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SPECIAL REPORT

The EBMT activity survey 2008: impact of team size, team density and new trends

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Six hundred and fifteen centers from 45 countries reported a total 30 293 HSCT to this 2008 EBMT survey with 26 810 first transplants (40% allogeneic, 60% autologous). This corresponds to an increase of 7% for the allogeneic and 3% for the autologous HSCT. Main indications were leukemias (32%; 89% allogeneic); lymphomas (56%; 89% autologous); solid tumors (6%; 96% autologous); and non-malignant disorders (6%; 88% allogeneic). There were more unrelated than HLA-identical sibling donors (49 *vs* 46%). The proportion of peripheral blood transplants remained stable with 99% for autologous and 70% for allogeneic HSCT. One fifth of the teams with >80 HSCT performed more than half of all HSCT. This trend towards teams with higher numbers of HSCT was stronger for allogeneic (Gini coefficient 57%) than for autologous HSCT (Gini coefficient 38%). Transplant rates (number of transplants per 10 million inhabitants) increased in a close to linear way with increasing team density (number of transplant teams per 10 million inhabitants) and without saturation ($R^2 = 0.54$); this connection was even stronger for allogeneic HSCT ($R^2 = 0.67$). These data illustrate status and trends for HSCT in Europe. They provide a rational basis for planning and patient counseling.
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Introduction

This 2008 activity report joins the past series of annual surveys of the European Group for Blood and Marrow Transplantation EBMT, which has become an important instrument to describe the status of hematopoietic SCT (HSCT) in Europe to observe trends and to monitor changes in technology use.[1–4] It captures the numbers of HSCT in the preceding year from each participating team by indication, donor type and stem cell source. Thanks to the near 20-year history of the survey, its standardized structure over many years and the excellent commitment by the participating teams, observation of changes over the years and short to midterm predictions of trends have become possible.[5–7]

The reports have given detailed annual numbers and have focused each year on one specific aspect such as stem cell source, donor type or a defined disease category. In recent years, the numbers of donor lymphocyte infusions were added. Since 2007, the survey collects in collaboration with sister organizations in Europe, information on other cellular therapies besides standard HSCT, such as mesenchymal stem cell therapies and HSCT for non-hematological indications.

Previous analyses indicated an impact of team size and team density on transplant rates and a high predictability of transplant rates[8]. Little distinction was made between donor types and disease classification. In addition, the ongoing discussions in several European countries on optimal use of infrastructure and on optimal numbers of HSCT per teams warrant data on the current situation. Therefore, our interest was for a more detailed analysis on the distribution of number of transplants by the participating teams and on the impact of team density on transplant rates of different disease indications. In addition, we tried to establish some short and mid-term predictions.[5] Key aspects of these findings are presented in this report.

Patients and methods

Data collection and validation

Participating teams were requested to report their data for 2008 by indication, stem cell source and donor type as listed in Table 1 and as in preceding years. Quality control measures included several independent systems: confirmation

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Table 1 Numbers of hematopoietic stem cell transplants in Europe 2008 by indication, donor type and stem cell source

	Allogeneic HSCT											*Autologous HSCT*		
			Donor type			*Stem cell source*		*Cord blood*						
			Proportion PB			*Proportion PB*			*Proportion CB*					
	Total N	*Allogeneic* N	*HLA identical sibling* %	*Other family member* %	*Unrelated* %	*Total* %	*Unrelated* %	*All* N	*Total*[a] %	*Family donor*[b] %	*Increase/ decrease*[c] %	*Autologous* N	*Proportion PB* %	*Increase/ decrease*[c] %
Leukemias	8610	7632	43	4	52	74	70	479	6	2	7	978	94	8
Acute myeloid leukemia	4241	3511	46	5	49	77	73	210	6	1	7	730	94	9
Acute lymphatic leukemia	1981	1860	43	5	52	62	57	145	8	4	4	121	92	19
Chronic myeloid leukemia	392	387	45	3	51	69	67	24	6	4	−11	5	100	—
Myelodysplastic syndrome[d]	1167	1147	36	4	60	77	74	72	6	3	9	20	100	—
Myeloproliferative syndrome	389	361	42	2	56	86	84	14	4	0	22	28	100	—
Chronic lymphatic leukemia	440	366	42	2	57	89	85	14	4	0	14	74	99	—
Lymphoproliferative disorders	15127	1699	49	3	47	86	81	60	4	0	3	13428	99	3
Plasma cell disorders	7221	527	55	2	42	90	86	9	2	0	4	6694	100	3
Hodgkin's lymphoma	2204	285	48	5	46	84	76	15	5	0	3	1919	98	5
Non Hodgkin's lymphoma	5702	887	46	3	51	84	80	36	4	0	3	4815	99	4
Solid tumors	1486	62	45	31	24	81	53	1	2	0		1424	96	0
Neuroblastoma	409	20	25	50	25	65	20	1	5	0	—	389	90	15
Soft tissue sarcoma	62	4	0	25	75	75	67	0	0	0	—	58	93	—
Germinal tumors	311	5	20	0	80	100	100	0	0	0	—	306	99	6
Ewing's sarcoma	245	11	55	36	9	82	0	0	0	0	—	234	97	−8
Other solid tumors	459	22	73	18	9	32	50	0	0	0	—	437	98	−10
Non malignant disorders	1486	1314	57	9	34	33	28	152	12	24	15	172	97	7
Bone marrow failures	617	615	59	4	36	38	35	44	7	20	18	2	100	—
Hemoglobinopathies	302	302	84	7	9	34	26	25	8	88	18	0	0	—
Primary immune deficiencies	273	272	34	22	44	24	21	48	18	6	0	1	0	—
Inherited disorders of metabolism	122	116	29	9	61	22	18	33	28	3	43	6	83	—
Autoimmune disease	172	9	0	33	67	56	67	2	22	50	—	163	98	9
Others	101	75	40	4	55	47	54	14	19	7	—	26	100	—
Total	26810	10782	46	5	49	71	68	706	7	7	7	16028	99	3

[a]Proportion of cord blood allogeneic HSCT.
[b]Proportion of family donor cord among all cord HSCT.
[c]Percentage of increase or decrease in HSCT from 2007 to 2008 and trends. Calculated for indications with more than 100 HSCT only.
[d]Includes secondary acute leukemias.

of validity of the entered data by the reporting team, selective comparison of the survey data with MED-A data sets in the EBMT ProMISE data system, cross-checking with the National Registries and onsite visits of selected teams.

Teams

637 teams in 47 countries (39 European and 8 affiliated countries) were contacted for the 2008 report, of which 615 (36 European, 8 affiliated countries) reported their numbers. This corresponds to a 97% return rate and includes 499 active EBMT member teams and includes two more responding teams than in 2007 (613 teams). Twenty-three teams, for unknown reasons, chose not to reply. Contacted teams are listed in the Appendix in alphabetical order by country, city, EBMT center code, and with their numbers of first, total HSCT, allogeneic, and autologous first HSCT. According to information received there were no blood or marrow transplants performed in Albania, Andorra, Armenia, Georgia, Liechtenstein, Malta, Moldavia, Monaco, Montenegro, San Marino and the Vatican in 2008. Non-European countries participating in the EBMT include Algeria, Iran, Israel, Jordan, Lebanon, Saudi Arabia, South Africa and Tunisia. Their data are included in all of the analyses.

Transplant numbers

The EBMT survey concentrates in detail on patients with a first HSCT; this includes patients with a planned tandem transplant. Information on additional transplants

Table 2 Numbers of novel cellular therapies in Europe 2008

	Allogeneic	*Autologous*	*Total*
Mesenchymal cell infusions	210	147	357
Hematopoietic stem cells for Non hematopoietic use			
Cardiovascular	4	309	313
Neurological	61	13	74
Tissue repair	6	61	67
Total	281	530	811

was collected generically, with the following definitions: *Re-transplants* (autologous or allogeneic) define an unplanned HSCT for rejection or relapse after a previous HSCT. *Multiple transplants* define subsequent transplants within a planned double or triple autologous or allogeneic transplant protocol. Information on stem cell source includes BM, peripheral blood or cord blood; transplants with more than one source were categorized as peripheral blood HSCT. Information on numbers of reduced intensity conditioning transplants (RIC HSCT), as defined by EBMT (www.ebmt.org) was collected generically and not for individual transplants.

Information on additional cellular therapies was limited to number of donor lymphocyte infusions, mesenchymal stromal cell therapies, HSCT for non-hematopoietic use or non-hematopoietic stem cell therapies as outlined in Table 2. Collection of information was harmonized with identical surveys by EULAR (European League against Rheumatism; www.eular.org) and TERMIS-EU (Tissue Engineering and Regenerative Medicine International Society; www.termis.org).[6]

Transplant rates

Transplant rates, defined as numbers of HSCT per 10 million inhabitants, were computed for each country without adjustments for patients who crossed borders and received their HSCT in a foreign country. Population numbers were obtained from the US census office database (www.census.gov).

Team size and density

Team size was defined as the number of first HSCT for patients transplanted in the year 2008. Team size was analyzed separately for total HSCT, allogeneic or autologous HSCT only. Team density was defined as numbers of transplant teams per 10 million inhabitants and was computed for each country, for the total of all HSCT as well as separately for autologous and allogeneic HSCT.

Statistical analysis

The relation between transplant rates and team density is estimated by ordinary least squares and its explanatory content expressed by the coefficient of determination (R^2). Multiple regression analyses assess trends over time. The Gini coefficient[7] classifies the inequality among transplantation teams for different types of treatment with respect to the number of HSCT.

Results

Activity of participating teams

Of the 615 teams, 370 (60%) did both allogeneic and autologous transplants; 222 (36%) restricted their activity to autologous, 10 teams (2%) to allogeneic transplants. 13 teams (2%) reported having performed no transplants in 2008.

There was substantial variation in the number of HSCT performed by the participating institutions. Forty-seven teams (8% of all teams) reported 1–5 HSCT (0.3% of all HSCT), 143 teams (23%) 6–20 HSCT (6%), 201 teams (33%) 21–50 HSCT (22%), 145 teams (24%) 51–100 HSCT (34%), 58 teams (9%) 101–150 HSCT (23%) and 21 teams (3%) more than 150 HSCT (14%). Hence, it took typically around four small teams to match the average number of transplants that a large institution performed.

The 117 teams (roughly a fifth of all teams) with more than 80 HSCT performed over 50% of all transplants in 2008. Hence, the contribution of small teams and large teams to the total of all transplants was unequal with a higher contribution of larger teams as exemplified by the Lorenz curve in Figure 1. If all teams would contribute equally, the coefficient would be zero and equal to the 45 °C curve. It is of interest to note that this inequality is nearly identical for allogeneic (Gini coefficient 45%) and autologous HSCT (Gini coefficient 44%) as for the total of HSCT (Gini coefficient 46%).

Numbers of HSCT in 2008

First transplants 2008. A total 26 810 first transplants, 10 782 (40%) allogeneic and 16 028 (60%) autologous were carried out in 2008 (Table 1). Overall, this corresponds to a 5% increase in the number of HSCT when compared with 2007, when there were 25 563 first transplants. Numbers of allogeneic HSCT increased by 7% from 10 072 in 2007 to 10 782 in 2008 and the numbers of autologous increased by 3.5% from 15 491 in 2007 to 16 028 in 2008.

Additional transplants 2008. There were 1751 re-transplants (861 allogeneic/890 autologous) and 1732 additional planned multiple transplants (102 allogeneic/1630 autologous). Thus, there were a total of 30 293 HSCT procedures, 11 745 allogeneic (39%) and 18 548 autologous (61%) performed in 2008. This corresponds to an increase of 89 re-transplants (51 allogeneic and 31 autologous) or 5% when compared with 2007. In contrast, there was a decrease of 4% in tandem transplants from 522 in 2007 to 503 in 2008. Main indications for the tandem transplants were, as in the previous years, multiple myeloma, Non-Hodgkin's lymphoma and Hodgkin's lymphoma. It is interesting to note that there were 32 such procedures reported for acute myeloid leukemia beyond first CR.

Disease indications

Numbers in 2008. Indications for HSCT in 2008 are listed in detail in Table 1. Main indications were *lymphoproliferative disorders* with 15 127 patients (56%), 1699 patients with allogeneic HSCT (11%), 13 428 with autologous HSCT (89%); *leukemias* with 8610 patients (32%), 7632

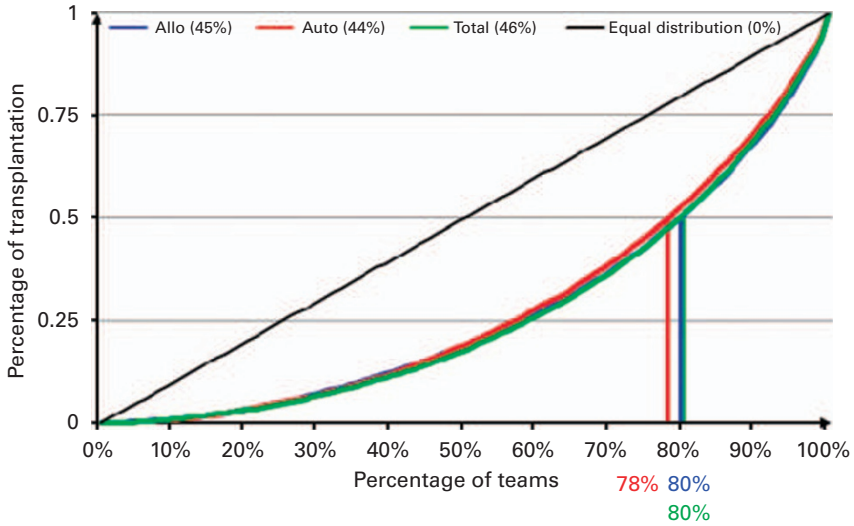

Figure 1 Lorenz curves for transplantation teams in Europe 2008: Teams are ordered proportionally by increasing number of HSCT along the *x* axis while reporting the fraction of transplantations performed by teams smaller than or equal to them on the *y* axis. The Gini coefficient measures the area between the 45 °C line and the actual line relative to the triangle below the diagonal. It reaches from zero on the *x* axis in a situation with teams of identical size to one, when a single team performs all transplantation, thus providing an indicator of inequality. Only teams performing allogneic HSCT are included for the calculation of the allogeneic Gini-coefficient, only teams performing autologous HSCT for the autologous curve. Total HSCT = green, allogeneic HSCT = blue, autologous HSCT = red.

patients with allogeneic (89%), 978 autologous (11%) HSCT; *solid tumors* with 1486 patients (6%), 62 with allogeneic HSCT (4%), 1424 with autologous HSCT (96%) and *non-malignant disorders* with 1486 patients (6%), 1314 with allogeneic HSCT (88%), 172 with autologous HSCT (12%). The latter, autologous HSCT for non-malignant disorders predominantly include patients with autoimmune disorders ($N = 163$). An additional 101 patients (0.4%), 75 with allogeneic HSCT and 26 with autologous HSCT were listed as 'other indications'.

