



Deliverable 7:

Report identifying European tumour boards of ECTGs providing ICT logistics



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ExPO-r-Net WP5 Deliverable 7:

Report identifying European tumour boards of ECTGs providing ICT logistics

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Introduction

Multidisciplinary care is the hallmark of high-quality cancer management. This statement has been widely supported over the last decades where individual opinions have been displaced by collective and multidisciplinary decisions in the approach of the patient with oncologic diseases.

Paediatric Oncology has been growing exponentially on the last years and cancer is nowadays the first cause of non-accidental death. Clinical trials that aim directly to children with cancer are now developing exponentially and Paediatric tumor boards are developing according to this increasing demand.

A paediatric tumor board comprises a multidisciplinary team (MDT) of experts including paediatric oncologists, radiologists, surgeons, radiotherapists, pathologists and other disciplines that discuss clinical cases where the diagnosis and treatment plan is complex. The clinical management of a patient following a discussion at a tumor board takes into account the opinion of several experts participating in a particular kind of meeting. Tumor boards are standard practice in specialist pediatric oncology centres and are part of the normal decision making process for treatment of children with cancer.

ExPO-r-Net (European Expert Paediatric Oncology Reference Network of Diagnosis and Treatment) is a project funded by CHAFAEA (Consumers, Health, Agriculture and Food Executive Agency) of the European Union that aims to build a Pediatric Oncology European Reference Network. This network aims to facilitate for "Cross-border healthcare" to allow children and young people with cancer access to expertise and specialist healthcare in a Member State other than the Member State of affiliation. The mission of ExPO-r-Net is to reduce current inequalities in childhood cancer survival and healthcare capabilities in different EU Member States by building a European Reference Network for Paediatric Oncology.

European Reference Networks (ERNs) are a feature of the EU Directive on Cross-Border Healthcare aiming to unite the best specialists from across Europe to tackle complex or rare medical conditions that require highly specialised healthcare and a concentration of knowledge and resources.

One of the missions in this project is the creation of virtual tumor boards. A virtual tumor board is a special type of multidisciplinary meeting based on IT videoconference systems that can involve experts from different specialist centres throughout Europe. The tumor board meetings are 'virtual' because they are held via videoconference systems, allowing regular meetings and discussions between experts in different countries without needing to travel for a face to face meeting. The virtual tumor board can therefore convene rapidly to discuss urgent cases as soon as possible and can be held on a more regular basis as there is no need for physicians to displace from the institutions for the meetings.

In order to create a tumor board network one of the deliverables in WP5 is to identify European tumor boards of European Clinical Trial Groups that already exist, investigate which kind of ICT logistics are available in the different countries and explore the differences between European regions. Under the ExPO-r-Net project, the actual picture of multidisciplinary pediatric tumor boards in Europe has been studied in depth.

Methods

A standard survey with twenty questions regarding several features of MDT practice in paediatric oncology in Europe was designed in Hospital Universitari i Politècnic La Fe (Valencia). Data collected included information of the centres, number of treated patients per year, infrastructure for meetings, MDT organization/logistics clinical decision-making, information exchange and ICT logistics. The majority of the requests were multiple choice but some open questions with allowed free text explanation were also included. The questionnaire went through an internal review and finally an external review was made by the University of Birmingham (UK) as quality assessment work package in the project.

After acceptance, the survey was distributed by email using google docs application to the national leaders of the established European National Paediatric Haematology and Oncology Societies (NaPHOS). The contacts were provided by the SIOPE national registry. Participants were sent an introductory email asking for information about the treatment of pediatric oncology in the country (number of centres and number of patients treated per centre) and if participation was accepted a second email with an invitation link to fill out an electronic survey via freely available software was forwarded. Surveys were completed online between July 2015 and March 2016. A simplified version of this questionnaire is presented in this report (Annex 1).

Up to four reminder email were sent to the non-responder countries. See below the dates this work was done:

- Date designed: 27/04/15
- Internal review: 04/05/15
- External review: 03/07/15
- Date sent: 08/07/15
- 1^o reminder: 21/08/15
- 2^o reminder: 23/09/15
- 3^o reminder: 13/10/15
- Last reminder: 09/02/16

Results

1. The countries

The following 30 countries in Europe were included in the study: Austria, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Macedonia, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, and United Kingdom.

