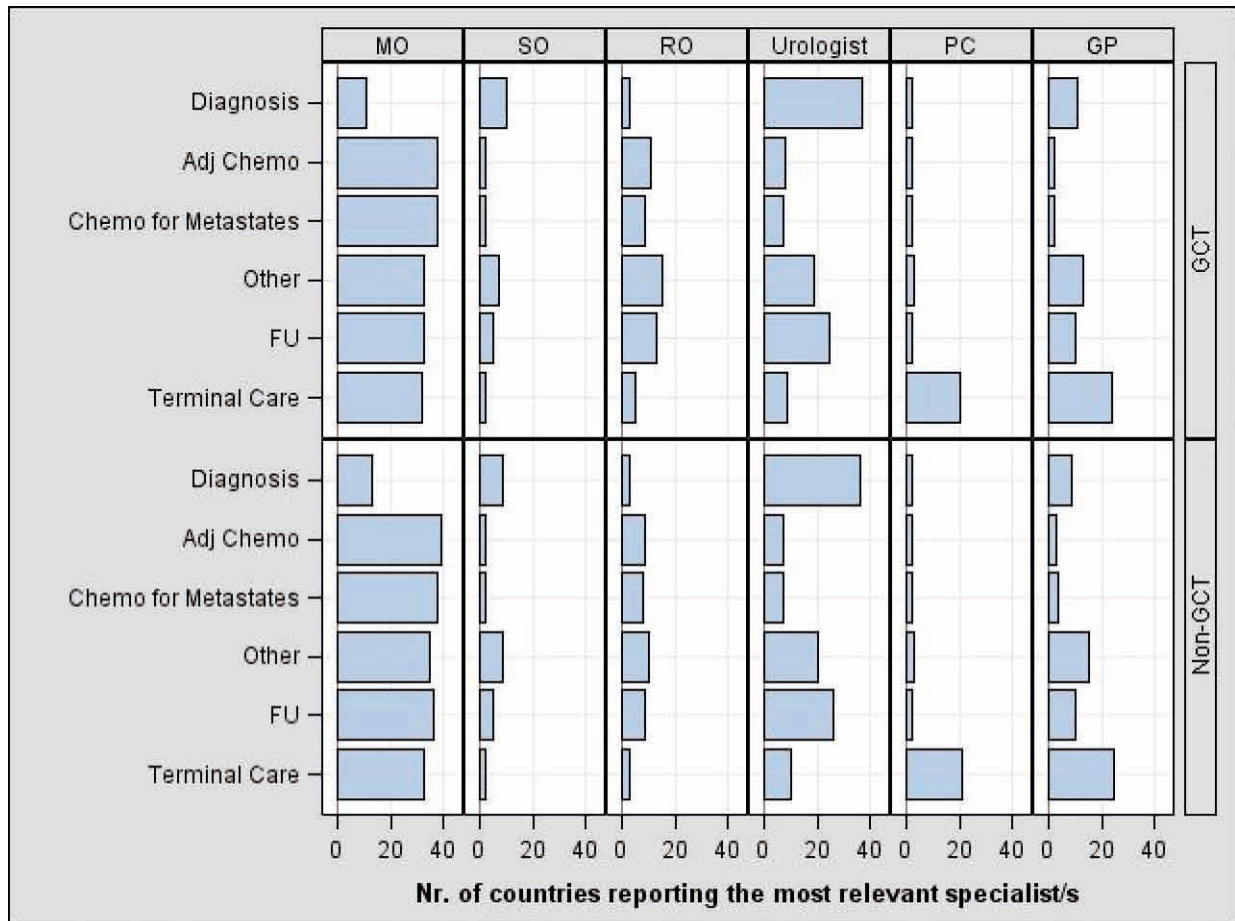
Other = hormonal treatment

The other Genitourinary malignancies

For seminomatous and non-seminomatous germ cell malignancies a very similar situation was seen: urologists are pri-

marily involved in the diagnosis; medical oncologists in the application of chemotherapy and medical oncologists along with urologists in the follow-up of patients.

