1.1. Patients with cancer discussed at the multidisciplinary team meeting (QC-6)

1.1.1. Documentation sheet

Description	Proportion of patients with a new diagnosis of cancer who were discussed at the multidisciplinary team meeting (MDT, MOC-COM[a])
Calculation	**Numerator**: Number of patients diagnosed with an invasive cancer in a given year discussed at the MDT within 1 month before and 6 months after incidence date **Denominator**: Number of patients diagnosed with an invasive cancer in a given year (first tumour only)
Rationale	Multidisciplinary team meetings have been implemented in many countries as the predominant model of cancer care to ensure that all patients receive timely diagnosis and treatment, that management of the tumour is evidence-based, and that there is continuity of care. In all cancer guidelines developed by the KCE and the College of Oncology, multidisciplinary discussion is recommended to decide on the cancer diagnosis, staging and treatment plan. They are financed in Belgium since 2003, and have been strongly encouraged by the National Cancer Plan since then.[1]
Data source	Belgian Cancer Registry (BCR), incidence years 2004-2020, linked to IMA-AIM data.
Technical definitions	The nomenclature codes for the coordination of a MDT (MOC-COM) are the following: • first MOC-COM (350372-350383) • Participation in multidisciplinary MOC-COM (350394-350405, 350416-350420) • follow-up MOC-COM (350276-350280) • additional MOC-COM (350291-350302) • supplementary fees for oncologists (350453-350464, 350475-350486). Selection of patients: • new diagnoses of invasive cancer registered in the BCR (no in situ tumours), incidence years 2004-2020 The following cases were excluded from the analyses: • Second and subsequent invasive tumours for the same patient during one incidence year (only the first tumour per incidence year is taken into account) • Patients without a Belgian residence • Patients without national social security number • Patients for whom no IMA data in the year of incidence were available (≈2% of the selected patients)

[a] COM: consultation multidisciplinaire en oncologie, MOC: multidisciplinair oncologisch consult

	To account for the fact that the date of diagnosis is sometimes slightly inaccurate and that small administrative mistakes in the health insurance data are possible, a MDT was searched for each patient within a time frame of 1 month before and 6 months after incidence date.
International comparability	No data are readily available from other countries. Data on multidisciplinary discussion are only sporadically published.
Limitations	No information is available on the quality of the discussion, and there are some financial incentives for hospitals to organise MDT meetings (the financing of extra manpower in oncological centres is directly linked to the number of patients discussed during MDT in a centre during a given year). As the delay on the invoice data (i.e. IMA-AIM data) can prolong up to 2 years after the actual date that the MDT was organised, the proportion of MDTs from the last included incidence year of the analysis (in this case 2020 may be a slight underestimation.[1] Although extremely useful to assess MDT practice at the population level, working with administrative billing databases entails some limitations in the interpretation of the results.[4] First, although MDT coverage is frequently used as a parameter of quality of care (Stordeur et al., 2012),[5] no information is available on the actual quality of discussions between specialists. Second, only financed MDT meetings were analysed, leading to an underestimation of reality; discussions with experts of the field revealed that many patients are discussed during an MDT pre- and postoperatively. As billing rules define that only one MDT per year can be financed and the postoperative MDT with the full treatment plan is preferred for billing, the latter may fall outside the timeframe of one month before until 6 months after incidence date of the tumour. A financing for the organisation of a "reference MDT meeting" to allow experts from reference centres to discuss more complex cases at a (inter)national level should be foreseen to fairly recognise the contribution of these clinical experts (Stordeur, Vrijens, & Leroy, 2016).[6]
Dimension	Quality: Continuity-Coordination of care
Related indicators	Cancer 5-year survival rate (breast, colorectal)
Reviewers	Cindy De Gendt (BCR)

Background

In Belgium, MDT meetings are financed since 2003 by the National Institute for Health and Disability Insurance (RIZIV – INAMI). MDT meetings are not obligatory according to the Belgian legislation for every new cancer diagnosis. Indeed, the law stipulates only four situations in which the discussion of a case in a MDT is mandatory: (1) when an oncological treatment deviates from the hospital's oncology manual, (2) when re-irradiation of a same target zone is envisaged within 12 months after the start of the first radiotherapy, (3) when chemotherapy is delivered with a drug that, in its first reimbursement phase, is to be monitored by a MDT and (4) from 2007 onwards, for every new breast cancer diagnosis treated in a recognised breast clinic. Nonetheless, the National Cancer Plan launched in 2008 encouraged the implementation of MDT meetings as an essential step in the clinical pathway of each new cancer case. In 2009, financial incentives have been set up to fund the supportive oncology staff members (i.e., psychologists, nurses, social workers, dieticians and data managers); they are based on the number of billed MDT meetings in preceding years per oncological centre. Hence, the more MDTs are billed, the more supportive staff the oncological centre can recruit. In general, financing was limited to one MDT per patient per calendar year. In 2010, a differentiation was introduced allowing different financed MDT meetings per patient along the care pathway in a few specific situations (i.e. a "follow-up MDT meeting" when the diagnosis and/or the treatment plan is altered and/or when re-irradiation is scheduled within 12 months after initiation of the first radiotherapy, and a "supplementary MDT meeting" when a patient is referred to another hospital to complete the diagnosis and the treatment plan). In addition, the maximum possible number of intramuros specialists being reimbursed for attending a MDT meeting increased from 4 to 5, and