Trends since 2007. Not all indications increased at the same rate when compared with the 2007 data and there were some clear trends[8] (Table 1). Highest increases in allogeneic HSCT were observed for patients with non-malignant disorders (+15%), specifically for BM failure syndromes (+18%), hemoglobinopathies (+18%) and inherited disorders of metabolism (+43%). Above average increases for patients with malignancies were noted for AML beyond first CR (+12%), myeloproliferative syndromes (+22%), and chronic lymphocytic leukemia (+14%). It is interesting to note that number of allogeneic HSCT for CML in the first chronic phase continued to decline and were for the first time ever lower than the numbers of allogeneic HSCT in the advanced phase, which continued to increase (+2%). Overall, numbers of HSCT for CML decreased by 11%. Highest increases in autologous HSCT were observed for patients with leukemias (+8%), specifically for ALL (+19%) and AML (+9%). Numbers increased on average for all lymphoproliferative disorders by about 3%, with the exception of non-myeloma plasma cell disorders (−22%). Numbers of autologous HSCT for solid tumors continued to decrease with the exception of neuroblastoma (+15%) and germinal tumors (+6%). Among the non-malignant disorders, numbers increased for autoimmune disorders by 9% (Table 1).

Donor type and stem cell source

Stem cell source in 2008. Of the 16 028 autologous first transplants, 200 (1%) were BM derived and 15 828 (99%) were derived from PBSCs or from combined peripheral blood and BM. There were no autologous HSCT reported for cord blood cells (Table 1). Of the 10 782 allogeneic first transplants, 2445 (23%) were BM, 7631 (70%) were peripheral blood and 706 (7%) were cord blood transplants. This indicates that the trend from BM to peripheral blood as stem cell source for allogeneic HSCT has stabilized over the last 2 years (2006, 70% peripheral blood; 2007, 71% peripheral blood, 2008, 70% peripheral blood). The proportion of peripheral blood as stem cell source increased from 68% for unrelated and twin donors to 73% for HLA-identical sibling donors and to 76% for other family member donors.

Stem cell source was influenced by main indication. BM remained the preferred source of stem cells for non-malignant disorders (56%) with even a higher proportion of BW for HLA-identical sibling donor transplants (63%). In contrast, peripheral blood was the preferred choice for malignant disorders (Figure 2) with the highest proportion of peripheral blood for leukemias (79%, Table 1). Interestingly, the proportion was the same for patients with acute leukemia in first CR or with CML in first chronic phase as for patients with advanced leukemias. Overall, the proportion of peripheral blood has slightly decreased over the past years for malignant disease indications (Figure 2).

There were 706 first HSCT with cord blood in 2008, which corresponds to an increase of 21% from the 585 cord blood HSCT in 2007. Of these were 7% HLA-identical

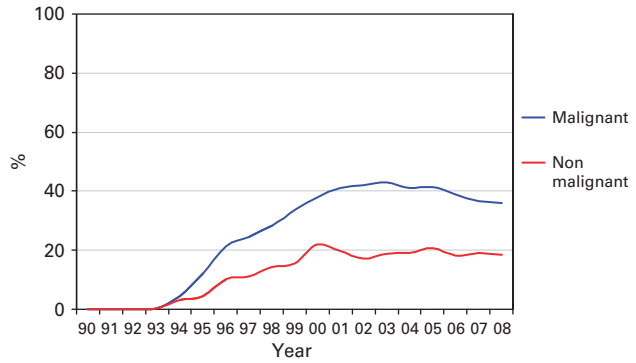

Figure 2 Change in stem cell source from BM to peripheral blood for allogeneic HLA-identical sibling donor HSCT from 1990 to 2008 by donor type. Curves represent the proportion of peripheral blood as stem cell source. HSCT for malignant disorders (blue) and for non-malignant disorders (red).

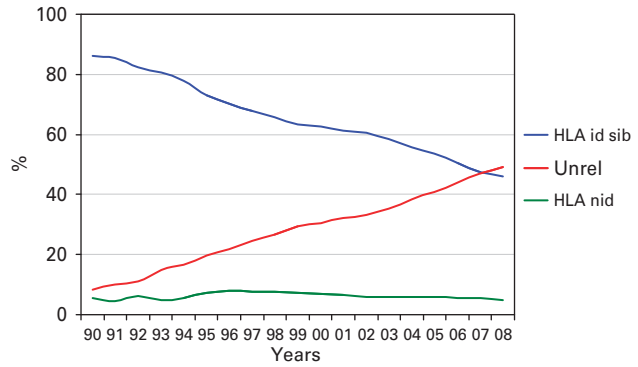

Figure 3 Relative proportion of donor type for allogeneic HSCT from 1990 to 2008. HLA identical sibling donor (including twin donors) = blue, unrelated donor = red, other family donor = green.

sibling cord blood HSCT, 0.2% other family donor cord blood HSCT and 93% unrelated cord blood HSCT. It is of interest to note that targeted cord blood HSCT (family donor HSCT) was almost exclusively used for non-malignant disorders (Table 1). There was no autologous cord blood HSCT reported in 2008, and no cord blood HSCT for non-hematopoietic use. There were 783 cord blood HSCT (first HSCT plus non-first HSCT) performed by 162 teams in 28 countries. Median number of cord blood HSCT in teams performing cord blood HSCT was three (range 1–37). Forty-two teams reported more than five cord blood HSCT in 2008.

Donor type in 2008. For the 10 782 allogeneic first transplants, HLA-identical siblings were used as donors for 4923 (46%) of the recipients, other family members for 523 (5%) of the recipients, a syngeneic twin for 44 (0.4%) of the recipients and an unrelated volunteer donor for 5292 (49%) of the recipients. This confirms the trend over recent years of an increasing proportion of unrelated donors, which has exceeded the proportion of HLA-identical sibling donor transplants for the first time (Figure 3). The proportion of unrelated donors compared with HLA-identical sibling donors differed from disease to disease with the highest in AML not in first CR, MDS and inherited disorders of metabolism and the lowest in hemoglobinopathies.

Use of reduced intensity conditioning in 2008

Numbers of RIC HSCT continued to increase from 3914 in 2007 to 4397 in 2008 at the same rate as allogeneic HSCT. RIC was used for 37% of all allogeneic HSCT, similar to that of last year's survey. This information is collected in a generic way only; no information on disease distribution is possible through the activity survey.

Additional cellular therapies

There were 1852 patients reported as having received donor lymphocyte infusions in 2008; this corresponds to 16% of all patients with an allogeneic HSCT and to about 42% of reported patients with RIC HSCT. Numbers are similar to those in 2007 with 1898 DLI. No information on the disease indication of those patients with DLI is available from the activity survey. Similarly, no information is obtained on preemptive use or on treatment for relapse.

Table 2 summarizes the use of additional cellular therapies in Europe. There were 357 mesenchymal stem cell transplants performed by 55 teams in 21 countries (Austria, Belgium, Finland, Germany, Greece, Iran, Israel, Italy, Lebanon, Luxembourg, Netherlands, Poland, Portugal, Russia, Serbia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom). Indications for these transplants were musculoskeletal, neurological, epithelial and autoimmune disorders. There were 454 HSCT for non-hematopoietic use by 31 teams in 13 countries. This includes 313 (69%) HSCT for cardiovascular disorders, 74 (16%) HSCT for neurological disorders, and 67 (15%) HSCT for tissue repair. These numbers represent a substantial increase from last year with 212 mesenchymal stem cell transplants and 212 HSCT for non-hematopoietic use in 2007.

Team density and transplant rates

Transplant rates differed substantially between European countries and countries affiliated with the EBMT (Figure 4). These differences relate to all types of HSCT. Total transplant rates (Figure 4a) in Europe ranged from 11 HSCT per 10 million inhabitants in the Ukraine to 848 (median: 293). As in previous years, the transplant rate was highest in Israel, a country that is known to accept patients across borders for HSCT. Transplant rates for allogeneic HSCT (Figure 4b) ranged from 1 (several countries) to 496 in Israel (median: 72). They ranged from 2 (several countries) to 607 in Iceland (median: 215) for autologous HSCT (Figure 4c).

Transplant rates were associated with World Bank Category and Gross National Income per Capita (data not shown). They were also associated with team density. There were 13 out of 47 participating countries with only one reporting transplant team. These countries either belonged to the low income World Bank Category or were countries with less than 3 million inhabitants. In the

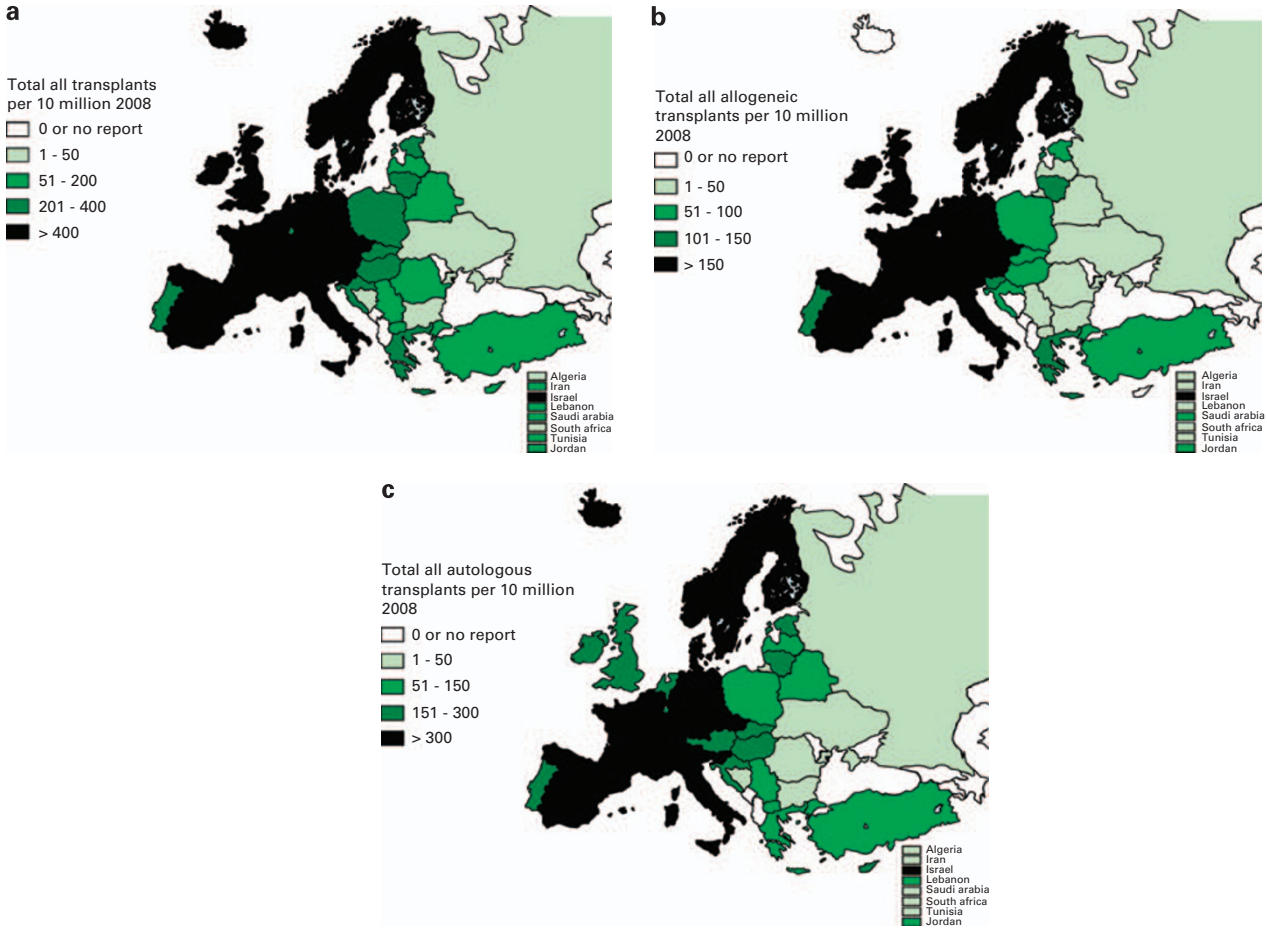

Figure 4 Transplant rates (=number of HSCT per 10 million inhabitants) in Europe 2008 by participating country. (**a**) Transplant rates for all HSCT, allogeneic and autologous combined. (**b**) Transplant rates for allogeneic HSCT only. (**c**) Transplant rates for autologous HSCT only.

remaining countries, the number of transplant teams ranged from 1 to 107 in Germany (median: 5), with 1 to 65 allogeneic (median: 3) and 1 to 101 autologous transplant teams (median: 4.5).

Team density ranged from 0.2 (Ukraine) to 35.7 (Iceland) per 10 million inhabitants (median: 6.1) for all HSCT, from 0.2 (Ukraine) to 12.5 (Belgium, median: 4.2) for allogeneic, and from 0.2 (Ukraine) to 35.7 (Iceland, median: 6.1) for autologous HSCT.

The logarithm of transplant rates increased with increasing team density in a close to linear way (Figures 5). Hence, an expansion of the number of teams by a fixed percentage raises the number of transplantation by a proportional growth factor with no clear indication for saturation. The explanatory content reached a level of $R^2 = 54\%$ for both total HSCT (5a) and allogeneic HSCT (5b), and the connection was even stronger for autologous HSCT ($R^2 = 67\%$, Figure 5c). A comparable pattern applies for AML allogeneic HSCT ($R^2 = 56\%$, Figure 5d) and PCD autologous HSCT ($R^2 = 78\%$, Figure 5e), the most frequent indications of the autologous and allogeneic subsample. The same figures for the data of 2002 reveal very similar patterns but steeper slopes of the regression equations.[9] The decline of these coefficients from roughly 1.0–1.2 to around 80–90% might serve as a first sign of saturation. However, no significant threshold value of the team density by which transplantation rates do not rise any more could be found.

Discussion

Data from this report describe the current state of art of HSCT in Europe in 2008. They document and confirm the ongoing role of autologous and allogeneic stem cells for a broad range of malignant and non-malignant disorders.[10] In addition, they show some novel and interesting trends.