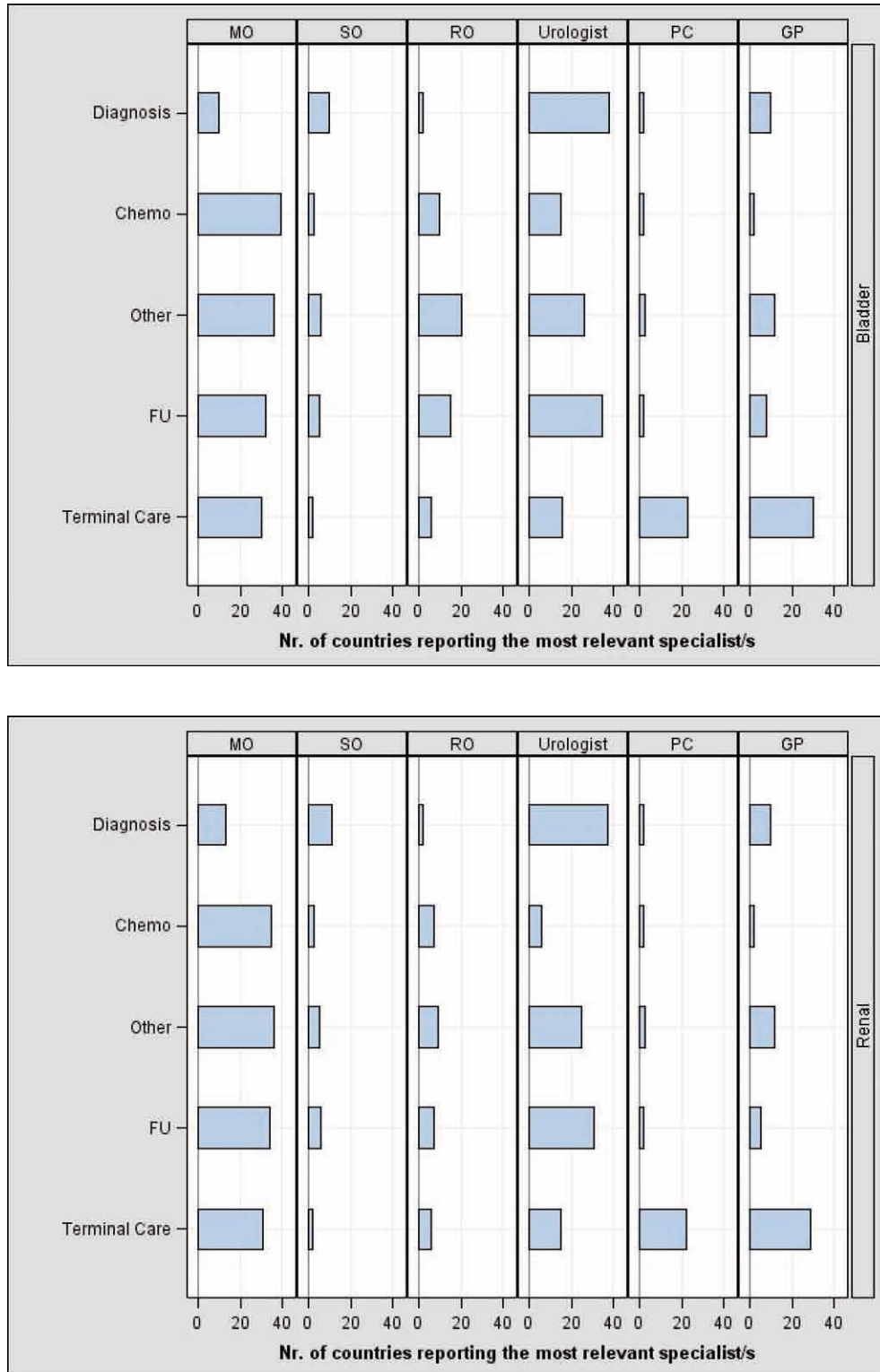
Figure 7.6: Pattern of cancer care and multidisciplinary collaboration grouped by type of cancer in GCT and non-GCT



The analysis of genitourinary malignancies, including bladder and renal cancers, showed a very similar situation with few exceptions. Urologists are mainly involved in the diagnosis. Medical oncologists are key specialists in chemotherapy administration, which is followed in almost one-third of

countries by urologists. Renal cancer is the exception for which medical cancer treatment is provided by urologists in only few countries. Medical oncologists and urologists are involved in the follow-up of patients to the same extent.