2. Total responses

A total of 23 NaPHOs responded to the information required (77%) and distributed the questionnaire to the centres in the country. No response was obtained from the following countries: Germany, Austria, Bulgaria, Denmark, Finland, Norway and Bosnia-Herzegovina.

In the 23 countries that answered there is a total of 212 institutions that treat childhood cancer. We received answered questionnaires from 121 centres (57% of the total amount).

On Table 1 (below), you can see the total number of countries ordered by population, the number of centres in each and the number of answers received with the total percentage response.

TABLE 1

COUNTRY	Population*	Response NAPHOS (centers/country)	Response centers (questionnaire)	Total responses/country
GERMANY	81,174,000	58	No responses	0%
UK + IRELAND	69,393,000	21	12	57%
FRANCE	66,352,469	30	15	50%
ITALY	60,795,612	33	3	9%
SPAIN	46,439,864	43	32	74%
POLAND	38,005,614	No response	No responses	0%
ROMANIA	19,861,408	5	4	80%
NETHERLANDS	16,900,726	7	3	43%
BELGIUM	11,258,434	5	3	60%
GREECE	10,812,467	8	8	100%
CZECH REPUBLIC	10,538,275	2	1	50%
PORTUGAL	10,374,822	4	2	50%
HUNGARY	9,849,000	7	1	14%
SWEDEN	9,747,355	6	5	83%
AUSTRIA	8,584,926	5	No responses	0%
SWITZERLAND	8,236,573	5	2	40%
BULGARIA	7,202,198	No response	No responses	0%
SERBIA	7,111,973	5	5	100%
DENMARK	5,659,715	4	No responses	0%
FINLAND	5,471,753	No response	No responses	0%
SLOVAKIA	5,421,349	3	3	100%
NORWAY	5,165,802	No response	No responses	0%
CROATIA	4,225,316	4	2	50%
BOSNIA-HERZ	3,825,334	No response	No responses	0%
LITUANIA	2,921,262	2	1	50%
SLOVENIA	2,062,874	1	1	100%
MACEDONIA	2,022,547	1	1	100%
LATVIA	1,986,096	1	1	100%
ESTONIA	1,313,271	1	1	100%

3. Existence of MTB and number of patients

The first direct question of the survey appointed to the existence of a tumor board in the institution. 110 of the 121 centres (91% of the respondents) have regular multidisciplinary meeting while 11 centres (9%) do not practice them. Most of the centres that don't normally have this practice are smaller centres that treat < 25 new cases per year.

According to the number of new patients treated per year, of the responding centres, 39% treat > 75 cases per year, 23% between 50-75 cases per year, 23% between 25 and 50 patients per year, 10% between 15 and 25 cases per year and finally 5,5% less than 15 patients per year. This data suggests that the results reflect the reality of the bigger institutions that treat more number of patients each year.

4. Meeting organization

The frequency of the meetings was also studied. Weekly boards are held on 43% of the centres, biweekly meetings on 23%, monthly on the 21% and other frequency on 14% of the centres. Regarding the length of the tumour board, on 43% of the respondents the total duration is less than 60 minutes, on 46% between 60 and 120 minutes, on 9%

between 120 and 180 minutes and on 4% of the centres the duration is more than 180 minutes.

Another issue is the number of particular cases discussed at each meeting. Only 1-2 cases are discussed per meeting on 17% of the responding centres, 3-4 cases on 30%, 5-6 cases in 18%, 7-9 cases in 10%, 10-11 cases in 16% and more than 12 patients on 9% of the centres.

5. Infrastructure for meetings

Standard operational procedures are available on 44% and don't exist on 56% of the institutions. MTB reports are produced on paper format on 45% of the cases, electronic format on 43% and they are not available on 13%.

A specific room to hold the meetings was another important fact that has been surveyed. 66% of the centres have a specific room for this purpose while 34% of the cases don't. 80% have a valid projector to visualize images by all the assistants. Access to PACS (Picture Archiving and Communication System) is feasible in 68% of the evaluated centres and not available in 32%. Finally, access to the clinical records from the same room is accessible in 77% and not accessible on 23% of the centres.

6. Clinical decision making

Specific questions on how the decision making is achieved has been addressed. A discussion is specially fruitful if all the specialists involved in the patients' care are present. However, in 55% of the centres the discussion happens without all the specialists involved while in 45% of them the patient is not discussed unless all disciplines are represented by one physician.