These most recent data confirm the steady increase in allogeneic HSCT by 7% and in autologous HSCT by 3.5%. They show too that the increase is not the same for all indications. The increase in allogeneic HSCT is most marked for leukemias and non-malignant disorders, especially hemoglobinopathies and inborn errors of metabolism. This increase is clearly associated with the increasing availability of unrelated donors, including unrelated cord blood products, and with the clear indications for an allogeneic HSCT in defined situations of acute leukemias.[11–13] There are only two disease categories with a decline in allogeneic HSCT: solid tumors and chronic myeloid leukemia in first chronic phase. For the first time,

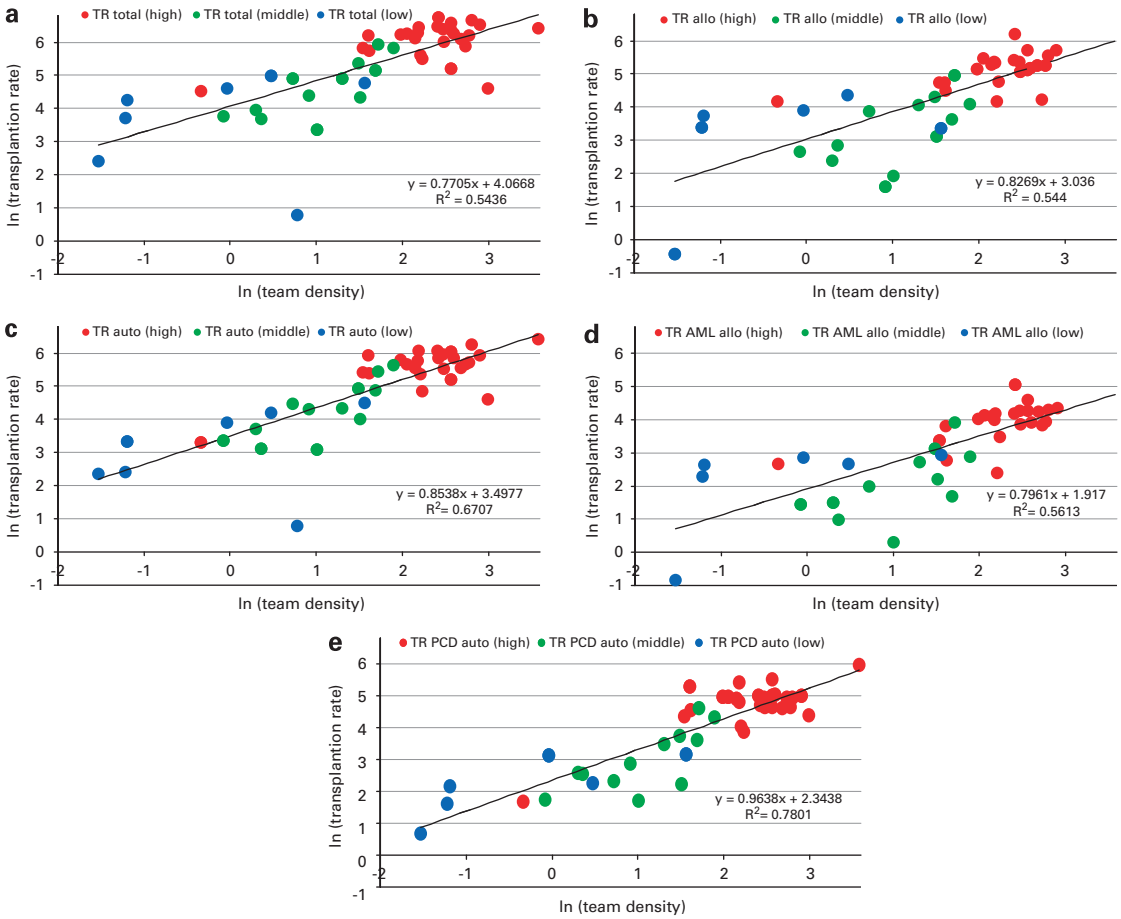

Figure 5 Association between transplant rates and team density (both as logarithms of the number per 10 million inhabitants) in Europe 2008. (**a**) Team density and transplant rates for all HSCT, allogeneic and autologous combined. (**b**) Team density and transplant rates for allogeneic HSCT. (**c**) Team density and transplant rates for autologous HSCT. (**d**) Team density and transplant rates for allogeneic HSCT for AML. (**e**) Team density and transplant rates for autologous HSCT for plasma cell disorders. Red = high income countries; green = middle income countries; blue = low income countries by World Bank category (www.worldbank.org).

there were more transplants in CML in advanced phases of the disease than in first chronic phase. This is somehow surprising in view of the fact that outcome of HSCT for CML is so clearly superior if the transplant is performed still in chronic phase and monitoring of the disease and failed response to imatinib can be captured in principle in time.[14,15] Information of the CML community relating to this fact appears warranted.

The increase in autologous HSCT is seen for acute leukemias and all types of lymphoproliferative disorders. This is somehow surprising and there is apparently no obvious trend yet to refrain from autologous HSCT despite the new modern drugs for patients with myeloma or lymphoma.[16] In contrast, autologous HSCT for solid tumors continues to decline, with the exception of the few entities with clear prospective randomized studies documenting an advantage for autologous HSCT compared with standard chemotherapy. Breast cancer, the leading indication a decade ago has almost become a non-entity.[17,18]

There were several interesting observations on changes and trends in the use of stem cell source. For autologous HSCT, peripheral blood remains almost the sole source of stem cells and no single autologous cord blood stem cell transplant was reported by the 615 participating teams. This observation clearly contrasts with the advertising activity of private cord blood banks but supports the EBMT guidelines on the use and storage of cord blood for private use. In contrast, cord blood continued to increase, at the same rate of plus 7% as allogeneic HSCT and with a proportion of about 7% of all allogeneic HSCT. There was a wide variation in the use of cord blood between the different participating countries, in absolute numbers, in transplant rates for cord blood or in the proportion of cord blood as source for an allogeneic HSCT.[19] Countries with lower cord blood rates had a higher transplant rate of other family member transplants, indicating a preference for haploidentical HSCT. Furthermore, the proportion of peripheral blood as stem cell source has slightly declined over the last few years. BM remains the preferred source for patients with non-malignant diseases.[20] This observation is explained by the clear advantage of BM as stem cell source in aplastic anemia, even though the still positive proportion of peripheral blood for this indication raises some concerns. The same holds true for the observation that the proportion of peripheral blood as stem cell source in malignant

diseases was the same in early and advanced disease stage despite some indications that patients in early disease might profit more from BM.[21]

Team size or the number of procedures by a team in a given period has been intensively discussed, not only in the field of HSCT. Some studies indeed suggest that the annual number of procedures in a team might have an impact on outcome. This has been observed in HSCT, in organ transplantation and complex medical interventions.[22–27] The survey cannot give an answer on the correct number of HSCT per year. The data only show that the vast majority of transplants are performed in teams undertaking more than 50 HSCT per year. In smaller countries, a small team might provide the necessary infrastructure.[7] There is a clear association between team density, the number of teams per number of inhabitants and transplant rates. Patients need to have access to the procedure. So far, there is no indication for saturation, hence no indication that teams overuse their facilities. This applies to all HSCT as well as to the most frequent indications for allogeneic (AML) or autologous (PCD) HSCT. Compared with the first analysis in 2002, there are changes in the steepness of the correlation curve; this might be a first indication that in countries with very high team densities, saturation might be close. An optimal number of team density or team size cannot be given by the data. Still, assumptions can be made: one team per 1 million might be needed to provide optimal service; the overall contribution of the 190 teams with less than 20 HSCT per year is marginal with 6.3% of all HSCT.

For the first time, the survey collected data on the use of mesenchymal stromal cell therapies and on hematopoietic stem cells for non-hematopoietic indications. These data indicate a wide spread use. Main indications include cardiovascular regeneration, neurological disorders or tissue repair. These data have to be regarded with caution. Not all teams performing HSCT are in contact with their colleagues from other fields in medicine. More time is needed to establish a comprehensive survey on tissue engineering and regenerative medicine cellular therapies. The preliminary data from this survey should serve as a stimulus to do so.

In summary, the report 2008 describes the status of HSCT in Europe and gives a clear perspective for patient counseling and health care planning.

Conflict of interest

The authors declare no conflict of interest.

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Appendix 2008

List of transplant centers in 2008
(Total 1st HSCT (total all HSCT) N allogeneic first HSCT/N autologous first HSCT)

Albania: no report
Andorra: no report
Armenia: no report
Algeria (1 team) (133 (137) 95/38)
Alger, Centre Pierre et Marie Curie, CIC 703, R Hamladji (133 (137) 95/38)
Austria (12 teams) (331 (368) 140/191)
Graz, Karl Franz University Hospital (hem), CIC 308, W Linkesch (46 (47) 22/24)
Graz, Universitäts-Kinderklinik (hem, onco), CIC 593, Ch Urban (10 (10) 7/3)
Innsbruck, Universitätsspital (hem, onco), CIC 271, G Gastl, D Nachbaur (65 (72) 33/32)
Klagenfurt, General Hospital Klagenfurt, D Geissler, M Heistinger (4 (5) 0/4)
Linz, AO Krankenhaus (onco), 1 Medizin, MA Fridrik (3 (3) 0/3)
Linz, AOK der Elisabethinen, Internal Medicine, CIC 594, D Lutz, O Krieger (39 (48) 20/19)
Salzburg, LKA Salzburg (onco), CIC 356, R Greil, C Russ (29 (34) 0/29)
Vienna, AKH, Universitätsklinik für Innere Medizin I (onco), CIC 227, HT Greinix, P Kalhs (75 (82) 40/35)
Vienna, St Anna Kinderspital (hem, onco), CIC 528, H Gadner, C Peters (23 (28) 18/5)
Vienna, Hanusch-Krankenhaus (hem, onco), CIC 743, E Koller (10 (12) 0/10)
Vienna, Donauspital, CIC 767, P Kier (5 (5) 0/5)
Vienna, Wilhelminenspital (hem, onco), CIC 828, H Ludwig (22 (22) 0/22)
Azerbaijan: (1 team: no report)
Baku, Azerbaijan Central Clinic Hospital, CIC 186, S Dincer (no report)

Belarus, Republic of (2 teams) (118 (132) 41/77)
Minsk, Belorussian Center (hem, onco, peds), CIC 591, O Aleinikova (58 (62) 27/31)
Minsk, Hospital No. 9, N Milanovitch (60 (70) 14/46)
Belgium (19 teams) (626 (709) 268/358)
Antwerpen, Stuivenberg ZH and AZ Middelheim (hem), CIC 339, P Zachée, R de Bock (37 (48) 18/19)
Antwerpen-Edegem, University Antwerpen (hem), CIC 996, W Schroyens (26 (29) 15/11)
Brugge, AZ St Jan (hem), CIC 506, D Selleslag, A Van Hoof, J Van Droogenbroeck, K Van Eygen (67 (72) 22/45)
Brussels, Institut Jules Bordet and the Children's University Hospital, CIC 215, D Bron, E Sariban, C Devalck, A Ferster (49 (59) 26/23)
Brussels, Clinique universitaire St Luc (hem, ads), CIC 234, A Ferrant (42 (44) 19/23)
Brussels, Clinique Universitaire St Luc (peds), CIC 234, C Vermylen (13 (14) 9/4)
Brussels, Hôpital Erasme (hem), CIC 596, W Feremans, A Kentos, M Lambermont, A Deweiwere (21 (23) 0/21)
Brussels, Ac Z VUC University Hospital (hem, onco), CIC 630, B Van Camp, A Schots (27 (30 12/15)

Charleroi, Hôpital Notre-Dame (hem, onco), CIC 349, M André (12 (14) 0/12)
Charleroi, Hôpital Vésale de Charleroi (hem), CIC 804, A Triffet (4 (4) 0/4)
Gent, University Hospital (hem, ads, peds), CIC 744, LA Noens (40 (42) 22/18)
Haine St Paul, Hôpital de Jolimont (hem), CIC 234, A Delannoy, C Ravoot, N Straetmans (14 (16) 0/14)
Hasselt, Virga Jesse Ziekenhuis (hem), CIC 632, D Vanstraelen, G Bries, V Madoe (25 (27) 0/25)
Leuven, University Hospital Gasthuisberg (hem, ads, peds), CIC 209, G Verhoef, M Delforge, J Maertens, D Dierickx (115 (121) 77/38)
Liège, CHR de la Citadelle (hem, onco), CIC 353, S Van Steenweghen, C Andre, F Scerbo (12 (12) 1/11)
Liège, University Hospital Sart-Tilman (hem), CIC 726, Y Béguin, B De Prijck (59 (86) 25/34)
Roeselare, Heilig Hartziekenhuis (hem, onco), CIC 646, F Van Aelst, J Tytgat, J Demol (17 (17 12/5)
Wilrijk, Sint Agustinos GVA (hem), CIC 715, J Lemmens (13 (14) 0/13)
Yvoir, Clinique universitaire Mont-Godinne (hem), CIC 234, C Doyen (33 (37) 10/23)
Bosnia-Herzegovina: (2 teams) (1 (1) 0/1)
Sarajevo, Clinical centre University Sarajevo (hem), CIC 198, A Sofo-Hafizovic (1 (1) 0/1)
Tuzla, University Clinical Centre of Tuzla (hem), CIC 647, A Kopic (no report)
Bulgaria: (2 teams) (19 (21) 5/14)
Sofia, Pediatric Hospital for Oncohematology and Bone Marrow Transplantation (peds hem-onco), CIC 346, D Bobev, B Avramova, M Yordanova (19 (21) 5/14)
Sofia, National Centre of Hematology and Transfusiology BMT, CIC 859, G Mihaylov (0 (0) 0/0) center under reconstruction.

Croatia (3 teams) (126 (152) 24/102)
Zagreb, Clinic Hospital 'Merkur', CIC 159, B. Jaksic, H Minigo (32 (42) 6/26)
Zagreb, Clinical Hospital Center, CIC 302, B Labar, D Nemet, M Mrsic (83 (99) 18/65)
Zagreb, University Hospotal Dubrava (hem), CIC 407, V Pejsa, O Jaksic (11 (11) 0/11)
Cyprus (1 team) (14 (14) 0/14)
Nicosia Makarious Hospital lll (hem), CIC 575, N Papaminas, C Stylianou (14 (14) 0/14)
Czech Republic (9 teams) (482 (542) 208/274)
Brno, Masaryk University Hospital (ads, peds, hem, onco), CIC 597, J Vorlicek, J Mayer, Z Koristek (115 (136) 32/83)
Hradec Kralové, Charles University (hem), CIC 729, L Jebavy, S Filip, M Blaha (47 (49) 15/32)
Olomouc, University Hospital (hem, onco), CIC 574, K Indràk (48 (55) 22/26)
Pilsen, Faculty Hospital (hem, onco), CIC 718, V Koza, K Steinerova (83 (101) 44/39)
Prague, Clinical Haematology, Charles University, CIC 318, T Kozak (26 (30) 0/26)
Prague, Thomayer Memorial Hospital, CIC 375, J Abrahamova, J Nepomuckà (2 (2) 0/2)
Prague, University Hospital Motol (peds, hem, onco), CIC 452.1, P Sedlacek. (42 (43) 34/8)
Prague, Institute of Hematology and Blood Transfusion, A Vitek, P Kobylka CIC 656 (62 (66) 61/1)
Prague, Charles University, CIC 745, M Trneny (57 (60) 0/57)

Denmark (4 teams) (252 (276) 84/168)
Aalborg, Aalborg Hospital (hem/clin immunolgy), CIC 848, J Baech I Christiansen (20 (22) 0/20)
Aarhus, Amtssygehus (hem) and Skejby Hospital, CIC 634 + 510, E Segel, B Moeller (47 (55) 0/47)
Copenhagen, Rigshospitalet (hem), CIC 206, H Seneglov (151 (161) 84/67)
Copenhagen, Herlev Hospital (hem), University, CIC 568, N Clausen (34 (38) 0/34)

Estonia (2 teams) (45 (46) 9/36)
Tallinn, North Estonia Medical Centre, K Vaht, T Jogi (26 (27) 0/26)
Tartu, University Hospital (hem, onco), CIC 746, H Everaus, A Kaare (19 (19) 9/10)