Figure 7.7: Pattern of cancer care and multidisciplinary collaboration grouped by type of cancer in bladder and renal cancer

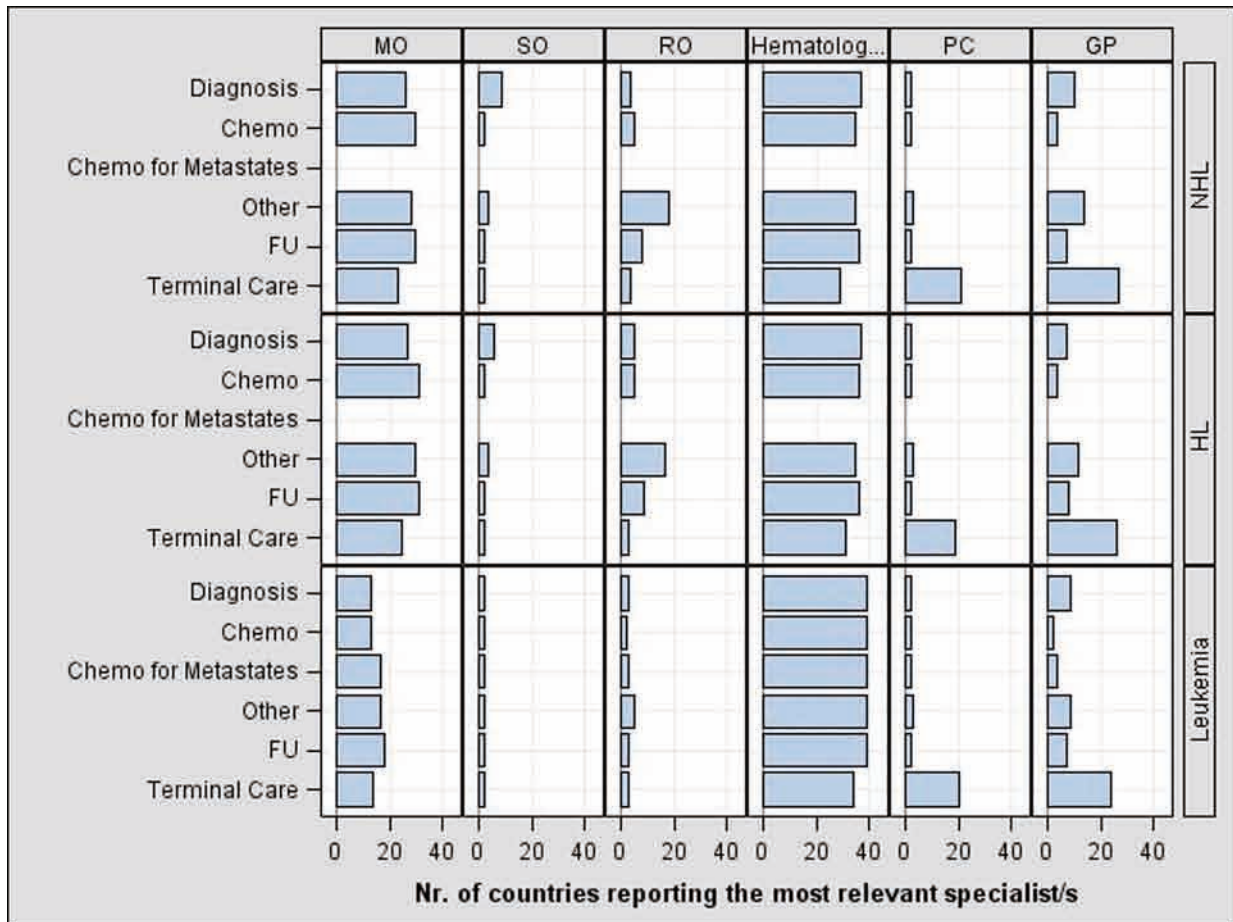


Hematological malignancies

As for hematological malignancies, the report shows a different situation for lymphomas (Hodgkin and non-Hodgkin) and leukemia. Hematologists are predominantly involved in all types of analyzed parameters for lymphomas, but in

half of the European countries medical oncologists are also involved. In the diagnosis and care of leukemia patients, such involvement is primarily reserved to hematologists and to medical oncologists only in few countries.