some specialists (in medical oncology, haematology, paediatric oncology and paediatric haematology) received a supplementary fee when attending or coordinating the MDT meeting. The general practitioner of the patient can also participate in the meeting.

1.1.2. Results

Belgium

In 2004 (the first full year after the start of the financing of multidisciplinary discussion of patients diagnosed with cancer in Belgium), only 52.5% of the cancer patients were discussed during a multidisciplinary team meeting. In 2010, 78.9% of the patients benefited from this meeting and this proportion increased further to 90.4% in 2020. The proportion of cancer patients discussed at a MDT varies between different types of cancer, but this variability between tumour types is less pronounced in the more recent years (see Table 1).

In both 2019 and 2020, patients with breast cancer are the most often discussed in a MDT (95.5% in 2020), contrasting with malignant melanoma (75.6% in 2020) and even less (67.5% in 2020) for unknown primary and ill-defined sites cases (Table 1 and Figure 1).

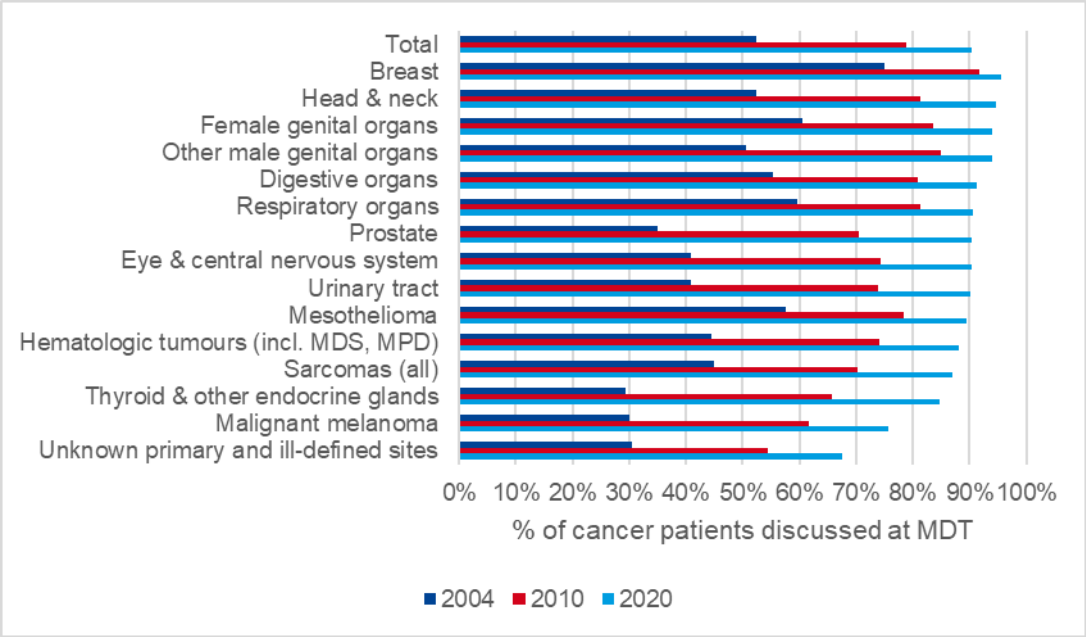
Table 1 – Proportion of cancer patients discussed at multidisciplinary team meeting, per tumour group (2004-2020)