Finland (7 teams) (255 (274) 90/165)
Helsinki, Children's Hospital, CIC 219, U Pihkala, S Vettenranta (31 (37) 21/10)
Helsinki, University Central Hospital, Department of Medicine, CIC 515, L Volin (82 (83) 50/32)
Helsinki, University Hospital (onco), CIC 833, H Joensuu, R Janes (10 (10) 0/10)
Kuopio, Department of Medicine, University Hospital, CIC 396, E Jantunen, T Nousiainen (33 (33) 0/33)
Oulu, University Central Hospital (hem, onco), CIC 690, P Koistinen, T Turpeenniemi-Hujanen (18 (21) 0/18)
Tampere, University Hospital (ads, peds), CIC 635, E Koivunen, T Lehtinen, R Silvennoinen, M Arola (31 (35) 0/31)
Turku, University Central Hospital, CIC 225, K Remes (50 (55) 19/31)
France (72 teams) (3727 (4173) 1307/2420)
Amiens, CHU Amiens, CIC 955, G Damaj (58 (58) 0/58)
Angers, Centre Hospitalier, CIC 650, N Ifrah, S François (63 (84) 27/36)
Argenteuil, Hopital Victordupouy (hem), CIC 199, L Sutton (18 (18) 0/18)
Besançon, Hôpital Jean Minjoz & Hôpital St Jacques (ads, peds), CIC 233, P Herve, E Deconinck, P Rohrlich (86 (108) 45/41)
Bordeaux, CHU Bordeaux Groupe Hospitalier Pellegrin-Enfants (peds, hem, onco), CIC 978, C Jubert (12 (14) 5/7)
Brest, CHU de Brest, Hôpital Morvan (Hem), D Gillet (70 (77) 30/40)
Caen, Centre Hospitalier Régional, CIC 251, O Reman (58 (60) 22/36)
Caen, Hôpital Cote de Nacre (peds hem onco), P Boutard (2 (2) 0/2)
Caen, Centre Régional François Baclesse, C Fruchart (30 (35) 0/30)
Clermont Ferrand, Centre Jean Perrin and CHU Hotel Dieu (ads, peds), CIC 273, J-O Bay, F Démeocq, P Travade (146 (167) 57/89)
Colmar, Hôpital civil, B Audhuy (5 (5) 0/5)
Corbeil Essonne, Hôpital Gilles de Corbeil, A Devidas (20 (21) 0/20)
Créteil, Hôpital H Mondor (hem), CIC 252, C Cordonnier, M Kuentz (54 (62) 27/27)
Dijon, Hôpital d'Enfants, D Caillot (76 (79) 0/76)
Dunkerque, Centre Hospitalier (hem), M Wetterwald (12 (16) 0/12)
Grenoble, Centre Hospitalier A Michallon (ads, peds), CIC 270, J Y Cahn, F Garban, P Drillat, D Plantaz (82 (93) 35/47)
Lille, Hôpital Claude Huriez, CIC 277, F Bauters, JP Jouet (107 (117) 67/40)
Lille, Hôpital Jeanne de Flandre (peds), CIC 963, B Bruno (1 (1) 0/1)
Lille, Centre Oscar Lambret (onco, peds), A Defachelles (11 (16) 0/11)
Lille, Centre Hospitalier Saint Vincent, N Cambier (16 (17) 0/16)
Limoges, Centre Hospitalier Dupuytren (ads,hem), CIC 977, D Bordessoule, P Turlure (52 (53) 0/52)
Lyon, Centre Léon Bérard, CIC 241, P Biron, T Philip (75 (76) 0/75)
Lyon, Hôpital Edouard Herriot, CIC 671, M Michallet, E Wattel, A Thiebaut, F Nicolini, J Troncy, X Thomas (65 (73) 57/8)
Lyon Sud (Pierre Benite), Centre Hospitalier, B Coiffier (87 (96) 0/87)
Lyon, Hôpital Debrousse, CIC 806, Y Bertrand, V Mialou (26 (27) 26/0)
Marseille, Inst. Paoli-Calmettes, CIC 230, D Blaise (255 (311) 67/188)
Marseille, Hôpital d'Enfants de la Timone (onco), CIC 301, C Coze, JL Bernard J Frayfer (8 (13) 0/8)
Meaux, Centre Hospitalier de Meaux (9 (10) 0/9)
Metz, Thionville Hôpital Notre-Dame de Bon-Secours (hem), V Dorvaux, B Christen (19 (20) 0/19)
Montpellier, CHR Lapeyronie (hem ads), CIC 926, JF Rossi, N Fegueux (125 (132) 52/73
Montpellier, Hôpital Arnaud de Villeneuve (peds), G Margueritte (10 (10) 8/2)
Mulhouse, Hôpital du Hasenrain, B Drénou, M Ojeda (13 (13) 0/13)
Nancy, Vandoeuvre-les-Nancy, Hôpital d'Enfants, P Bordigoni (62 (64) 51/11)
Nancy, Vandoeuvre-les-Nancy, CHU Nancy-Brabois (hem), P Lederlin, F Witz (40 (43) 0/40)

Nantes, Hotel Dieu (hem), CIC 253, M Mohty, JL Harousseau (188 (197) 87/101)
Nice, Hôpital de l'Archet (incl. Hopital Lenval (peds), CIC 523, N Gratecos, JP Cassuto, D de Ricaud (55 (60) 30/25)
Nice, Centre Antoine Lacassagne, A Thyss (32 (32) 0/32)
Paris, Hôpital Necker (ads, hem), CIC 160, B Varet, C Bélanger, A Veil (64 (69) 30/34)
Paris, Hôpital Necker des enfants malades (allo), CIC 201, A Fischer (40 (45) 39/1)
Paris, Hôpital St Louis (hem allo, ads, peds), CIC 207+ CIC 748, G Socié, E Gluckman, H Esperou (118 (122) 118/0)
Paris, Hôpital St Louis (auto), CIC 805, G Gisselbrecht (68 (72) 0/86)
Paris, Hôpital St Louis (auto-leuk), CIC 960, H Dombret, L Degos, P Rousselot (4 (4) 0/4)
Paris, Hôpital St Louis (auto immuno-Haem), J-P Fermand (no report)
Paris, Hôpital St Antoine (hem), CIC 213, C Gorin, L Fouillard (58 (63) 15/43)
Paris, Hôpital D'enfants Armand-Trousseau, CIC 675, G Leverger, A Auvrignon, L Douay (11 (11) 0/11)
Paris, Hôtel Dieu (hem), CIC 222, B Rio, Z Marjanovic (63 (70) 37/26)
Paris, Hôpital Pitié Salpétière (hem), CIC 262, JP Vernant, V Leblond, N Dedhin (92 (100) 50/42)
Paris, Institut Curie (ads/onco/peds), CIC 702, J Michon (38 (41) 0/38)
Paris, Hôpital Tenon (onco), CIC 747, JP Lotz (18 (44) 0/18)
Paris, Hôpital Robert Debré, CIC 631, A Baruchel, JH Dalle, G Cotten (35 (38) 35/0)
Paris, Hôpital Européen GP, JM Andrieu, C Le Maignan (1 (1) 0/1)
Paris, Hôpital d'Instruction des Armées Percy, Clamart, T de Revel, G Nedellec (36 (47) 25/11)
Paris, Hôpital Cochin (auto), M Quarre (41 (45) 0/41)
Pessac, Hôpital Haut-Lévèque, CHU Bordeaux, CIC 267, N Milpied, G Marit, R Tabrizi (137 (149) 70/67)
Poitiers, Hôpital la Miletrie, CIC 264, M Renaud (56 (63) 9/47)
Pontoise, Hospital Renè Dubois (hem, onco), CIC 961, H Gonzalez (15 (16) 0/15)
Reims, Hopital Robert Debré (hem, onco), CIC 959, A Delmer, B Pignon, C Himberlin (47 (51) 0/47)
Rennes, CHRU, Clinique Médical Infantil, CIC 661, E Le Gall, V Gandemer (13 (15) 6/7)
Rennes, Hôpital de Pontchaillou (hem), CIC 661, T Lamy (104 (109) 29/75)
Roubaix, Hôpital V Provo (hem), I Plantier-Colcher (18 (20) 0/18)
Rouen, Centre Henri Becquerel, CIC 941, H Tilly, P Lenain (80 (103) 21/59)
Rouen, Hôpital Charles Nicolle, JP Vannier (14 (18) 12/2)
St Cloud, Centre René Huguenin, CIC 551, M Janvier (23 (24) 0/23)
Strasburg, Hôpital de Hautepierre, B Lioure (88 (102) 34/54)
Strasburg, Hopital Hautepierre, Service de Pédiatrie lll, P Lutz (12 (16) 7/5)
Toulouse, Hôpital de Purpan (hem), CIC 624, M Attal, J-C Nogaro (9 (9) 1/8)
Toulouse, Hôpital de Purpan (peds), CIC 624, H Rubie (120 (135) 29(91)
Tours, Hôpital Bretonneau (onco), CIC 272, P Colombat (79 (83) 0/79)
Valenciennes, Hosp. De Valenciennes, M Simon (16 (17) 0/16)
Villejuif, Institut G Roussy (peds), CIC 503, O. Hartmann, D Valteau-Couanet (46 (76) 0/46)
Villejuif, Institut G Roussy (ads, hem), CIC 666, J-H Bourhis, C Boccaccio, J-M Vantelon (115 (115) 47/68)
Villejuif, Hôpital Paul Brousse, B Delmas-Marsalet (0 (0) 0/0)

Georgia: no report
Germany (107 teams) (4841 (5930) 2291/2550)
Aachen, Universitätsklinikum RWTH (hem, onco), Med Klinik lV, CIC 348, R Osieka, O Galm (16 (20) 0/16)
Augsburg, Zentralklinikum (hem, onco), Med Klinik ll, G Schlimok, Chr Schmidt (40 (43) 17/23)
Bad Saarow, HELIOS Klinikum, P Reichardt, K Senftleben (11 (13) 0/11)
Berlin, Universitätsklinikum der HU Charité Campus Virchow Klinikum (peds), CIC 336, G Gaedicke, W Ebell, J. Kühl (35 (41) 30/5)
Berlin, Universitätsklinikum der HU Charité Campus Virchow Klinikum (ads, hem, onco), CIC 807, B Dörken, R Arnold (116 (130) 74/42)
Berlin, HELIOS Klinikum Berlin, Robert-Rössle Klinik (hem, onco), CIC 518, W-D Ludwig, M Hildebrandt, (22 (28) 0/22)
Berlin, Universitäts-Klinik der FU Benjamin Franklin (hem, onco), CIC 590, L Uharek E Thiel (65 (87) 29/36)
Bielefeld, Franziska Hospital (hem, onco), HJ Weh, A Zumsprekel (1 (1) 0/1)
Bochum, Knappschaftskrankenhaus (hem, onco), CIC 124, W Schmiegel, C Teschendorf (27 (37) 0/27)
Bonn, Universitätsklinikum, (ads,hem.onco), P Brossart, I Schmidt-Wolf (19 (25) 0/19)
Bonn, Universitätsklinikum, (peds,hem.onco), U Bode, A Simon, (2 (3) 0/2)
Braunschweig, Städtisches Klinikum (hem, onco), CIC 674, B Wörmann, T Gabrysiak (28 (46) 0/28)
Bremen, Klinikum Bremen-Mitte, St Jürgenstrasse, CIC 602, B Hertenstein, H Thomssen (32 (38) 16/16)
Bremen, DIAKO (hem, onco), KH Pflüger, J Kullmer, (19 (22) 0/19)
Chemnitz, Krankenhaus Küchwald (hem), CIC 104, M Hänel, G Geiβler (53 (63) 0/53)
Cottbus, Carl-Thiem Klinikum, Med. Klinik ll (hem), H Steinhauer, N Peter (15 (26) 0/15)
Dessau, Städtisches Klinikum Dessau (hem, onco), M Plauth, A Florschütz (0 (0) 0/0)
Dortmund, St Johannes Hospital (hem, onco), H Pielken, M Hindahl (0 (0) 0/0)
Dresden, Universitätsklinikum Carl Gustav Carus (hem, onco), CIC 808, G Ehninger, M Bornhäuser (162 (184) 112/50)
Duisburg, St Johannes Hospital, CIC 519, C Aul, R Hartwig (18 (27) 0/18)
Düsseldorf, Universitätsklinikum, Medizinische Klinik (hem, onco) R Haas, G Kobbe, St Antonius Hospital, Eschweiler, (hem, onco), CIC 390, R Fuchs, F Schlegel, NO Transplant, nur Nachsorge in D'dorf (104 (121) 53/51)
Düsseldorf, Universitätsklinikum Zentrum für Kinderheilkunde, CIC 651, A Borkhardt, D Dilloo, F Schuster, (28 (32) 16/12)
Erlangen, Universitätsklinikum, (hem, onco), Med. Klinikum 5, CIC 809:1, W Rösler, A Mackensen, (53 (56) 21/32)
Erlangen, Universitäts-Klinik für Kinder und Jugendliche (hem.onco), CIC 809:2, W Holter, W Rascher, D Stachel (15 (18) 8/7)
Essen, Universitätsklinikum (ads, peds), CIC 259, D W Beelen, R Trenschel, A Elmaagacli, (182 (191) 172/10)
Essen, Evangelisches Krankenhaus Essen-Werden GmbH (hem, onco), CIC 784, W Heit, M Wattad (45 (55) 15/30)
Essen, Universitätsklinikum (hem), C U Dührsen, R Noppeney (35 (47) 0/35)
Essen, West German Cancer Center, M Schuler, (19 (34) 0/19)
Frankfurt, KH Nordwest, E Jäger, E Weidmann, (20 (22) 0/20)
Frankfurt, Klinikum Frankfurt (Oder), CIC 190, M Kiehl (18 (30) 2/16)
Frankfurt a. M, Universitätsklinikum d J W Goethe (hem, onco peds), CIC 138, T Klingebiel, P Bader, (47 (52) 38/9)
Frankfurt a. M., JW Goethe-Universität (ads), CIC 297, H Serve, H Martin (66 (74) 44/22)
Frankfurt/Mainz, Städtisches Klinikum (ads), H G Derigs, W Schmidt, (6 (7) 0/6)
Frankfurt/Mainz, Onkologische Gemeinschaftspraxis, CIC 193, W Knauf (12 (14) 0/12)
Freiburg i. Br., Universitätsklinik (ads, hem, onco), Med Klinik l, CIC 810, R Mertelsmann, J Finke, M Engelhardt (186 (209) 103/83)
Freiburg i. Br., Universitätskinderklinik (hem, onco), CIC 810, C Niemeyer, B Strahm, (20 (20) 17/3)
Giesen, Universitätskinderklinik (hem, onco), CIC 326, A Reiter, B Neubauer, W. Wössmann (16 (17) 13/3)
Göttingen, Georg-August Universität (hem, onco), CIC 552, L Trümper, G Wolf, (81 (109) 46/35)
Greifswald, Ernst-Moritz-Arndt Universität (ads + peds), CIC 530, G Dölken, W Krüger (29 (35) 17/12)