Figure 7.8: Pattern of cancer care and multidisciplinary collaboration grouped by type of cancer in hematological malignancies



Other specialist: hematologist

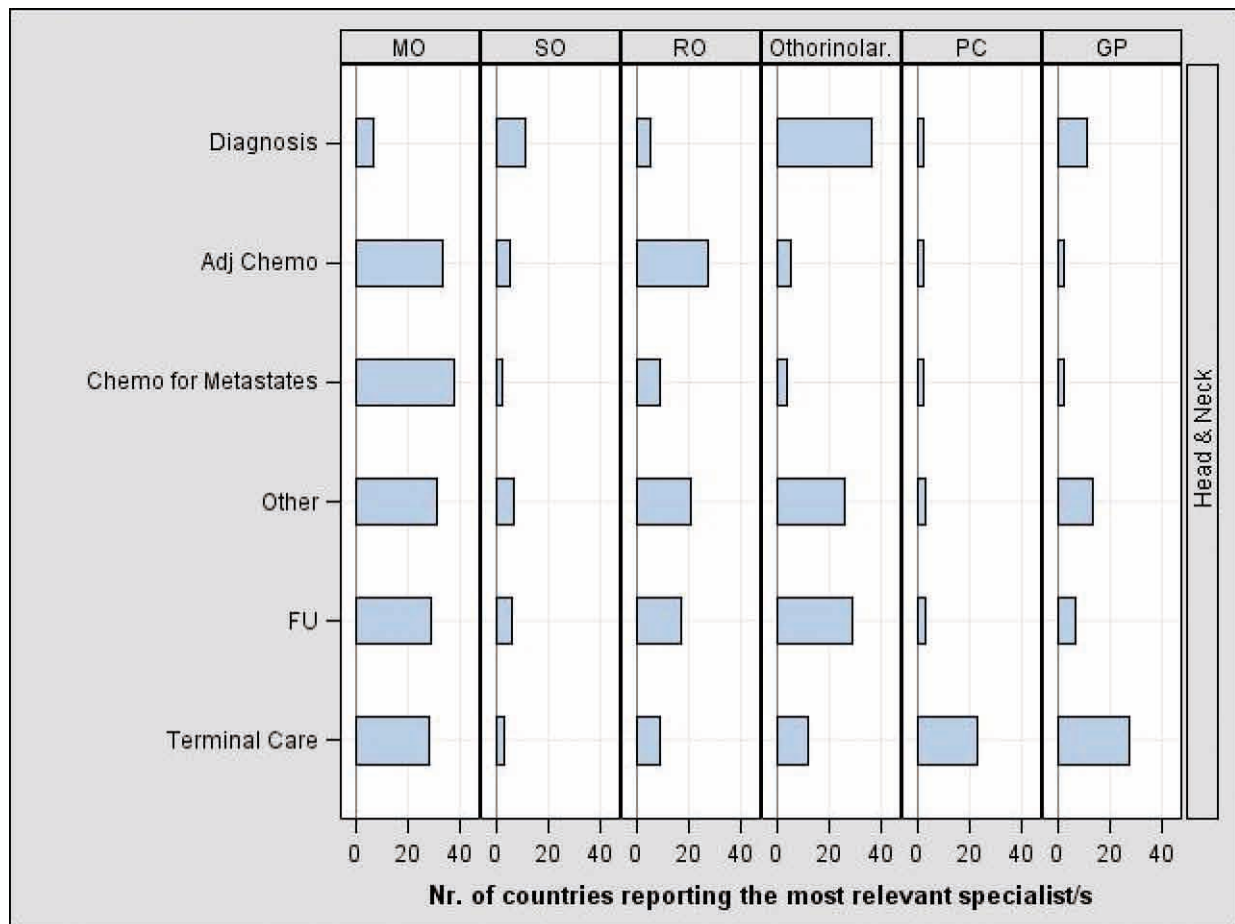
For leukemia chemo is chemo acute disease and chemo for metastasis is chemo chronic disease

Head and neck cancer

Ear, nose and throat specialists are involved in the diagnosis of head and neck cancers. This is the case in some countries for surgical oncologists and GPs. Medical oncologists are key specialists for administration of chemotherapy and

in half of the European countries, adjuvant chemotherapy is administered by radiotherapists. Head and neck cancer patients are followed equally by medical oncologists and ear, nose and throat specialists.