Year	2004			2010			2019			2020		
Localisation	N of Patients	N of MDT	% MDT	N of Patients	N of MDT	% MDT	N of Patients	N of MDT	% MDT	N of Patients	N of MDT	% MDT
C00-C14, C30-C32 Head & neck	2 340	1 225	**52.4%**	2 338	1 899	**81.2%**	2 624	2 467	**94.0%**	2 407	2 279	**94.7%**
C15-C26 Digestive organs	11 148	6 178	**55.4%**	13 121	10 611	**80.9%**	14 048	12 908	**91.9%**	13 192	12 042	**91.3%**
C33-C39 Respiratory organs	6 822	4 066	**59.6%**	7 660	6 231	**81.3%**	8 575	7 813	**91.1%**	8 549	7 740	**90.5%**
C40-C41, C46-C49 Bones, articular cartilage, soft tissue & Kaposi sarcoma	503	226	**44.9%**	513	360	**70.2%**	605	510	**84.3%**	664	577	**86.9%**
C43 Malignant melanoma	1 327	398	**30.0%**	2 032	1 255	**61.8%**	3 577	2 684	**75.0%**	3 454	2 611	**75.6%**
C45 Mesothelioma	224	129	**57.6%**	249	195	**78.3%**	282	256	**90.8%**	248	222	**89.5%**
C50 Breast	9 194	6 894	**75.0%**	10 029	9 205	**91.8%**	11 233	10 770	**95.9%**	10 795	10 307	**95.5%**
C51-C58 Female genital organs	3 014	1 825	**60.6%**	3 059	2 555	**83.5%**	2 964	2 801	**94.5%**	3 026	2 843	**94.0%**
C61 Prostate	8 857	3 104	**35.0%**	8 370	5 909	**70.6%**	9 807	8 753	**89.3%**	9 302	8 415	**90.5%**
C60, C62, C63 Other male genital organs	295	149	**50.5%**	399	339	**85.0%**	473	446	**94.3%**	526	494	**93.9%**

C64-C68 Urinary tract	3 376	1 377	**40.8%**	3 960	2 922	**73.8%**	4 670	4 155	**89.0%**	4 500	4 059	**90.2%**
C69-C72 Eye & CNS	817	334	**40.9%**	901	670	**74.4%**	1 058	974	**92.1%**	965	872	**90.4%**
C73-C75 Thyroid & other endocrine glands	618	182	**29.4%**	900	591	**65.7%**	1 015	814	**80.2%**	890	754	**84.7%**
C81-C96 Hematologic tumours (incl. MDS, MPD)	4 534	2 015	**44.4%**	5 810	4 300	**74.0%**	7 506	6 507	**86.7%**	7 002	6 164	**88.0%**
C76, C80 Unknown primary and ill-defined sites	1 152	350	**30.4%**	796	434	**54.5%**	680	451	**66.3%**	634	428	**67.5%**
Total. excl. non-melanoma	54 221	28 452	**52.5%**	60 137	47 476	**78.9%**	69 117	62 309	**90.2%**	66 154	59 807	**90.4%**
Total, excl. non-melanoma, MDS, MDP	53 526	28 176	**52.6%**	59 046	46 706	**79.1%**	67 354	60 800	**90.3%**	64 576	58 430	**90.5%**

Note: Abbreviations: MDS: Myelodysplastic syndrome, MPD: Myeloproliferative Disorder, CNS: Central Nervous System
Source: Belgian Cancer Registry (BCR) data linked to data of the Intermutualistic Agency (IMA – AIM)

Figure 1 – Proportion of cancer patients discussed at multidisciplinary team meeting, per tumour group (2004-2020)



Note: Sarcomas (all): Bones, articular cartilage, soft tissue & Kaposi sarcoma
Source: Belgian Cancer Registry (BCR) data linked to data of the Intermutualistic Agency (IMA – AIM)

A paper[4] published on similar Belgian data (BCR-IMA) focused on seven different cancer types (female breast cancer, prostate cancer, lung cancer, rectal cancer, malignant melanoma, acute leukaemia and soft tissue sarcoma) in patients diagnosed between 2004 and 2011 (n= 205 062 patients). More detailed analyses in this paper provide further insight into the current results. For example, the positive trend over time in coverage rate by MDT meetings seemed independent of the stage of the disease for all cancer types, except for melanoma: in 2011, patients with stage I were less discussed (66%) in MDT than those with stage III disease (98%). This is probably due to the fact that these patients are not automatically referred to a hospital but are often diagnosed and treated ambulatory, particularly for non-advanced stages (in ambulatory dermatology practices). In this case, diagnoses are reported directly to the BCR by the laboratory for pathological anatomy.

In general, age seemed to play an important role in considering a patient for a MDT discussion; elderly patients (i.e., ≥80 years) were less often discussed during a MDT meeting for all cancer types. This underuse of MDT meetings for elderly patients is regrettable: even when a patient is unfit to undergo a curative treatment, an MDT meeting remains extremely useful to determine in a multidisciplinary way which strategy could be helpful for the patient taking into account the results of the geriatric assessment and the frailty of the patient, whatever its intent, curative or palliative.