Gütersloh, Städt. Krankenhaus (hem, onco), G Massenkeil, B Rüβmann (0 (0) 0/0)
Hagen, Kath. Krankenhaus (hem, onco), CIC 536, H Eimermacher, W Lindemann (23 (25) 0/23)
Halle, Martin Luther Universität (hem, onco, ads), CIC 338, G Behre, H-J Schmoll, (61 (91) 21/40)
Halle, Martin Luther Universität (hem, onco, peds), CIC 654, D Körholz, C Manz-Körholz (5 (7) 4/1)
Hamburg, Asklepios Klinik St George (hem, onco), CIC 153, N Schmitz, M Zeis (95 (112) 55/40)
Hamburg, AK Altona (hem, onco), CIC 366, D Braumann, H Salwender (58 (75) 0/58)
Hamburg, Eppendorf-Krankenhaus (hem, onco, ads, peds) CIC 614, AR Zander, N Kröger, H Kabisch, (158 (168) 136/22)
Hamburg, Universitätsklinikum- Hamburg- Eppendorf (hem, onco, ads), Med Klin ll, CIC 673, C Bokemeyer (33 (52) 0/33)
Hameln, Gesundheitseinrichtungen Hameln-Pyrmont, (hem, onco), H Schmidt, K Buhrmann (18 (27) 3/15)
Hamm, St Marien Hospital (hem, onco), CIC 147, H Dürk, D Metzner (17 (26) 0/17)
Hamm, Evangelisches Krankenhaus (hem, onco), CIC 509, L Balleisen, E. Lange (21 (24) 0/21)
Hannover, Medizinische Hochschule (hem, onco, ads), CIC 295, A Ganser, M Eder (110 (133) 72/38)
Hannover, Medizinische Hochschule (hem, onco, peds), CIC 295, K Welte, K Sykora (34 (37) 29/5)
Hannover, Klinikum Region Hannover, Krankenhaus Siloah, CIC 342, H Kirchner, M Sosada (12 (19) 0/12)
Heidelberg, Universitätsklinikum, (hem, onco), CIC 524, P Dreger, AD Ho (220 (296) 86/134)
Homburg/Saar, Universitätsklinikum des Saarlandes (hem, onco), CIC 785, M Pfreundschuh, J Schubert (54 (72) 18/36)
Idar-Oberstein, Klinik für KMT, Hämato-/Onkologie, CIC 592, A Fauser, H Biersack, Dr Wenzel, L Kraut (16 (22) 13/3)
Jena, Universitätsklinikum Jena, (hem, onco), Innere Medizin ll, CIC 533, K Hoeffken, HG Sayer (61 (84) 27/34)
Jena, Universitätsklinikum, (hem, onco), Klinik f. Kinder-u. Jugendmedizin, CIC 750, J Beck, B Gruhn (20 (21) 11/9)
Kaiserslautern, Westpfalzklinikum (hem), CIC 357, H Link, St Mahlmann (8 (8) 0/8)
Karlsruhe, Städtisches Klinikum (hem, onco), CIC 290, M Bentz, S Wilhelm (26 (37) 0/26)
Kassel, Klinikum Kassel, (hem, onco), M Wolf, E U Steinhauer (19 (24) 0/19)
Kiel, Sektion f. Stammzell-u. Immuntherapie Dr- Mildred-Scheel-Haus (hem, onco), CIC 256, M Gramatzki, T Valerius (99 (119) 57/42)
Köln, Universitätsklinikum (ads, peds), CIC 534, M Hallek, Chr Scheid, F Berthold, T Simon (110 (116) 49/61)
Krefeld, HELIOS Klinikum Krefeld, Med Klinik ll, T Frieling, M Planker (0 (0) 0/0)
Leipzig, Universitätsklinikum Leipzig AöR (hem, onco), CIC 389, D Niederwieser (158 (177) 103/55)
Lemgo, Klinikum Lippe- Lemgo, F Hartmann, C Constantin (8 (11) 0/8)
Lübeck, Universitätsklinikum Schleswig–Holstein, Campus Lübeck, (ads), CIC 367:1, H Lehnert, S Peters (18 (22) 0/18)
Lübeck, Universität zu Lübeck, Klinik f. Kinder-u. Jugendmedizin, (peds), CIC 367:2, E. Herting, Chr. Schultz (2 (2) 0/2)
Lübeck, Sana Kliniken Lübeck (hem, onco), S Fetscher, J Schmielau (18 (25) 0/18)
Ludwigshafen, Klinikum der Stadt, M Uppenkamp, M Hoffmann (11 (14) 0/11)
Magdeburg, Universitätsklinikum Magdeburg AöR, (hem, onco), CIC 359, T Fischer (27 (39) 0/27)
Mainz, Uniklinik Mainz, (hem), Med. Klin. lll, CIC 786, K Kolbe, D Wehler (78 (86) 45/33)
Mannheim, III Med. Klinik, A Hochhaus, J Hastka, G Metzgeroth (22 (32) 0/22)
Marburg, Uniklinikum Marburg, (hem, onco), CIC 645, A Neubauer, A Burchert (56 (74) 29/27)
Minden, Klinikum Minden, (hem, onco), H Bodenstein, HJ Tischler (10 (14) 0/10)
Mönchengladbach, Kliniken Maria Hilf GmbH, KH St Franziskus, U Graeven (27 (37) 0/27)
Munich, Klinikum Grosshadern der LMU (ads, hem, onco) CIC 513, H-J Kolb, W Hiddemann (110 (119) 77/33)
Munich, Klinikum Innenstadt der LMU (peds, hem, onco), CIC 513, I Schmidt, M Albert (22 (24) 19/3)
Munich, SKH München- Harlaching (hem, onco), CIC 664, M Hentrich, L Lutz (17 (27) 0/17)
Munich, Städt. Krankenhaus Schwabing (hem, onco, peds), CIC 189, S Burdach, A Wawer (6 (6) 3/3)
Munich, Klinikum Innenstadt der LMU, M Reincke, F Oduncu (30 (30) 0/30)
Munich, SKH München-Schwabing (hem, onco), Ch Nerl, N Fischer (22 (30) 0/22)
Munich, Klinikum rechts der Isar (hem, onco), CIC 558, C Peschel, H Menzel (71 (80) 18/53)
Münster, Universitätsklinikum Münster, Klinik f. Kinder u. Jugendmedizin, (hem, onco), CIC 505, H Jürgens, M Frühwald (22 (26) 10/12)
Münster, Westfälische Wilhelms-Universität (hem, onco), Innere Med. CIC 680, W Berdel, J Kienast (134 (162) 82/52)
Nürnberg, Klinikum-Nord, Einheit f. Knochenmarktransplantation, Med. Klinik 5 (hem, onco), CIC 625, M Wilhelm, H Wandt, K Schäfer-Eckart (66 (85) 33/33)
Oldenburg, Klinikum Oldenburg (hem, onco), CIC 749, B Metzner, C H Köhne (67 (97) 12/55)
Osnabrück, Klinikum Osnabrück (hem, onco), CIC 101, R Peceny, HJ Hartlapp (8 (10) 0/8)
Potsdam, Klinikum Ernst-von-Bergmann (hem, onco), CIC 106, G Maschmeyer, A Dukat, (19 (27) 0/19)
Regensburg, Universität Regensburg, (hem, onco), CIC 787, R Andreesen, E Holler, A Reichle (119 (153) 62/57)
Rostock, Universität Rostock Med. Fakultät, (hem, onco), CIC 585, M Freund, M Schmitt, (70 (81) 23/47)
Rotenburg-Wümme. Diakoniekrankenhaus, J Potratz, F Heits, A Meinhardt (18 (22) 0/18)
Siegen, St Marien- Krankenhaus (hem, onco), CIC 135, W Gassmann, T Gaska (18 (32) 0/18)
Stuttgart, Robert-Bosch-Krankenhaus (hem, onco), CIC 145, W Aulitzky, S Martin, M Kaufmann (48 (61) 21/27)
Stuttgart, Olgahospital (hem, onco), Pädiatrisches Zentrum, CIC 701, St Bielack, E Koscielniak (1 (2) 0/1)
Stuttgart, Bürgerhospital and Katharinenhospital (onco), H G Mergenthaler, J Schleicher (18 (27) 0/18)
Stuttgart, Diakonie-Klinikum, E Heidemann (21 (31) 0/21)
Tübingen, Eberhard- Karls- Universität Med.-u. Poliklinik, (hem, onco), CIC 223, L Kanz, C Faul (114 (142) 68/46)
Tübingen, Universitätsklinik, Kinderheilkunde u. Jugendmedizin, (hem, onco), Abteilung Pädiatrie, CIC 535, R Handgretinger, P Lang (36 (43) 33/3)
Ulm, Universitätsklinik, Med. Klinik u. Poliklinik, (hem, onco), CIC 204, H Döhner, D Bunjes (104 (124) 54/50)
Ulm, Universitätsklinik, Klinik u. Poliklinik f. Kinder-u. Jugendmedizin, CIC 204, K M Debatin, W Friedrich, A Schultz (24 (25) 24/0)
Villingen, Schwarzwald-Baar Klinikum, Innere Medizin II. W Brugger, F Köhler (23 (27) 0/23)
Wiesbaden, Deutsche Klinik für Diagnostik, CIC 311, R Schwerdtfeger, M Schleuning, H Baurmann (90 (101) 79/11)
Wiesbaden, Dr Horst-Schmidt Klinikum (hem, onco), CIC 586, N Frickhofen, B Jung (10 (15) 0/10)
Wuppertal, HELIOS Klinikum Wuppertal, Med. Klinik I. (hem, onco), A Raghavachar (0 (0) 0/0)
Würzburg, Universität Würzburg, Med. Klinik u. Poliklinik II. (hem, onco, ads), CIC 712, H Einsele, F Weiβinger, G Stuhler (142 (194) 63/79)
Würzburg, Universitätsklinikum Würzburg, Kinderklinik u. Poliklinik (peds), CIC 196, P G Schlegel (15 (22) 9/6)
Greece: (12 teams) (245 (263) 116/129)
Alexandroupolis, Thrace University Medical School (Hem), CIC 681, G Bourikas, D Pantelidou (4 (4) 0/4)
Athens, Laikon General Hospital, CIC 328, Y Rombos, D Boutsis, V Kalotychou (no report)
Athens, Medical Center (hem), CIC 603, A Pigadito (1 (1) 0/1)
Athens, University of Athens, CIC 604, I Dervenoulas (15 (15) 2/13)

Athens, Evanghelismos Hospital (hem), CIC 622, D Karakassis, N Harhalakis, E Nikiforakis (65 (71) 40/25)
Athens, General Hospital G Gennimatas (hem), CIC 638, A Zomas (no report)
Athens, Diagnosis & Therapy Centre 'Hygeia' (hem), Maroussi, CIC 643, G Karianakis (11 (11) 0/11)
Athens, Hellenic Cancer Institute St Savas (onco), CIC 751, A Efremedis, G Koumakis, M Stamatellou, K Papanastassiou, I Fillis (30 (41) 6/24)
Athens, 'Aghia Sophia' Children's Hospital, CIC 752, S Graphakos, G Vessalas (32 (32) 24/8)
Crete, University Hospital Heraklion, CIC 352, M Kalmanti (1 (1) 0/1)
Patras, University Medical School (hem), CIC 281, N C Zoumbos, A Spyridonidis, A Symeonidis, M Tiniakou (16 (17) 12/4)
Thessaloniki, The George Papanicolaou General Hospital (hem), CIC 561, AS Fassas (70 (70) 32/38)

Hungary (5 teams) (306 (306) 90/216)
Budapest, St Istvan & St Laszlo Hospital of Budapest (hem ads), CIC 556, T Masszi, P Reményi (153 (153) 55/98)
Budapest, Szent Laszlo Hospital (peds), CIC 824, G Kriván, E Torbvágyi, L Lengyel (38 (38) 21/17)
Debrecen, University of Debrecen, CIC 648, A Kiss (48 (48) 0/48)
Miskolc, Postgraduate Medical School (peds), CIC 599, N Kalman, G Marton (23 (23) 14/9)
Pécs, University of Pécs, Internal Medizine, CIC 682, H Losonczy, M Dávid, Á Szomor (44 (44) 0/44)