Figure 7.9: Pattern of cancer care and multidisciplinary collaboration in head and neck cancer



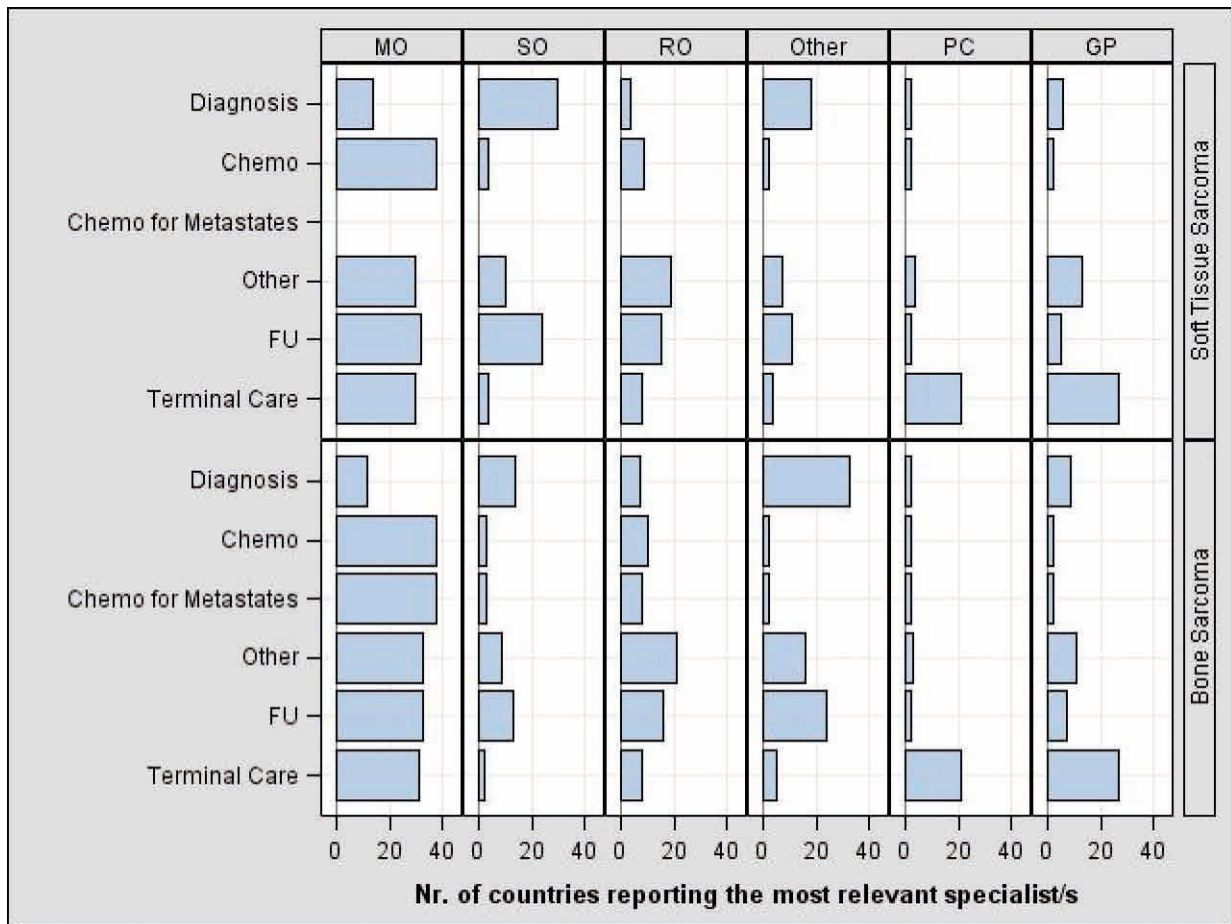
Other specialist: otorhinolaryngologist

Sarcomas

Regarding the administration of chemotherapy for soft tissue and bone sarcomas, the situation is very similar, with a primary role of medical oncologists in the majority of countries. For some other parameters (e.g. diagnosis), there are some differences between those two entities: surgical oncologists play a role in soft tissue, while in bone sarco-

mas orthopedics are mainly involved. Patients with sarcomas can also receive other medical treatments provided by radiotherapists in some countries. Medical oncologists are key specialists in the follow-up of patients, with significant contribution from surgical oncologists for soft tissue and orthopedic surgeons for bone sarcomas.