As expected in the vast majority of the cases (93%) patients are informed that their particular case is going to be discussed in a multidisciplinary forum while this doesn't happen in 7% of the centres involved in the survey. Recommendations or action points decided at the MTB are mandatory in 49% of the institutions and optional in 43% of the centres. Finally, if final recommendations of the MTB are not followed by the individual physician patients are informed in 82% of the cases according to the questionnaire.

7. Information exchange

Some of the questions were aimed to learn about how MTB were carried out with the participation of members from different institutions. Physical movement of physicians occurs in 51% of the cases. On the other hand, this is resolved by means of videoconference in 18% and by teleconference in 4% of the centres. Finally in 19% of them, specialists in other institutions never participate on the meetings.

Second consultations are made on a national basis on 62% of the centres and they are made internationally in 64%. We must address that some institutions are unique in smaller countries so the possibility of a national consultation is not possible.

8. Virtual / ICT logistics

Videoconferencing and ICT facilities were one of the main concerns in the project. Centres were asked if videoconferencing facilities are available in H. 323 videoconference system or in web based videoconference system (skype, adobe connect, etc) or if no facilities are available. 51% of the centres don't have any kind of access to videoconference, 28% have access based on web videoconferencing systems and only 20% have H. 323 Videoconferencing systems.

Electronic data exchange is done in 57% of the institutions and in 77% of them this happens prior the MTB so every part can prepare the cases. 43% of the centres do not exchange electronic data and 33% of them think that this is really necessary.

Finally we addressed specifically in the number of centres that already participate in virtual tumour boards. This is the main issue regarded in order to set up european tumour boards. Surprisingly, only 14% of the centres participate in virtual meetings. The vast majority of Europe (86%) don't usually carry out this type of boards.

9. Data comparative analysis

Comparative analysis was done taking into consideration 108 responses from 21 countries. We excluded the centers that don't have multidisciplinary boards (11 answers) and the countries where less than 40% of the centers answered (Poland and Hungary). For comparative analysis, the respondents were grouped in Europe into four geographical regions: Northern, Central, Southern and Eastern. This division was done according to the EURO CARE paper: *De Angelis, Roberta et al. Cancer survival in Europe 1999–2007 by country and age: results of EURO CARE-5—a population-based study. The Lancet Oncology , Volume 15 , Issue 1 , 23 - 34.*

Statistical significance among regions was assessed by multinomial logistic regression and $p < 0.05$ was considered as statistically significant.

On the following graphs we show the items where statistically significative differences where observed:

1) Existence of standard operational procedures.

	NORTH	CENTRAL	SOUTH	EAST
YES	67%	71%	29%	36%
NO	33%	29%	71%	64%

East and South countries have less number of SOPs as compared with North and Central countries ($p=0.002$)
 2) Frequency of the meetings There are statistically significant differences in the frequency of MTB ($p=.003$)
 3) Specific room for MTB

Statistically significant differences in the existence of a specific room for MTB ($p=0.001$)

4) Projector in the MTB room:

	NORTH	CENTRAL	SOUTH	EAST
WEEKLY	75%	65%	25%	36%
BIWEEKLY	19%	26%	22%	21%
MONTHLY	6%	4%	33%	21%
OTHER	0%	4%	20%	21%

Statistically significant differences in the existence of a projector in the MTB room ($p=0.001$)

	NORTH	CENTRAL	SOUTH	EAST
YES	81%	96%	60%	36%
NO	18%	4%	40%	64%

5) PACS (Picture Archiving and Communication System)
 Statistically significant differences in PACS availability ($p=0.000$)

	NORTH	CENTRAL	SOUTH	EAST
YES	94%	91%	74%	43%
NO	6%	9%	26%	57%

6) Access to clinical records in the MTB room Statistically significant differences access to clinical records from the same MTB room ($p=0.002$)

	NORTH	CENTRAL	SOUTH	EAST
YES	75%	87%	71%	21%
NO	25%	13%	29%	79%

7) Videoconferencing facilities

Statistically significant differences in videoconferencing facilities ($p=0.000$)

	NORTH	CENTRAL	SOUTH	EAST
YES	94%	100%	76%	50%
NO	6%	0%	24%	50%

8) MTB report

Statistically significant differences in MTB report ($p=0.000$)

9) National second consultations

	NORTH	CENTRAL	SOUTH	EAST
Yes, H. 323 Video conference	56%	39%	7%	0%
Yes, web based	13%	48%	26%	21%
No	31%	13%	67%	79%