Iceland (1 team) (17 (17) 0/17)
Reykjavik, National University Hospital (hem), CIC 605, S Reykdal (17 (17) 0/17)
Iran (2 teams) (461 (462) 274/187)
Shiraz, Nemazee Hospital (hem, onco), CIC 188, M Ramzi (73 (73) 27/46)
Teheran, Shariati Hospital (hem, onco), CIC 633, A Ghavamzadeh (388 (389) 247/141)
Ireland (5 teams) (157 (173) 63/94)
Cork, Regional University Hospital (hem), O Gilligan, M Cahill (7 (7) 0/7)
Dublin, St James's Hospital (hem), CIC 257, C Flynn, P Browne (101 (113) 50/51)
Dublin, St Vincent's Hospital (hem, onco), CIC 541, J Crown, K Murphy, M Connell (12 (12) 0/12)
Dublin, Our Lady's Hospital of Sick Children, Crumlin, CIC 774, A O'Meara (24 (28) 13/11)
Galway, University College Hospital, CIC 408, P Hayden (13 (13) 0/13)
Israel (8 teams) (571 (602) 332/239)
Haifa, Rambam Medical Center (hem, ads, peds), CIC 345, J Rowe (98 (100) 49/49)
Jerusalem, Hadassah University Hospital (ads, peds), CIC 258, R Or, S Slavin (108 (110) 80/28)
Petach-Tikva, Beilinson Hospital (hem, ads) CIC 409, M Yeshurun (43 (44) 15/28)
Petach-Tikva, Children's Medical Center, CIC 755, J Stein (36 (40) 21/15)
Revohot, Kaplan Hospital (hem), CIC 327, A Berribi (12 (12) 0/12)
Tel Aviv, Sourasky Medical Center, CIC 161, E Naparstek (49 (53) 28/21)
Tel Hashomer, Chaim Sheba Medical Center (hem, onco, ads) CIC 754, A Nagler, A Shimoni (184 (196) 117/67)
Tel Hashomer, Chaim Sheba Medical Center (hem, onco, peds) CIC 572, A Toren, H Golan, B Bielorai (41 (47) 22/19)
Italy (97 teams) (3791 (4538) 1340/2451)
Alessandria, SS Antonio e Biagio e C Arrigo (hem), CIC 825, A Levis, A Allione, M Pini, F Salvi (54 (64) 16/38)
Ancona, Ancona Univeristy Hospital (hem), CIC 788, M Montanari, P Leoni (59 (67) 24/35)
Ascoli Piceno, Mazzoni Hospital, CIC 119, P Galieni (34 (39) 4/30)
Avellino, AOS Giovanni Di Guglieimo (hem), CIC 789, N Cantore, G Storti (24 (26) 6/18)
Avezzano, Ospedale Civile di Avezzano, F Recchia (5 (5) 0/5)
Aviano, CRO Aviano (onco), CIC 162, M Michieli, M Rupolo, M Mazzucato, F Lollo (36 (45) 0/36)
Bari, Universita degli Studi di Bari (hem), CIC 649, G Specchia, D Pastore (35 (37) 12/23)
Bergamo, Ospedale Riuniti, CIC 658, A Rambaldi (87 (102) 38/49)
Bologna, St Orsola-Malpighi (hem, onco), CIC 240, G Bandini, F Bonifazi, M Baccarani (131 (151) 47/84)
Bologna, Poli. S Orsola, Clinica pediatrica III, CIC 790, A Pession, A Prete (24 (29) 18/6)
Bolzano, Ospedale S Maurizio (hem), CIC 299, M Casini, P Fabris, P Coser (80 (82) 26/54)
Brescia, Ospedali Civili, CIC 288, G Rossi, C Almici (80 (124) 0/80)
Brescia, Universitá degli Studi di Brescia (peds), CIC 741, F. Porta, A. Ugazio (16 (20) 14/2)
Brindisi, Ospedaliera 'A. Di Summa', Perrino Hospital (hem), CIC 920, G Quarta, S Pinna (14 (14) 0/14)
Busto Arizio, Ospedale di circolo de Busto Arizio, CIC 927, L Montalbetti (11 (11) 0/11)
Cagliari, Ospedale A Businco (hem), CIC 791, P Dessalvi (43 (54) 17/26)
Cagliari, BMT Center CIC 811, G La Nasa (25 (33) 13/12)
Cagliari, Ospedale per le Microcitemie (peds), CIC 812, F Argiolu, A Cao (10 (13) 7/3)
Catania, Ospedale Ferrarotto (hem), CIC 792, G Milone (42 (47) 21/21)
Civitanove-Marche, Unita Operativa Di Medicina Interna, CIC 419, R Centurioni (5 (5) 0/5)
Cremona, Ospedale Maggiore (hem), Medicina II, CIC 226,, F Lanza, P Spedini, M Tajana (7 (11) 0/7)
Cuneo, Hospital S. Croce E Carle (hem), CIC 606, A Gallamini, N Mordini (26 (33) 10/16)
Ferrara, St Anna Hospital (hem), CIC 330, F Lanza, S Moretti, GM Rigolin, A Cuneo (22 (27) 0/72)
Firenze, Ospedale di Careggi (hem, ads + peds), CIC 304 A + B, A Bosi, S Guidi, D Caselli, G Bernini (112 (129) 39/73)
Genova, Università, CIC 139, F Patrone, A Ballestrero (27 (32) 0/27)
Genova, Ospedale S Martino (hem), CIC 217, A Bacigalupo (84 (93) 76/8)
Genova, Istituto Giannina Gaslini (hem, onco), CIC 274, G Dini, E Lanino (50 (61) 29/21)
Genova, Ospedaliera Universitaria San Martino (hem), CIC 987, A Carella (29 (34) 5/24)
Latina, Ospedale S Maria Goretti, CIC 379, A De Blasio, E Zappone (18 (24) 0/18)
Lecce, Ospedale Vitofazzi di Lecce (hem), CIC 868, N Di Renzo (22 (22) 0/22)
Messina, Policlinico Universitario (onco), CIC 669, V Pitini (9 (13) 0/9)
Milano, Ospedale di Niguarda (onco ST), CIC 184, S Siena, P Pedrazzoli, R Schiavo (35 (62) 0/35)
Milano, Ospedale Maggiore di Milano, CIC 265, G Lambertenghi Deliliers (35 (45) 13/22)
Milano, Ospedale Fatebenefratelli e Oftalmico (onco), CIC 269, A Scanni, C Bianchi, D Pedretti (1 (1) 0/1)
Milano, Ospedale di Niguarda (hem), CIC 294, P Marenco, R Cairoli, G Grillo (75 (78) 21/54)
Milano, Istituto Europeo di Oncologia, CIC 331, G Martinelli (52 (62) 10/42)
Milano, 1st. Clinico Humanitas (hem-onco), CIC 354, L Castagna, A Santoro (53 (74) 14/39)
Milano, Istituto Nazionale Tumori (ads, onco, peds), CIC 616, P Corradini, A Gianni, R Luksch (89 (108) 17/72)
Milano, S Carlo Borromeo Hospital (onco), CIC 683, L Tedeschi (2 (2) 0/2)
Milano, Istituto Scientifico HS Raffaele, CIC 813, F Ciceri, M Bregni (110 (147) 75/35)
Mirano, Ospedale Civile (onco), CIC 563, O Vinante, G Bertoldero (7 (7) 0/7)
Modena, University of Modena (hem, onco), CIC 543, F Narni, A Donelli, G Torelli (49 (61) 12/37)
Monza, Ospedale S Gerardo (peds), CIC 279, C Uderzo (26 (27) 23/3)
Monza, Ospedale S Gerardo de 'Tintori, CIC 544, P Pioltelli, E Pogliani (51 (73) 18/33)
Napoli, AORNA Cardarelli, Div. Di Oncologia, CIC 313, C Battista, G Pacilio, B Chiurazzi, G Iodice (10 (10) 0/10)
Napoli, Hospital 'Pausilipon' (hem peds), V Poggi, M Ripaldi (22 (24) 11/11)

Napoli, Cardarelli Hospital (hem), CIC 607, F Ferrara, S Palmieri (44 (57) 0/44)
Napoli, Cardarelli Hospital (hem), CIC 837, V Mettivier (17 (21) 0/17)
Napoli, Federico ll University (hem), CIC 766, B Rotoli, C Selleri, G De Rosa (46 (51) 16/30)
Napoli, National Cancer Institute (hem, onco), CIC 839, A Pinto, G Marcacci (25 (36) 0/25)
Nuoro, Ospedale San Francesco (hem), CIC 793, A Gabbas, A Palmas (7 (10) 0/7)
Orbassano, Ospedale San Luigi Orbassano, CIC 378, G Saglio, A Guerrasio (21 (36)1/20)
Padova, Centro Leucemie Infantili, CIC 285, C Messina, S Cesaro, L Zanesco, S Varotto (37 (44) 17/20)
Padova, Instituto Oncologia Veneto IVO-IRCCS, Oncologia Medica ll, CIC 319, S Aversa, D Marino, A Jirillo, F Canova, C Trentin (6 (6) 0/6)
Palermo, Ospedale die Bambini (peds.hem,onc), CIC 109, O Ziino (12 (13) 3/9)
Palermo, Ospedale V Cervello (hem), CIC 392, R Scimè, A Cavallaro (55 (60) 22/33)
Palermo, Ospedale 'La Maddalena' (hem, onco), CIC 692, M Musso, F Porretto, A Crescinanno (72 (83) 17/55)
Parma, Cattedra di Ematologia, Univ. of Parma, CIC 245, V Rizzoli, M Mangoni (13 (18) 1/12)
Pavia, Policlinico S Matteo (hem), CIC 286, EP Alessandrino (63 (66) 27/36)
Pavia, Policlinico St Matteo (hem, onco, peds), CIC 557, F Locatelli (81 (100) 68/13)
Pavia, Policlinico St Matteo (onco), CIC 562, M Danova (0 (0) 0/0) center under reconstruction.
Pavia, Fondazione S Maugeri (onco), CIC 771, A Zambelli, G Robustelli della Cuna (8 (14) 0/8)
Perugia, Policlinico Monteluce (onco), CIC 573, AM Liberati, FGrignani (no report)
Perugia, Policlinico Monteluce (hem), Università, CIC 794, MF Martelli, F Aversa, A Tabilio (107 (124) 43/64)
Pesaro, Ospedale San Salvatore, CIC 529, G Visani, G Lucarelli (40 (43) 14/26)
Pescara, Ospedale Civile (hem), CIC 248, P di Bartolomeo (47 (57) 32/15)
Piacenza, Ospedale Civile (hem, onco), CIC 163, L Cavanna (23 (26) 0/23)
Pisa, University of Pisa (peds, hem, onco), CIC 795, C Favre (18 (21) 16/2)
Pisa, University of Pisa (ads, hem, onco), CIC 132, M Petrini, F Papineschi (50 (68) 13/37)
Potenza, San Carlo Hospital, CIC 861, A Olivieri, M Cimminiello (18 (20) 4/14)
Ravenna, Ospedale Civile (hem, onco), CIC 306, E Ruffa (25 (31) 0/25)
Reggio di Calabria, Azienda Ospedale 'Riuniti e Morelli', CIC 587, P Iacopino, G Console (68 (76) 22/46)
Reggio Emilia, Arcispedale S Maria Nuova (hem), CIC 660, L Gugliotta (19 (23) 4/15)
Rimini, Ospedale Infermi Rimini (hem.onco), P Fattori (16 (20) 0/16)
Rionero in Vulture, Centro di Riferimento Oncologico della Basilicata (Hem), CIC 185, P Musto, N Di Renzo (7 (13) 0/7)
Roma, Università 'La Sapienza' (hem), Faculty l, CIC 232, R Foa, G Meloni (99 (100) 29/70)
Roma, Ospedale S Camillo (hem), CIC 287, I Majolino, A Locasciulli (33 (38) 20/13)
Roma, Università Cattolica (hem), CIC 307, S Cuore, S Sica, G Leone (60 (82) 19/41)
Roma, Universitario Tor Vergata (hem) CIC 756, Ospedale Bambino Gesu (hem), Regina (145 (172) 51/94)
Roma, Universitario Tor Vergata, CIC 383, G Lucarelli, J Gaziev (19 (19) 19/0)
Roma, Ospedale Bambino Gesu (onco), CIC 796, A Donfrancesco, A Jenkner, A Castellano, L De Sio, R Cozza, P Fidani, C De Laurentis (21 (25) 0/21)
San Giovanni Rotondo, Hospital Casa Sollievo Sofferenza (hem), CIC 526, N Cascavilla, M Corsetti, M Greco (63 (79) 18/45)
Sassari, Universita Di Sassari (hem) CIC 870, M Longinotti (12 (12) 0/12)
Siena, Ospedale Sclavo (hem), CIC 321, F Lauria (38 (43) 14/24)
Taranto, Ospedale Nord (hem), CIC 332, P Mazza, G Palazzo, B Amurri (44 (47) 18/26)
Torino, Azienda Ospedaliera S Giovanni, CIC 231, M Falda, F Locatelli (64 (70) 38/26)
Torino, Ospedale Regina Margherita (peds), CIC 305, F Fagioli, E Vassallo (38 (50) 21/17)
Torino, Ospedale Mauriziano Umberto 1, IRCC, CIC 377, M Aglietta, A Capaldi; F Carnevale (28 (28) 5/23)
Torino, Ospedale S Giovanni (hem), CIC 696, M Boccadoro, M Massaia, C Tarella, B Benedetto, D Caracciolo, A Pileri (82 (108) 18/64)
Tricase (Lecce), Hospital C Panico, CIC 652, V Pavone (36 (41) 10/26)
Trieste, Istituto per I'Infanzia, Clinical Pediatrica, CIC 525, M Andolina (15 (15) 12/3)
Udine, Policlinico Universitario (hem), CIC 705, R Fanin (85 (104) 38/47)
Venezia, Ospedale Civile Riuniti di Venezia (hem), CIC 502, T Chisesi, M Vespignani, M Chinello (15 (17) 3/12)
Verbania-Pallanza, UOA Oncologia Medica, Ospedale di Verbania, CIC 385, A Luraschi (3 (4) 0/3)
Verona, Policlinico G.B.Rossi (hem, onco), CIC 623 + CIC 514, F Benedetti (59 (63) 28/31)
Vicenza, Ospedale S. Bortolo (hem), CIC 797, R Raimondi, F Rodeghiero (49 (56) 20/29)
Viterbo, ASL Viterbo Polo Ospedaliero Centrale, CIC 210. M Montanaro (0 (0) 0/0)

Jordan: (1 team) (85 (90) 46/39)
Amman, King Hussein Cancer Centre (ads, peds), CIC 580, M Sarhan, A Hussein (85 (90) 46/39)

Latvia: (1team) (17 (17) 5/12)
Riga, Clinic Linezers, CIC 583, S Lejniece (17 (17) 5/12)
Lebanon: (2 teams) (29 (32) 2/27)
Beirut, American University of Beirut, CIC 369, A Bazarbachi (29 (32) 2/27)
Beirut, Makassed University Hospital (hem,onco), CIC 418, A Ibrahim (no report)
Liechtenstein: no report
Lithuania: (2 teams) (113 (134) 47/66)
Vilnuis, University Hospital Santariskiu Klinikos (hem), CIC 644, A Slobinas, I Trociukas (104 (125) 42/62)
Vilnuis, University Children's Hospital (hem, onco), CIC 508, J Rascon (9 (9) 5/4)
Luxemburg: (1 team) (5 (5) 0/5)
Luxembourg, Dept of Hematology-Oncology, Centre Hospitalier, S De Wilde (5 (5) 0/5)

Macedonia: (1 team) (25 (25) 6/19)
Skopje, Medical Faculty (hem), CIC 381, B Georgievski (25 (25) 6/19)
Malta: no report
Moldova: no report
Monaco: no report
Montenegro: no report

Netherlands (14 teams) (830 (872) 371/459)
Amsterdam, Academic Medical Center (ads, peds), CIC 247, MJ Kersten, J Zsiros (66 (71) 25/41)
Amsterdam, Free University Hospital (hem), CIC 588, GJ Ossenkoppele (111 (118) 42/69)
Amsterdam, The Netherlands Cancer Institute, CIC 976, S Rodenhuis J Baars (10 (11) 0/10)
Enschede, The Medisch Spectrum Twente, CIC 360, Dr Schaafsma (16 (16) 0/16)
Groningen, University Hospital (hem), CIC 546, G van Imhoff (84 (86) 27/57)
The Hague, Haga Hospital (Leyenburg), CIC 547, PW Wijermans (45 (46) 0/45)
Leiden, University Medical Centre (ads, peds), CIC 203, R Willemze, M Egeler (96 (108) 92/4)
Maastricht, University Hospital (hem, onco), CIC 565, HC Schouten, J Wagstaff (49 (53) 12/37)
Nieuwegein, St Antonius Hospital, CIC 200, HK Koene, G Veth, O de Weerdt (no report)

Nijmegen, University Hospital (ads, peds, onco), CIC 237, A Schattenberg, P Hoogerbrugge (111 (116) 57/54)
Rotterdam, Dr Daniel den Hoed Cancer Center, CIC 246, JJ Cornelissen (136 (136) 54/82)
Rotterdam, Sophia Children's Hospital, CIC 998, R Pieters (6 (11) 0/6)
Utrecht, University Hospital (hem, ads, peds), CIC 239, E Petersen, NM Wulffraat (92 (92) 62/30)
Zwolle, Isala Kliniecken / Sophia Ziekenhuis, CIC 548, M von Marwijk Kooy (8 (8) 0/8)
Norway (6 teams) (244 (270) 77/167)
Bergen, Haukeland Universitets Sjukehus, CIC 197, M Sjo (34 (40) 10/24)
Oslo, Rikshospitalet Radiumhospitalet, CIC 235, D Albrechtsen, L Brinch (75 (80) 59/16)
Oslo, Rikshospitalet Radiumhospitalet (onco), CIC 782, G Lauritzen, S Kvaloy (50 (60) 8/42)
Oslo, Ulleval Universitets Sykehus (hem), F Wislöff, J-M Tangen (50 (50) 0/50)
Tromso, University Hospital of Northern Norway (hem), I M Dahl (17 (17) 0/17)
Trondheim, St Olavs Hospital, J Hammerstrom, A Waage (18 (23) 0/18)