Figure 7.10: Pattern of cancer care and multidisciplinary collaboration grouped by type of cancer in sarcomas



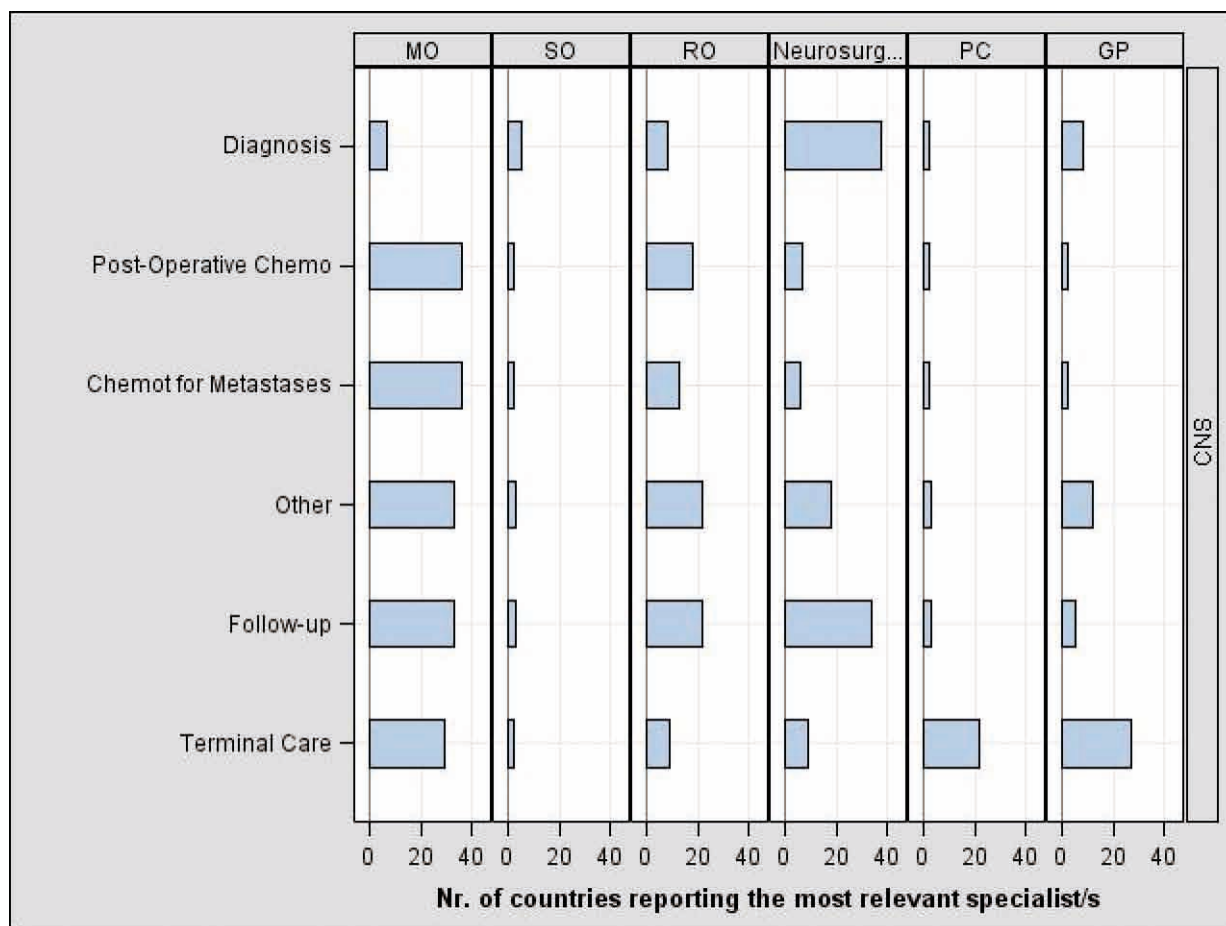
For Soft Tissue Sarcoma SPEC=Other and for Bone Sarcoma SPEC=Orthopedist

Central nervous system (CNS) malignancies

Neuro-surgeons are the primary specialists involved in the diagnosis of central nervous system malignancies. Cytotoxic treatments are mainly delivered by medical oncologists and in one-third of countries by radiotherapists, mainly in the case of adjuvant treatment. Radiotherapists are involved

with medical oncologists and neuro-surgeons in delivering other medical treatment in some countries too. Follow-up is done by neuro-surgeons and medical oncologists in equal proportion. In almost half of the countries, follow-up is performed by radiotherapists.

Figure 7.11. Pattern of cancer care and multidisciplinary collaboration in CNS



Conclusion

In conclusion, all medical specialties are involved with different degrees in various phases of the disease. Surgical oncologists and GP's are mainly involved in the screening and diagnosis; Medical oncologists represent the key specialty profile in the administration of chemotherapy. Additionally in some countries, organ-based specialists play a significant role in chemotherapy administration, mainly for gastrointestinal and lung cancers. To a lesser extent, radiotherapists participate in administering medical treat-

ment, and results consistent with Phase II MOSES Survey showed this is also the case for the prescription of hormonal treatments. All specialties are involved in the follow-up, showing possible overlapping of control examinations. Palliative care specialists contribute in terminal care of cancer patients in countries where separate specialization or subspecialization exists. In countries where that specialty is not recognized, medical oncologists, GPs and organ-based specialists are involved.