	NORTH	CENTRAL	SOUTH	EAST
Yes, electronic format	69%	74%	33%	7%
Yes, paper format	31%	22%	46%	86%
No	0%	4%	22%	7%

Statistically significant differences in making national second consultations ($p=0.00$)

10) Virtual tumour boards

Statistically significant differences in the existence of virtual tumour boards ($p=0.000$)

	NORTH	CENTRAL	SOUTH	EAST
YES	94%	91%	46%	36%
NO	0%	9%	53%	57%
One center	6%	0%	2%	7%

10. European tumor boards providing ICT logistics

As we have learned from the questionnaire results, very few centres are equipped with ICT logistics and normally practice virtual tumour boards. Pioneer centers in this issue have been identified and details of their practice have been outlined in the free text answers of the surveys. Furthermore, in WP5 visits to these institutions have been

	NORTH	CENTRAL	SOUTH	EAST
YES	44%	30%	4%	0%
NO	56%	70%	96%	100%

organized to learn about the structure and detailed functioning of already existing virtual tumour boards

10.1 FRANCE - CANPEDIF

In France, a virtual tumour board network centralized at Institut Gustave Roussy exists since 2012. The name of the network is CanPedif (Cancer Pediatrie Ile de France) and it is coordinated by Miguel Maiz at Gustave Roussy. A visit to the centre was performed by members of WP5 to explore the functioning of the board and we had the opportunity to participate in one of the boards.

In CanPedif several hospitals are connected and regularly celebrate virtual meetings. The four main centres that share the information are: Institut Gustave Roussy, Institut Curie, Trousseau and Debre but other institutions participate frequently

There are 7 different types of tumour boards that address the following topics:

- Bone tumours
- Central nervous system tumours
- Leukaemias
- Lymphomas
- Abdominal tumours (neuroblastoma, Wilms, hepatoblastoma...)
- ENT tumours
- New drugs, clinical trials and molecular advice

Each one of the boards have two specific responsible figures and they are all coordinated by Miguel Maiz. A designed responsible physician exists for each one of the boards and has the task of writing and introducing the recommendations in the ICT software. Each board has a secretary that takes care of all organizational aspects.

Each one of the boards have a specific periodicity and duration:

- Bone tumours: Monthly (17:00-19:00)
- Central nervous system tumours: Weekly (15:00-19:00)
- Leukaemias: Biweekly (16:30-18:30)
- Lymphomas: Monthly (16:30-19:00)
- Abdominal tumours (neuroblastoma, Wilms, hepatoblastoma...): Biweekly (14:30-16:30)
- ENT tumours: Monthly (16:30-19:00)
- New drugs, clinical trials and molecular advice: Biweekly (1 hour)

The board is only conducted if at least three different specialists are present. Individual physicians send the formal requests to the secretary and the same secretary is responsible of creating a document with the list of patients to be discussed with their individual diagnosis. There is always a registry of the physicians that attend the meeting.

Individual physicians present the case from their patient and in the screen you can select images to show the other members from PACS, show prepared slides, pathology images, etc

IT software is based on Adobe Connect using a specific programme called Arkadin (AKA-2). There is a booked virtual room for web-conferencing and participants can speak between other by telephone line and share images and documents that are projected in the room on enlarged size. The audio is guaranteed by telephone call and to get access a PIN code is required. No camera is available although it is not needed. The costs of the whole videoconference is 0,045 cents/minute/site connected and the cost of Adobe Connect is 35 euros/monthly in France. There is possibility of movement and you can have access by individual mobile phone, even from abroad.

A website is available on the following link: <http://canpedif.e-monsite.com>

10.2 SPAIN - HOSPITAL U I P LA FE

Virtual tumor boards have been running in Spain and centralized at Hospital U i P La Fe (València). The public health system in a particular region of the country (Comunidad Valenciana) has a videoconferencing system called Polycom that allows institutions in this community to have virtual meetings. The audio system is based on microphones and cameras are placed to have face to face meetings. Images, reports and slides that appear in the screen of the IT systems can be shared and viewed by the other participants.

At the moment, meetings have been happening between two centers and new technology must be developed to allow multi-conferences between more institutions. The first meeting by polycom have been done with Hospital General Alicante and Hospital General Castellón and a pilot meeting using adobe connect with Hospital Vall d'Hebron.