Poland (17 teams) (752 (818) 270/482)
Bydgoszcz, Nicolars Copernicus University (peds, hem, onco), CIC 764, M Wysocki, J Stycznski (15 (16) 7/8)
Gdansk, Medical University (hem), CIC 799, A Hellmann (52 (54) 18/34)
Katowice, Silesian Medical Academy (hem), CIC 677, S Kyrcz-Krzemien (143 (167) 70/73)
Krakow, Jagiellonian University (hem), CIC 553, A Skotnicki (52 (56) 16/36)
Krakow, University Children's Hospital, CIC 507, J Gozdzik (16 (18) 6/10)
Lodz, Medical University of Lodz (hem), CIC 171, T Robak (26 (28) 0/26)
Lublin, Children's University Hospital (hem, onco), CIC 678, J Kowalczyk (17 (19) 12/5)
Lublin, University Medical School (hem, onco), CIC 695, A Dmoszynska, M Wach, A Walter-Croneck, W Legiec (53 (56) 3/50)
Poznan, Institute of Pediatrics, CIC 641, J Wachowiak (18 (20) 17/1)
Poznan, K. Marcinkowski University (hem), CIC 730, M Komarnicki (72 (73) 26/46)
Warsaw, Inst. of Haematology and Blood Transfusion, CIC 693, B Marianska, B Nasilowska-Adamska, A Tomaszewska, M Szczepinski (25 (29) 7/18)
Warsaw, Maria Sklodowska-Curie, Centre of Oncology, CIC 800, J Walewski (47 (48) 0/47)
Warsaw, Central Hospital Military Medical Academy (hem, onco), CIC 816, P Rzepecki, K Sulek, C Szczylik (40 (41) 4/36)
Warsaw, Medical University of Warsaw (hem, onco), CIC 954, W Wiktor-Jedrzejczak, A Deptala, M Rokicka (59 (72) 18/41)
Wroclaw, Lower Silesian Centre for Cellular Transplantation with National Bone Marrow Donor Registry, CIC 538, A Lange (39 (42) 18/21)
Wroclaw, Medical Academy (hem), CIC 699, K Kuliczkowski (20 (20) 5/15)**
Wroclaw, University of Medicine (peds, hem, onco), CIC 817, A Chybicka (57 (58) 43/14)
Portugal (6 teams) (309 (362) 114/195)
Coimbra, University Hospital, CIC 164, N Costa (no report)
Lisbon, Instituto Portugues de Oncologia, CIC 300, M Abecasis (72 (79) 34/38)
Lisbon, Hospital de Santa Maria, CIC 636, J Alves do Carmo, F de Lacerda (42 (50) 25/17)
Lisbon, Hospital de St Antonio dos Capuchos, CIC 826, A Botelho de Sousa (41 (60) 0/41)
Porto, Instituto Portugues de Oncologia, CIC 291, P Pimentel, F Campilho (121 (130) 55/66)
Porto, Hospital S Joao (hem. onco), CIC 329 plus CIC 572, JE Guimaraes, F Principe (33 (43) 0/33)

Romania: (3 teams) (112 (116) 23/89)
Bucharest, Fundeni University Hospital (hem), CIC 427, D Colita, C Arion (43 (43) 4/39)
Targu-Mures, Sectia Clinica de Hematologie, CIC 178, I Benedek (41 (43) 9/32)
Timisoara, Emergency Childrens Hospital 'Louis Turcanu', lll Ped Clinic (hem/onco), CIC 174, M Serban, C Jinca (28 (30) 10/18)
Russia (17 teams) (559 (609) 177/382)
Ekaterinburg, Regional Hospital No. 1, TS Konstantinova, VA Shalaev (35 (41) 4/31)
Kirov, Research Hematological Institute, TP Zagoskina (no report)
Moscow, Russian Children's Hospital (hem), CIC 694, A Maschan, E Skorobogato, E Pachanov (64 (78) 55/9)
Moscow, Cancer Research Center, KN Melkova (33 (40) 1/32)
Moscow, Institute of Biophysics, AE Baranov (7 (13) 0/7)
Moscow, Cancer Research Center peds Hem/onco, G Mentrevich (31 (31) 2/29)
Moscow, Research Hematology Center of RAS, VG Savtchenko (47 (54) 15/32)
Moscow, Main Military Clinical Hospital (hem), SV Shamansky, OA Rukavitcin (19 (19) 5/14)
Moscow, Clinic of Hematology and Cellular Therapy Transplantation Unit, CIC 520, A Novik (94 (94) 0/94)
Moscow, City Clinical Hospital No 38, NA Obidina (no report)
Novosibirsk, Insitute of Clinical Immunology, CIC 376, I Lisukov (38 (39) 4/34)
Samara, Regional Hospital, VA Rossiev (6 (6) 0/6)
St Petersburg, Clinical Center for Advanced Medical Tech, E Podoltseva, V Soldatenkov, O Ryasnyanskaya (no report)
St Petersburg, Research Institute of Hematology, KM Abdulkadyrov (19 (19) 2/17)
St Petersburg, State Pavlov Medical University (hem), CIC 725, BV Afanassiev, L Zubarovskaya (164 (173) 89/75)
St Petersburg, Leningrad Regional Clinical Hospital, IS Zyuzgin (no report)
Yaroslavl, Regional Clinical Hospital (Hem), V A Lapin (2 (2) 0/2)
San Marino: no report

Saudi Arabia (3 teams) (248 (257) 171/77)
Riyadh, King Faisal Specialist Hospital and Research centre (onco, ads hem), CIC 397.1, M Al Jurf (137 (139) 73/64)
Riyadh, King Faisal Specialist Hospital and Research centre (peds hem, onco), CIC 397.2, M Ayas (111 (118) 98/13)
Riyadh, Armed Forces Hospital, CIC 818, A Alabdulaaly (no report)
Serbia (4 teams) (115 (126) 25/90)
Belgrade, Mother and Child Health Institute, CIC 358, D Vujic (20 (21) 5/15)
Belgrade, Clinical Centre of Serbia (hem), CIC 373, J Bila, M Todorovic, D Antic, B Andjelic (19 (22) 0/19)
Belgrade, Military Medical Academy (hem), CIC 582, D Stamatovic (57 (63) 19/38)
Novi Sad, Institute of Internal Diseases, Clinical Centre of Novi Sad (hem), CIC 655, S Popoviæ (19 (20) 1/18)
Slovakia (5 teams) (142 (152) 33/109)
Bansra Bystrica, Roosevelt Hospital (hem), CIC 333, I Markuljak, E Kralikova (11 (13) 0/11)
Bratislava, National Cancer Institute, CIC 560, J Lakota (70 (70) 7/63)
Bratislava, University Hospital (hem), CIC 610, M Mistrik (21 (28) 15/6)
Bratislava, University Hospital, 2nd Children's Clinic, CIC 684, S Sufliarska, J Horàkovà, I Bodova (20 (21) 11/9)
Kosice, University Hospital LF UP JS (hem), CIC 984, E Tothova (20 (20) 0/20)
Slovenia (1 team) (83 (98) 23/60)
Ljubljana, University Medical Centre (hem), CIC 640, J Pretnar (83 (98) 23/60)
South Africa: (10 teams) (183 (195) 82/101)
Bloemfontein, Faculty of Health Sciences Freestate University (hem), V Louw, C Barrett (1 (1) 0/1)
Cape Town, Constantiaberg Medi Clinic (hem), CIC 772:1, P Jacobs, L Wood (9 (11) 5/4)
Cape Town, Constantiaberg Medi Clinic, CIC 772:2, M du Toit (17 (17) 7/10)
Cape Town, UCT Medical School Faculty of Health Sciences (hem), CIC 512, N Novitzky (38 (42) 20/18)
Cape Town, UCT Groote Schuur Hospital (hem), N Novitzky, C du Toit, A McDonald (31 (36) 10/21)

Durban, Albert Luthuli Hospital, V Jogessar (no report)
Johannesburg, Donald Gordon Medical Centre, P Ruff (12 (12) 2/10)
Johannesburg, Garden City Clinic, P du Toit (no report)
Pretoria, Mary Potter Oncology Centre, C Slabber (no report)
Pretoria, Faerie Glen Hospital, J Thomson, D Brittain (75 (76) 38/37)
Spain (67 teams) (1853 (2000) 661/1192)
Alicante, Hospital General, C Rivas-Gonzales (9 (9) 0/9)
Barcelona, Hospital Clinic (hem, onco), CIC 214, E Carreras (70 (83) 30/40)
Barcelona, Santa Creu I Sant Pau (adults), CIC 260, J Sierra, S Brunet (101 (107) 54/47)
Barcelona, Santa Creu I San Pau (peds), CIC 260, I Badell Serra, N Pardo, M Torrent (9 (13) 8/1)
Barcelona, Hospital Vall d'Hebron, Materno Infantil, CIC 422, J Sanchez de Toledo Codina (36 (37) 25/11)
Barcelona, Hospital General Vall d'Hebron, CIC 584, A Julia-Font, E Sanchez (27 (27) 13/14)
Barcelona, Hospital Mutua de Terrasa (hem-onco), T Marti (7 (8) 0/7)
Barcelona, Hospital Universitario Germans Trias i Pujol, CIC 613, J Ribera (45 (50) 18/27)
Barcelona, Hospital Sant Joan de Deu, CIC 668, J Estella Aguado (0 (0) 0/0)
Barcelona, Hospital Duran i Reynals (Hem), Institut Catala d'Oncologia, CIC 759, R Duarte Palomino, C Ferra, J Berlanga, A Fernàndez (41 (44) 18/23)
Caceres, Hospital San Pedro de Alcantara, E Pardal, J Prieto (21 (22) 0/21)
Cadiz, Hospital del SAS de Jérez (hem), CIC 612, JPEddy (37 (40) 10/27)
Cadiz, Hospital Universitario 'Puerta del Mar' (hem), CIC 679, J Muñoz (8 (8) 0/8)
Canary Isles, Las Palmas, Hospital Insular (hem), CIC 335, J Gonzalez-San Miguel (12 (12) 0/12)
Canary Isles, Las Palmas, Hospital Materno-Infantil (peds, hem, onco), J Lodos Rojas, A Molinés (1 (1) 0/1)
Canary Isles, Las Palmas, Hospital Universitario de Gran Canaria 'Dr Negrin', CIC 537, T Molero, R Mataix, C Campo, S Jiménez (28 (28) 11/17)
Canary Isles, Teneriffe, Hospital Universitario de Canarias, L Hernandez Nieto, MT Hernandez Garcia (24 (26) 0/24)
Canary Isles, Teneriffe, Hospital NS De la Candelaria, J Garcia-Talavera, J Breña, P Rios Rull (21 (21) 0/21)
Castellon de La Plana, Hospital General de Castellon (hem), R Garcia-Boyero (7 (8) 0/7)
Cordoba, Hospital Reina Sofia (hem), CIC 238, A Torres Gomez (62 (65) 37/25)
Cruces-Barakaldo, Hospital de Cruces (hem), CIC 393, I Zuazua-Verde, F Floristan (30 (33) 0/30)
Galdakao, Hospital de Galdakao, Hem, CIC 975, J Ojanguren, K Atutxa (12 (13) 0/12)
Granada, Hospital Virgen de la Nieves (hem), CIC 559, M Jurado Checon (27 (29) 10/17)
Jaen, Hospital Cuidad de Jaen (hem), A Alcalam (11 (11) 0/11)
La Coruña, Complexo Hospitalario Universitario La Coruña, CIC 361, FJ Batlle, C Ramirez, P Torres, R González-Rodríguez, R Varela (35 (37) 7/28)
Lérida, Hospital Arnan de Villanova, J Macia (8 (8) 0/8)
Lugo, Hospital Xeral-Calde, M Gonzales-Lopez (9 (9) 0/9
Madrid, Hospital de la Princesa (hem), CIC 236, A Figuera, A Alegre (54 (60) 27/27)
Madrid, Hospital Doce de Octubre (hem, ads), CIC 382, JJ Lahuerta, J De la Serna (48 (48) 4/44)
Madrid, Hospital Ramon y Cajal (ads), CIC 615, J Odriozola, J Pérez de Oteyza, J Lopez, J Garcia Larana (no report)
Madrid, Hospital Ramon y Cajal (peds), CIC 615, A Munoz Villa (3 (3) 1/2)
Madrid, Clinica Puerta de Hierro (hem), CIC 728, MN Fernandez, JR Cabrera Marin (20 (24) 9/11)
Madrid, Hospital Nino Jesus (peds, onco), CIC 732, MA Diaz (46 (50) 34/12)
Madrid, Hospital Universitario San Carlos (hem), CIC 733, J Diaz Mediavilla, L Llorente, R Martinez (24 (24) 0/24)
Madrid, Hospital La Paz Infantil (hem, onco) and Hospital General La Paz (ads), CIC 734, A Martinez-Rubio, A Sastre, F Hernandez-Navarro, M Canales, R Arrieta (49 (52) 19/30)
Madrid, Hospital General Universitario Gregorio Marañon, Servicio de Hematologia-UTMO, (ads), CIC 819, JL Diez Martin, P Balsalobre, J Gayoso, D Serrano, I Buño, A Gomez-Pineda, C Muñoz (35 (38) 24/11)
Madrid, Clinica Moncloa (hem), JM Fernandez-Ranada, A Escudero (5 (6) 0/5)
Madrid, Clinica Ruber, JM Fernandez-Ranada, A Escudero (5 (5) 0/5)
Madrid, Hospital Quirou Madrid (hem, ads), JM Fernandez-Ranada, A Escudero (16 (16) 3/13)
Madrid, Hospital Quirou Madrid (hem, ped), L Madero (1 (1) 0/1)
Madrid, Hospital Universitario de Getafe (hem), F Oña Compan, N Somolinos (7 (7) 0/7)*
Madrid, Fundacion Jimenez Diaz (hem, onco), JL Lopez-Lorenzo, F Lobo, M Callejas (5 (5) 0/5)
Malaga, Carlos Haya Hospital (hem), CIC 576, M Gonzalez, M Pascual (52 (54) 20/32)
Murcia, Hospital Univ. 'Virgen de la Arrixaca', CIC 323, JM Moraleda, A Morales-Lazaro, MJ Majado-Martinez (40 (46) 17/23)
Murcia, Hospital Morales Meseguer, CIC 735, V Vicente-Garcia, I Heras (44 (56) 11/33)
Orense, Hospital Cristal-Pinor (hem), J-L Sastre-Moral (11 (11) 0/11)
Oviedo, Hospital Covadonga (hem), CIC 642, D Carrera Fernandez (39 (41) 12/27)
Palma de Mallorca, Hospital Son Dureta (hem), CIC 722, J Besalduch, M Canaro (34 (38) 11/23)
Palma de Mallorca, Hospital son Llatzer, CIC 110, J Bargay-Lleonart (18 (18) 0/18)
Pamplona, Hospita de Navarra (hem), CIC 577, M Orue, MJ Uriz (24 (25) 0/24)
Pamplona, Clinica Universitaria de Navarra, CIC 737, J Rifon (24 (25) 6/18)
Pontevedra, Hospital Montecelo (hem), A-M Dios Loureiro (11 (11) 0/11)
Salamanca, Hospital Clinico (hem), CIC 727, D Caballero (91 (95) 43/48)
San Sebastian, Hospital Nostra Senora de Aranzazu, CIC 598, R Lasa, J Marin, D Martinez (41 (42) 16/25)
Santander, Hospital Universitario M de Valdecilla (hem), CIC 242, A Iriondo, E Conde (53 (67) 30/23)
Santiago de Compostela, Hospital Xeral de Galicia (hem), CIC 570, JL Bello (27 (28) 11/16)
Sevilla, Hospital Universitario Virgen del Rocio, CIC 769, I Espigadot (66 (73) 22/24)
Tarragona, Hospital de Tarragona Joan XXlll (hem), A Llorente Cabrera (10 (10) 0/10)
Valencia, Hospital Clinico Universitario (hem, onco), CIC 282, C Solano, C Arbona (52 (57) 19/33)
Valencia, Hospital Infantil La Fe (peds, onco), CIC 653, V Castel, A Verdeguer, J M Fernandez (20 (23) 8/12)
Valencia, Hospital Universitario La Fe (hem), CIC 663, MA Sanz, GF Sanz (98 (107) 59/39)
Valencia, Hospital Doctor Peset (hem), P Ribas Garcia (9 (9) 0/9)
Valencia, Instituto Valenciano de Oncologia, I Picon (10 (10) 0/10)
Valladolid, Hospital Rio Hortega, CIC 611, J Garcia Frade (14 (15) 0/14)
Vigo, Complexo Hospitalario Universitario de Vigo (hem), CIC 421, C Albo-Lopez (23 (24) 3/20)
Vigo, Hospital Xeral-Cies, A Martinez-Dalmau (no report)
Zaragoza, Clinico Universitario Lozano Blesa (hem, onco), CIC 531, M Gutierrez (9 (9) 0/9)
Zaragoza, Hospital Miguel Servet (hem + onco), D Rubio-Félix, A Anton (24 (25) 11/13)
Sweden (8 teams) (510 (573) 171/339)
Goteborg, CHECT (ads + peds), CIC 289, M Brune, A Fasth (89 (107) 31/58)
Linköping, University Hospital (hem), CIC 740, C Malm (55 (56) 14/41)
Lund, University Hospital (hem), CIC 283, S Lenhoff (73 (81) 26/47)
Malmö, University Hospital, T Ahlgren (8 (10) 0/8)
Örebro, University Hospital (hem, onco), CIC 738, U Tidefelt (23 (27) 0/23)
Stockholm (Huddinge), Karolinska University Hospital (hem, onco), CIC 212, P Ljungman (135 (142) 63/72)