Regulations of multidisciplinary board activities

A multidisciplinary board for each of the above tumor types exists in 75.6% of European countries but only in 37.9% the composition of the boards is the same in every Oncology facility, including fixed type of specialties. In almost all countries multidisciplinary boards are exclusively located in Oncology facilities. In only 45.2% of the surveyed countries there is an official policy that regulates their activities. Regarding official recognition of the multidisciplinary board decisions; in almost half of the surveyed countries, patient treatments are subject to such decisions exclusively. For 8 countries, the existence of a waiting list for patients to be directed to the multidisciplinary board meetings was reported, with an average waiting time of less than one month.

In one-third of European countries, a supervising body over different multidisciplinary boards exists. In the majority of countries, specialists participating in the multidisciplinary board meetings consult patient records only and visit patients only in very complex cases.

In half of the countries, initially it is the oncologist that presents the case within the multidisciplinary board. Multidisciplinary boards are flexible in terms of allowing trainees to attend meetings.

In 10 European countries, the public health system reimburses Oncology treatment on the basis of a **second opinion** and in an additional 14 countries this happens sometimes, but not always. In almost all countries such treatment is provided in the country of the patient's citizenship. In 68% of the reported countries, it is possible to obtain such treatment in another country, if such treatment is not available in the country of origin of the patient. Trainees have more restricted access to such second opinion group meetings.

SECTION 8 - PRESCRIPTION AND ADMINISTRATION OF CYTOTOXIC THERAPY

In 37.5% of the surveyed countries, administration of cytotoxic drugs is restricted according to the specialists' profile. Table 8.1 summarizes the degree of involvement of specialists other than medical oncologists in the prescription of chemotherapy and hormonal treatments. From this table, we can see that non-Medical Oncology professionals, if are involved in the administration of cytotoxic treatments, is mainly for hormonal therapies. In 40% of European countries, cancer patients are faced with reimbursement difficul-

ties for the treatment prescribed by specialists other than medical oncologists. In 81,6% of European countries there are local health authority rules and regulations for compensation of prescribed cytotoxic agents and in almost all, legal safety rules exist about handling and administration of cytotoxic drugs. All results in this section are very similar to those obtained in the MOSES II Survey performed 2 years ago.

Table 8.1: Degree of involvement of non-Medical Oncology specialists in the prescription of cytotoxic treatments

Frequency	Chemotherapy		Hormone Therapy	
--Not Specified--	6		6	
Rarely	18	(52.9%)	11	(32.4%)
Frequently	10	(29.4%)	21	(61.8%)
Almost Always	6	(17.7%)	2	(5.8%)