The board schedule is coordinated at H. La Fe by the tumor board coordinator and the board is held weekly and lasts for one hour (13:00-14:00). In each board a maximum of 5 patients of all types of malignancies are discussed and previous to the celebration of the board a document with the name of the patient, diagnosis and clinical record summary is forwarded by the individual physician to the tumor board coordinator. The tumor board coordinator send by email the document to every participant at the board so the cases can be correctly prepared.

The cases are not discussed unless every specialist that is involved on the patients' care is present. Final recommendations are gathered by the coordinator and introduced on the clinical records. If the patient is from another institution a report on the final recommendations is sent by email.

10.3 OTHER IDENTIFIED VIRTUAL TUMOUR BOARDS IN EUROPE

- UK: Cambridge, Oxford, UCLH, Liverpool. National Sarcoma Advisory Panel Virtual Tumour Board. In the board, images and histology are linked in advance. Outcomes are documented on a system called infoflex and these are saved to each individuals electronic patient record where appropriate. Outcomes are considered advice rather than mandatory recommendations.
- Sweden (Swedish pediatric Radiotherapy Group): Gottenburg, Linköping, Uppsala: Biweekly virtual tumour board for radiotherapy indications.
- France: IHOPE, Lyon: MTB in AuRACLE area is done by web-conferencing 3 times a week. One for leukemia and bone marrow transplantation, one for solid tumours and one for central nervous system cancer.

Conclusions

Pediatric tumour boards are a common feature in Europe. 91% of the surveyed centers have a local MTB in their institutions to discuss complex patients. On the other hand, virtual tumour boards and videoconferencing experiences between different institutions are very rare and are only happening in particular countries and a limited number of institutions. The experience in the communities that carry out this meetings is advantageous and patients get benefit of the multidisciplinary decisions of these forums.

Important differences on the functioning and the access to IT technology between regions in Europe have been detected in the survey and need to be addressed. In order to reduce inequalities and have equal access to healthcare a virtual network that connects the centres of the different countries is important and must be developed. The ExPO-r-Net project has the aim to initiate this task, that can hopefully be achieved in the following years with the development of the European Reference Networks.

ANNEX 1 PEDIATRIC TUMOUR BOARD QUESTIONNAIRE

1. Name of Center and country:
2. Number of new cancer patients diagnosed and treated at your institution per year?
 - a. < 15 cases/year
 - b. ≥ 15 cases/year and < 25 cases/year.
 - c. ≥ 25 cases/year and < 50 cases/year.
 - d. ≥ 50 cases/year and < 75 cases/year.
 - e. ≥ 75 cases/year
3. Do you have a Pediatric Multidisciplinary Tumor Board (MTB)?
 - a. Yes
 - b. No
4. If so, how often do you meet?
 - a. Weekly
 - b. Biweekly
 - c. Monthly
 - d. If Other, please specify:
5. What is the usual length of your Pediatric MTB?
 - a. Up to one hour
 - b. 60-120 min
 - c. 120-180 min
 - d. More than 3 hours
6. Please, indicate the number of cases discussed by your Pediatric MTB in a single meeting:
 - a. 1-2 cases.
 - b. 3-4 cases.
 - c. 5-6 cases.
 - d. 7-9 cases
 - e. 10-12 cases.
 - f. > 12 cases.
7. Please, indicate tumor types discussed in your Pediatric MTB:
 - a. Lymphoma
 - b. CNS Neoplasms
 - c. Neuroblastoma
 - d. Retinoblastoma
 - e. Renal Tumors
 - f. Liver Tumors
 - g. Bone Tumors
 - h. Soft Tissue Sarcoma
 - i. Germ Cell Tumors
 - j. Leukaemia
 - k. If Other, please specify:
8. The Pediatric MTB room has (yes/no):
 - A specific room for this purpose
 - Equipment for projecting and viewing radiology images/ specimen biopsies
 - Equipment connected to PACS (Picture Archiving and Communications System)
 - Access to retrospective images/reports during the meeting
9. In the case of specialist not belonging to your institution, how do you manage it?
 - a. They move to our institution for the meeting.
 - b. Tele-conference
 - c. Video-conference

- d. They do not participate
- e. If Other, please specify:

10. Has your Pediatric MTB room video-conferencing facilities?

- a. Yes, H. 323 Video Conference System.
- b. Yes, web based video conference system (Skype, Adobe Connect, etc)
- c. No

11. Concerning the development of your Pediatric MTB (yes/no):

- A patient's case is not discussed unless all specialists who are involved are present.
- Patients are informed that a Pediatric Tumor Board will review their treatment/care.
- If Pediatric MTB recommendations are not followed, the patient is informed.