Umea, Norrland University Hospital, CIC 731, A Wahlin, V Lazarevic, J Lindh, B Markevärn (47 (55) 12/35)
Uppsala, University Hospital (ads + peds), CIC 266, G Oberg (80 (95) 25/55)
Switzerland (9 teams) (400 (455) 150/250)
Aarau, Kantonsspital (hem, onco), CIC 316, M Wernli, M Bargetzi (18 (20) 0/18)
Basel, Kantonsspital (hem, onco), CIC 202, A Gratwohl, D Heim, J Halter, T Kühne (79 (96) 49/30)
Bellinzona, Ospedale San Giovanni (hem, onco), CIC 829, F Cavalli, M Ghielmini, L Leoncini (11 (16) 0/11)
Bern, Inselspital (ads, peds, hem, onco), CIC 221, K Leibundgut, M Fey, T Pabst, D Baerlocher (59 (71) 0/59)
Geneva, Hôpital Cantonal Universitaire (hem, onco), CIC 261, J Passweg, C Helg, Y Chalandon, H Ozsahin, M Ansari (45 (47) 45/0)
Lausanne, CHUV (hem, onco), CIC 820, M Duchosal, A Rosselet, S Leyvraz, N Ketterer (66 (72) 0/66)
St Gallen (hem, onco), Kantonsspital, CIC 324, U Hess (10 (11) 0/10)
Zurich, University Hospital (ads, hem, onco), CIC 208, U Schanz, G Stüssi, C Renner (87 (96) 35/42)
Zurich, University Hospital (peds, hem, onco), CIC 334, R Seger, T Güngör (25 (26) 21/4)
Tunisia (1 team) ((88 (103) 42/46)
Tunis, Centre National de Greffe de Moelle Osseuse, CIC 183, B Othman-Tarck (88 (103) 42/46)

Turkey (29 teams) (950 (1013) 400/550)
Adana Yuregir, Baskent University Adana Research and Training (hem), CIC 589, H Ozdogu (23 (24) 12/11)
Ankara-Sihhiye, Hacettepe University (hem), CIC 168, H Goker, O Ozcebe, I Haznedaroglu, S Dundar (22 (23) 14/8)
Ankara-Besevler, Gazi University (hem), CIC 169, G Sucak (66 (79) 33/33)
Ankara, Hacettepe University, Institute of Oncology, CIC 292, E Kansu, E Özdemir (31 (37) 0/31)
Ankara-Etlik, GATA BMT Center, CIC 372, F Arpaci, A Özet, C Beyan, A Ural (62 (62) 14/48)
Ankara, Ihsan Dogramaci Childrens Hospital, CIC 399, ATuncer, D Uckan (20 (25) 20/0)
Ankara, University School of Medicine (hem), CIC 617, G Gürman, M Arat (102 (120) 34/68)
Ankara, University of Ankara (peds), CIC 620, E Unal (22 (24) 21/1)
Ankara, Numune Education and Research Hospital, CIC 691, G. Özet (34 (37) 8/26)
Ankara, Bayinder Hospital (hem), CIC 412, S Dincer (12 (12) 3/9)
Ankara, Ankara Oncology Research & Education Hospital, CIC 423, F Altuntas (0 (0) 0/0)
Antalya, Akdeniz University Hospital (peds), CIC 618, MA Yesilipek, V Hazar, A Kupesiz (43 (46) 38/5)
Antalya, Akdeniz University Hospital (hem), CIC 685, L Undar (44 (44) 20/24)
Antalya, Medical Park Hospitals (hem, onco), CIC 919, Y Koc (22 (25) 4/18)
Aydin, Adnan Menderes University Medical Faculty (hem), CIC 187, Z Bolaman (0 (0) 0/0)
Balcali (Adana), Cukurova University Hospital (peds, onco), CIC 821:1, A Tanyeli (5 (6) 5/0)
Balcali (Adana), Cukurova University Hospital (ads, onco), CIC 821:2, B Sahin (no report)
Eskisehir, Osmangazi University, CIC 686, Z Gülbas (37 (37) 17/20)
Gaziantep, University Medical School, CIC 402, M Pehlivan (0 (0) 0/0)
Istanbul, Marmara University (hem), Altunizade, CIC 714, T Akoglu, M Bayik (34 (34) 6/28)
Istanbul, University of Istanbul, CIC 760, D Sargin, S Kalayoglu-Besisik (41 (41) 17/24)
Istanbul, Cerrahpasa Medical School, CIC 761, B Ferhanoglu, T Soysal, M Cem Ar (49 (49) 14/35)
Istanbul, University of Istanbul Pediatric BMT Unit (peds, hem, onco), CIC 400, O Öztürk (10 (10) 10/0)
Istanbul, Yeditepe University Hospital (hem), CIC 416, S Karti (1 (1) 0/1)
Izmir, Ege University Medical Faculty (peds), CIC 621, S Kansoy (29 (30) 28/1)
> Izmir, Ege University Medical Faculty (ads, hem, onco), CIC 628 + 368, S Cagirgan, F Buyukkececi, M Töbü, G Saydam (96 (98) 21/75)
Izmir, Dokuz Eylul University (onco), CIC 688, H Özsan (47 (47) 7/40)
Kayseri, Erciyes University Hospital (hem, onco), CIC 627, A Unal, M Cetin (89 (92) 46/43)
Trabzon, Karadeniz Technical University (hem), CIC 170, E Ovali (8 (8) 7/1)

Ukraine: (2 teams) (49 (51) 3/46)
Kiev, Kiev City BMT Center, CIC 176, E Karamanescht, V Khomenko, I Korenkova, S Borodkin (49 (51) 3/46)
Kiev, Kiev Regional Oncologic Hospital (peds, hem, onco), CIC 177, S Donska, O Ryzhak (no report)
United Kingdom (53 teams) (2591 (2784) 1106/1485)
Aberdeen, The Royal Infirmary (hem), CIC 344, DJ Culligan (16 (17) 4/12)
Bangor, Gwynedd Hospital (hem, onco), CIC 736, D Edwards (16 (16) 0/16)
Bath, Royal United Hospital (hem), CIC 619, C Knechtli (11 (11) 0/11)
Belfast, Belfast City Hospital (hem), CIC 268, F Jones, MF McMullin, TCM Morris, P Abram (52 (54) 13/39)
Birmingham, Heartlands Hospital (hem), CIC 284, DW Milligan (57 (60) 22/35)
Birmingham, Queen Elizabeth Hospital (hem), CIC 387, C Craddock, P Mahendra (141 (148) 65/76)
Birmingham, The Birmingham Childrens Hospital (hem), CIC 781, S Lawson (33 (39) 24/9)
Blackpool, Victoria Hospital, CIC 832, MP Macheta (15 (15) 0/15)
Bournemouth, Royal Bournemouth Hospital (hem), Poole Hospital, Dorset Cancer Centre and Salisbury District Hospital, CIC 765, S Killick, J Cullis (18 (19) 0/18)
Bristol, Royal Hospital for Children (allo, ads, peds) + Avon Haematology Unit (auto), CIC 386, JM Cornish, S Robinson (116 (121) 75/41)
Cambridge, Addenbrooke's Hospital (hem), CIC 566, C Crawley, RE Marcus, J Craig, H Balsdon, T Chapman (68 (72) 22/46)
Cardiff, University Hospital of Wales (hem), CIC 303, KMO Wilson, AK Burnett, JA Whittaker, CH Poynton (54 (61) 22/32)
Cheltenham, Cheltenham General Hospital, CIC 398, E Blundell (12 (12) 0/12)
Coventry, University Hospital & Warwickshire NHS Trust, Dr Bakhari (12 (13) 0/12)
Dudley, The Dudley Group of Hospitals NHS Trust (hem), CIC 405, S Fernandes (9 (9) 0/9)
Dundee, Ninewells Hospital (hem), CIC 719, D Meiklejohn (7 (7) 0/7)
Edinburgh, Western General Hospital, (hem) CIC 228, PRE Johnson, J Davies, F Scott, PH Roddie, P Shepherd (40 (43) 6/34)
Exeter, Royal Devon and Exeter Hospital (hem), CIC 571, C Rudin (9 (10) 0/9)
Glasgow, Royal Infirmary and the Western Infirmary, CIC 244, IG McQuaker, A Parker T Fitzsimons (97 (99) 49/48)
Glasgow, Royal Hospital for Sick Children (hem), CIC 707, B Gibson (20 (21) 13/7)
Ipswich, The Ipswich Hospital NHS Trust (hem), CIC 128, N Dodd (8 (9) 0/8)
Leeds, St James's University Hospital, The General Infirmary, Pinderfields Hospital CIC 254, M Gilleece, S Kinsey, MC Galvin (108 (110) 41/67)
Leicester, Royal Infirmary (hem), CIC 713, AE Hunter (57 (63) 29/28)
Liverpool, Royal Liverpool University Hospital (hem), CIC 501, RE Clark, A Pettitt (50 (51) 23/27)
Liverpool, Alder Hay, CIC 773, M Caswell (9 (9) 6/3)
London, Hammersmith Hospitals NHS Trust, CIC 205, J Apperley, E Olavarria, E Kanfer, A Rahemtulla, R Szydlo (96 (111) 36/60)
London, Royal Free Hospital (hem), CIC 216, S Mackinnon (55 (58) 38/17)
London, Royal Marsden Hospital (hem), CIC 218, M Potter (163 (177) 70/93)
London, University College Hospital (hem), CIC 224, K Thomson (143 (150) 49/94)

London, Great Ormond Street Hospital, CIC 243, P Veys (62 (70) 48/14)
London, The London Clinic (hem), CIC 263 M. Potter P, Gravett (18 (19) 9/9)
London, St George's Hospital (hem), CIC 539, EC Gordon-Smith, S Ball (16 (18) 10/6)
London, Guy's Hospital (hem), CIC 721, M Kazmi (42 (48) 20/22)
London, King's College (hem), CIC 763, A Pagliuca (132 (146) 75/57)
London, St Bartholomew's, CIC 768 and the Royal London Hospital, J Gribben, J Cavenagh, S Agrawal, T Lister (96 (105) 45/51)
London, St Mary's Hospital, CIC 866, J de La Fuente, JD Cavenagh, S Agrawal, T Lister (17 (19) 17/0)
Manchester, Royal Children's Hospital, CIC 521, R Wynn (27 (27) 22/5)
Manchester, The Royal Infirmary, CIC 601, JA Yin (55 (57) 33/22)
Manchester, Christie Hospital (hem), CIC 780, E Liakopoulou (90 (100) 27/63)
Newcastle upon Tyne, Royal Victoria Infirmary and the Sunderland Royal Hospital, CIC 276, GH Jackson, SJ Proctor, P Taylor, A Cant, R Skinner PJ Carey (111 (121) 59/52)
Norwich, Norfolk and Norwich Hospital (hem), CIC 391, M Lawes, G Turner (14 (15) 0/14)
Nottingham, City Hospital, CIC 717, N Russell, JL Byrne, AP Haynes, A McMillan (120 (129) 48/72)
Oxford, John Radcliffe Hospital (hem, onco), Headington and Wycombe General, CIC 255, TJ Littlewood, C Bunch, C Mitchell, C Hatton, G Hall, J Wainscoat (75 (80) 27/48)
Plymouth, Derriford Hospital, CIC 823, MD Hamon (39 (45) 10/29)
Salisbury NHS Foundation Trust, CIC 757, J Cullis (4 (4) 0/4)
Salford, Hope Hospital, JB Houghton (4 (4) 0/4)
Sheffield, Sheffield Teaching Hospitals NHS Foundation Trust CIC 778/1, J Snowden, & Sheffield Children's Hospital NHS Foundation Trust CIC 778/2, A Vora (65 (72) 24/41)
Somerset, Taunton and Somerset Hospital S Bolam, SA Johnson (10 (10) 0/10)
Southhampton, CRC Wessex, CIC 704, K Orchard, A Duncombe, J Kohler (74 (79) 25/49)
Stoke-on-Trent, University Hospital of North Staffordshire (hem), CIC 394, R Chasty (12 (14) 0/12)
Swansea, Singleton Hospital, CIC554, Skett, S Al Ismail (7 (7) 0/7)
Swindon, Great Western Hospital (Hem), CIC 608, N E Blesing, A Gray, S Green, A Koster (9 (10) 0/9)

Total: 26 810 (30 293) 10 782/16 028)

* Late report, not included in the analysis
** Late correction, not included in the analysis