ACKNOWLEDGMENTS

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APPENDIX

Medical Oncology title and training in the Member States

2006 status of MO for EU Member States		
Country	Title	Training
Austria	Haemato and Medical Onkologie (means Medical Oncology)	Basic education: 6 years, Specialization: 8 years, {6 years Internal Medicine + 3 years Hemato-oncology (2 years + 1 included in the 6 years of Internal Medicine)}
Belgium	Medical Oncology established since mid 2006	Basic education: 7 years, Specialization: 6 years, (3 Internal Medicine + 3 years Medical Oncology)
Cyprus	Pathologic Oncology (means Medical Oncology)	Basic education: 6 years, Specialization: 6 years, (3 Internal Medicine + 3 years Medical Oncology)
Czech Republic	Clinical Oncology (means Medical Oncology)	Basic education: 6 years, Specialization: 5 years
Denmark	Clinical Onkology (means combination of Medical Oncology and radiotherapy)	Basic education: 6,5 years. Specialization: 1,5 years (6 months surgery, 6 months Internal Medicine, 6 months general practice) + 6 years (1 year introduction to clinical oncology, followed by 5 years of main education of which 2 years MO at referral center and 3 years at a highly specialized center with both medical oncology and radiotherapy)
Estonia	Oncology combination: MO & RO	Basic education: 6 years, Specialization: 4 years
Finland	Combination: MO & RO, Syöpätaudit Ja Sädehoito	Basic education: 6 years, Specialization: 5 years
France	Oncologie Medicale (means Medical Oncology)	Basic education: 6 years medical school, Specialization: 5 years + 1 optional year for research
Germany	1. Haemato-Onkologie 2. Gastroentero-oncology or 3. Pneumo-oncology	1. Basic education: 6 years, Specialization: 3 years Internal Medicine + 3 years Medical Oncology. 2. Specialization: 3 years Internal Medicine + 3 years Gastroentero including 1 year Medical Oncology. 3. Specialization: 3 years Internal Medicine + 3 years Pneumo including 1 year Medical Oncology
Greece	Medical Oncology	Basic education: 6 years, Specialization: 6 years, (2,5 years Internal Medicine + 6 months Hemato + 3 years Medical Oncology)
Hungary	Medical Oncology	Basic education: Any post-graduate base disciplines + (e.g. Internal Medicine, Neurology, Gynecology, etc.), Specialization: Same as above + 2 more years of Medical Oncology
Ireland	Medical Oncology	Basic education: 5 years, Internal Medicine – 3 year minimum, Specialization: 4 years (after general professional training)
Italy	Oncologia (means Medical Oncology)	Basic education: 6 years, Specialization: 5 years (as of 2007)
Latvia	Internal Medicine	Basic education and Specialization: depends on where student received education
Lithuania	Onkologija Chemoterapija (means Medical Oncology)	Basic education: 6 years, primary internship 1 year, Specialization: 4 years, (2 years Internal Medicine + 2 years Medical Oncology)
Luxembourg	Internal Medicine	Basic education and Specialization: depends on where student received education

2006 status of MO for EU Member States		
Malta	not available	not available
Poland	Since 1985 MO = Chemotherapy of cancer. Since 2003 Clinical Oncology is an independent specialty (means Medical Oncology)	Basic education: 5 years + 1 year pre-registration, Specialization: 5 years, (2 years Internal Medicine + 3 years Medical Oncology)
Portugal	Oncologia Medica (means Medical Oncology)	Basic education: 6 years, Specialization: 5 years
Slovakia	Clinical Oncology (means Medical Oncology)	Basic education: 6 years, Specialization: 5 years, (2 years Internal Medicine + 3 years Medical Oncology)
Slovenia	Medical Oncology	Basic education: 6 years, Specialization: 6 years (2 years Internal Medicine + 4 years Medical Oncology)
Spain	Oncologia Medica (means Medical Oncology)	Basic education: 6 years, Specialization: 4 years
Sweden	Onkologi (combination of RT & MO)	Basic education: 5,5 years medical school + 21-month internship, Specialization: + 5 year residency in Oncology
The Netherlands	Medische Oncologie (Internist with Medical Oncologist: subspecialty of Internal Medicine)	Basic education: 6 years, Specialization: 6 years, (4 years Internal Medicine + 2 years Oncology)
United Kingdom	Medical Oncology	Basic education: 5 years medical school + 1 year as pre-registration hospital doctor, Specialization: + 3 years Internal Medicine + 4 years medical oncology
<i>The information above reflects the situation as of 31/12/2006</i>		

Status of MO for European countries that were not EU Member States as of 31/12/2006		
Country	Recognition of MO	Title
Bosnia-Herzegovina	Yes	
Bulgaria	Yes	Medical Oncology from 2007
Croatia	Yes	
Georgia	Yes	
Iceland	Subspecialty under Internal Medicine since 1978	
Macedonia	No	
Moldova	1. Hematology and 2).Oncology (subspecialties: chemotherapy, radiotherapy, oncological surgery)	
Montenegro	No, only subspecialty in General Oncology	
Norway	No	Internist with MO: subspecialty of Internal Medicine
Romania	Yes, since 1997	Internal Medicine (2006 decision to merge MO with Internal Medicine)
Russian Federation	No	
Serbia	No, only subspecialty in General Oncology	
Switzerland	Yes, since 1996	
Turkey	Subspecialty under Internal Medicine since 1984	
Ukraine	No, the term Oncology is used	

2006 status of MO for non-European countries	
Country	Recognition of MO
Algeria	Yes, since 1993
Argentina	Yes, since 1980, but the term Clinical Oncology is used
China	Yes, since 1959
Egypt	Yes, since 1995
India	Yes, separate subspecialty under Oncology
Israel	Oncology (Medical Oncology and Radiation Therapy under one specialty)
Japan	Yes
USA	Yes, for the past 30 years