12. What kind of cases do you present at your Pediatric MTB?

- New cases at diagnosis:

- 1. Always. 2. Mostly. 3. It depends on the patient's physician. 4. We do not usually discuss them.

- Prior to surgery and/or radiotherapy:

- 1. Always. 2. Mostly. 3. It depends on the patient's physician. 4. We do not usually discuss them.

- After surgery and/or radiotherapy:

- 1. Always. 2. Mostly. 3. It depends on the patient's physician. 4. We do not usually discuss them.

- Progression/relapse:

- 1. Always. 2. Mostly. 3. It depends on the patient's physician. 4. We do not usually discuss them.

- Second opinions from other centers:

- 1. Yes (specify), 2. No.

13. Do you have any standard operation procedures (SOPs) for your Pediatric MTB?

- a. Yes (please specify)
- b. No

14. Do you usually make a report with the Pediatric MTB treatment recommendations? Do you archive it into the patient's medical report?

- A. No
- B. Yes, in paper format
- C. Yes, in an electronic database that allows real-time information update of the patient's medical report

15. Pediatric MTB recommendations are:

- a. Mandatory
- b. Optional.
- c. There is a register of adherence to treatment

16. Do you discuss difficult cases with other MTBs in your same country?

- a. Yes (please specify)
- b. No

17. Do you discuss difficult cases with other MTBs in another European country?

- a. Yes (please specify)
- b. No

18. Is there electronic data exchange with other Hospitals?

- a. No, there is no need
- b. No, but that's what is needed

c. Yes

19. If so, do you exchange documents/reports/images:

- a) prior to the MTB or
- b) during the MTB (real time)

20. Do you participate in any Virtual MTB?

- a. Yes (please specify below)
- b. No, I am not interested
- c. No, but I would like to

If yes, please briefly describe how:

- a. the virtual MTB is prepared (scheduling, exchange of documents, images)
- b. communication with other participants is facilitated
- c. the outcome of the virtual MTB is documented

ANNEX 2. ABSTRACT - SIOP CONGRESS DUBLIN 2016

Pediatric tumor boards in Europe: Current situation and results of an international survey in ExPO-r-NeT

Juan A, Berlanga P, Bisogno G, Michon J, Valteau-Couanet D, Kearns P, Nicholson J, Petersen C, Pourtsidis A, Acha T, Schreier G, Vassal G, Schrappe M, Brunmair B, Ladenstein R, Cañete A

Background

Multidisciplinary care is the hallmark of high quality cancer management. Individual opinions have been displaced by collective decisions in the approach of pediatric cancer. Under the ExPO-r-NeT project (European Expert Paediatric Oncology Reference Network for Diagnostics and Treatment), the actual picture of multidisciplinary pediatric tumor boards in Europe has been studied in depth.

Methods

A 20 question survey regarding several features of tumor board practice was designed. Data collected included infrastructure, organization and clinical decision-making information from the centres. The survey was distributed to the National Paediatric Haematology and Oncology Societies (NaPHOS), that forwarded the survey to the sites. For comparative analysis, respondents were grouped into four geographical regions: Northern, Central, Southern and Eastern Europe. Statistical significance among regions was assessed by multinomial logistic regression and $p < 0.05$ was considered as statistically significant.

Results

The questionnaire was distributed amongst 30 countries. Response was obtained from 23 NaPHOS (77%) that altogether have 212 pediatric oncology treating centres. A total of 121 institutions answered (57%). Ninety-one percent of the centres hold multidisciplinary boards, however international second consultations are performed in 36% and only 15% participate on virtual tumor boards. Videoconferencing facilities and standard operational procedures (SOPs) are available in 49% and 43% of the centres respectively. There were statistically significant differences between European regions concerning meeting infrastructure and organization/logistics: specific room, projecting equipment, access to medical records and PACS (Picture Archiving and Communication System) videoconferencing facilities and existence of SOPs.

Conclusion

Pediatric tumor boards are a common feature in Europe. In order to reduce inequalities and have equal access to healthcare a virtual network is needed. Important differences on the functioning and the access to IT technology between regions in Europe have been observed and need to be addressed.