Regional comparison

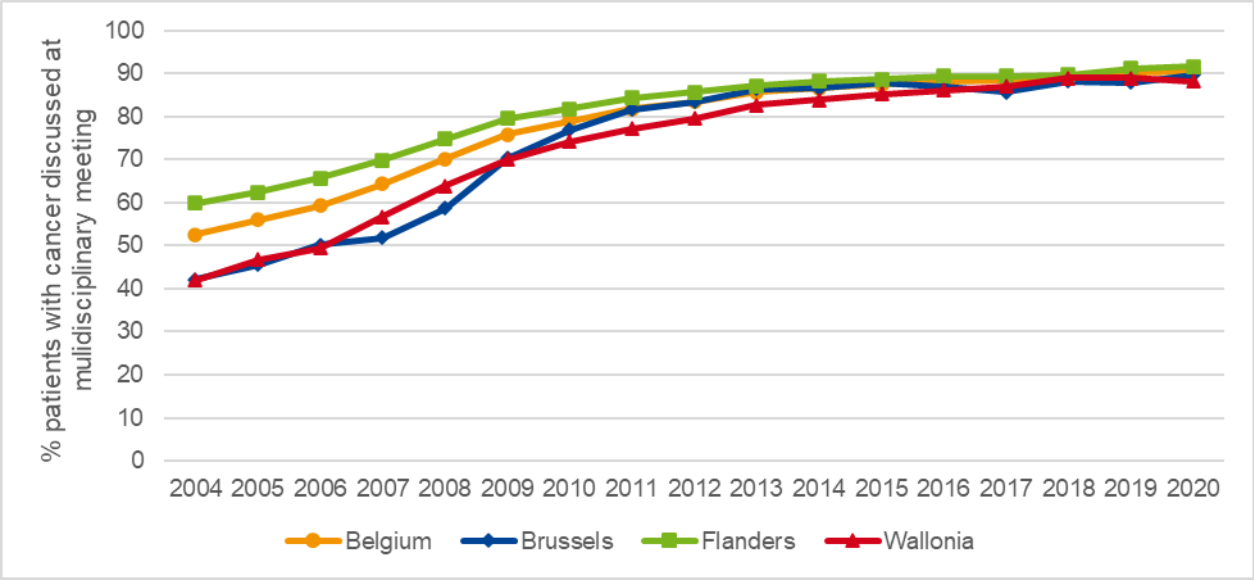
The clear regional differences in MDT that were observed at the introduction of the MDT meetings in the nomenclature for reimbursement (i.e. 2004, Flanders 59.8%, followed by Brussels 42.1% and Wallonia 42.0%) tend to diminish. Cancer patients diagnosed in 2020 were only slightly more frequently discussed at the MDT in Flanders (91.6%), followed by Brussels (89.3%) and Wallonia (88.2%) (Table 2 and Figure 2).

Table 2 – Proportion of cancer patients discussed at multidisciplinary team meeting, per region (2004-2020)

	2004			2010			2019			2020		
	N Patients	N MDT	% MDT	N Patients	N MDT	% MDT	N Patients	N MDT	% MDT	N Patients	N MDT	% MDT
Belgium	54 221	28 452	**52.5%**	60 137	47 476	**78.9%**	69 117	62 309	**90.2%**	66 154	59 807	**90.4%**
Brussels	4 339	1 825	**42.1%**	4 891	3 760	**76.9%**	5 022	4 408	**87.8%**	4 663	4 165	**89.3%**
Flanders	31 847	19 046	**59.8%**	36 024	29 465	**81.8%**	41 724	38 003	**91.1%**	40 717	37 310	**91.6%**
Wallonia	18 035	7 581	**42.0%**	19 222	14 251	**74.1%**	22 371	19 898	**88.9%**	20 774	18 332	**88.2%**

Source: Belgian Cancer Registry (BCR) data linked to data of the Intermutualistic Agency (IMA – AIM)

Figure 2 – Proportion of cancer patients discussed at multidisciplinary team meeting, per Region (2004-2020)



Source: Belgian Cancer Registry (BCR) data linked to data of the Intermutualistic Agency (IMA – AIM)

Impact of COVID-19 pandemic

Unknown.

Key points

- **Since the introduction of specific nomenclature codes for the multidisciplinary team meeting (MDT, MOC-COM) in 2003, a rapid increase in its use is noticed for all cancer types. Overall, about 90.4% of cancer patients diagnosed in 2020 were discussed at the MDT within one month before until six months after incidence date (compared to 52.5% in 2004 and 78.9% in 2010).**
- **There is variability in use of the MDT between different cancer types (highest in breast cancer with 95.5%, lowest in malignant melanoma of the skin (75.6% in 2020) and unknown primary and ill-defined sites cases with 67.5% in 2020).**
- **An increasing use of the MDT is noticed for all three Regions throughout the period 2004-2020.**
- **Moreover, initial (i.e. in 2004) marked regional variability in use of the MDT, with the highest results in Flanders, has clearly reduced in the more recent years. In 2020 cancer patients are only slightly more frequently discussed at the MDT in Flanders (91.6%), followed by Brussels (89.3%) and Wallonia (88.2%).**

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