



13.3. Cancer patients who received chemotherapy in the last 14 days of life (EOL-3)

13.3.1. Documentation sheet

Description	Patients with cancer receiving chemotherapy in the last 14 days of life
Calculation	Numerator: number of patients receiving chemotherapy in the last 14 days of life Denominator: number of patients diagnosed with cancer that died within the studied time period
Rationale	The main goal of palliative care is to improve or at least maintain quality of life in patients near death. In this way curative treatments, such as active cancer treatment in case of oncological patients, are stopped and the main focus of therapy becomes pain and symptom control. This indicator serves as a measure of the aggressiveness of care in the last days of life of cancer patients.
Data source	Belgian Cancer Registry (BCR), linked with IMA data
Technical definitions	<p>It is currently not possible to identify all palliative patients in administrative databases or in registries. Therefore, the indicator has been restricted to patients diagnosed with cancer having a poor prognosis and deceased during the study period.</p> <p><u>Inclusion Criteria</u></p> <p>Incidence years: 2006-2015</p> <p>Tumour selection based on the Pallcare project ¹ : combination of topography and morphology according to Eurocare-4 ^{2 3}, and Eurocare-5 ⁴: see EOL-1</p> <p>Patients deceased before January 1st 2017</p> <p>Age at diagnosis >=18 years</p> <p><u>Exclusion Criteria</u></p> <p>Patients with more than one invasive tumour (until 2015)</p> <p>Patients without a Belgian residence</p> <p>Patients without national social security number</p> <p>Patients for whom no IMA data of the year of death were available (=3.9%)</p> <p>Patients with an uncertain date of diagnosis</p> <p><u>Maximum 3 years of follow-up</u></p> <p>Analyses were limited to patients who died before January 1st of the third year following the year of incidence. For example: patients diagnosed in 2006 were included in case they died in 2006, 2007 or 2008; patients diagnosed in 2007 were included in case they died in 2007, 2008 or 2009, etc. These cohorts were defined in order to assure that for every diagnosis, the same follow-up period could be taken into account. By applying this definition, a bias induced by varying length of the follow-up period could be avoided.</p> <p><u>Chemotherapy</u></p> <p>Drug (ATC) selection: ATC category L01, minus some products that are (also) used in non-oncological settings (e.g. Ledertrexate, Celecoxib). More precisely, L01 covers systemic therapy with exclusion of hormonal therapy. L01 not only covers chemotherapy but also PKI and monoclonal Ab.</p>



Limitation	<p>The real proportion is probably higher than the presented results, as patients may receive chemotherapy within sponsored clinical trials. In this case, the product may be provided by the sponsoring company and therefore it will not be detected within reimbursed data.</p> <p>No information on aggressiveness of care in terminal patients without the diagnosis of cancer.</p> <p>A variety of agents (i.e. ATC L01 all together) are included in the analyses, as far as toxicity-profile, way of administration (orally versus IV).</p>
International comparability	This is not an international indicator. Some results are available in national reports or in specific scientific articles.
Dimension	Quality (appropriateness)
Key words	End of life care; aggressiveness of care

13.3.2. Results

An average of 10.7% of the cancer patients who died in the period between 2008 and 2015, received chemotherapy in the last 14 days of their life (see Table 124). Over the last four studied years there was a downward evolution from 11.2% in 2012 to 9.2% in 2015 (see). A slightly higher proportion of patients with chronic tumour types received chemotherapy in the last 14 days of life, compared to patients with acute tumour types (13.6% versus 10.3%). Within both categories (i.e. acute and chronic tumour type) more

variation is noted between individual tumour types: the proportion of patients who received chemotherapy in the last 14 days of life ranged from 3.5% for brain cancer to 37.0% for chronic myeloid leukaemia (see Table 125). Also, generally higher percentages are observed in haematological tumours, e.g. 32.3% for acute myeloid leukaemia, 35.7% for acute lymphatic leukaemia and 37.0% for chronic myeloid leukaemia.

A slightly higher proportion of patients received chemotherapy just before death in the Walloon Region compared to the Brussels-Capital and Flanders Region (10.9% vs 9.7% and 7.5%, respectively).

Table 124 – Proportion of patients who received chemotherapy in the last 14 days of life, by year of death (deaths in 2006, 2007 and 2016 excluded, maximum 3 years of follow-up)

	All Tumours			Acute Tumours			Chronic Tumours		
	Total	N with chemotherapy in the last 14 days of life		Total	N with chemotherapy in the last 14 days of life		Total	N with chemotherapy in the last 14 days of life	
	N	n	%	N	n	%	N	n	%
2008	9 585	1 046	10,9	8 360	896	10,7	1 225	150	12,2
2009	9 462	1 034	10,9	8 233	874	10,6	1 229	160	13,0
2010	9 871	1 169	11,8	8 598	989	11,5	1 273	180	14,1
2011	9 936	1 114	11,2	8 745	957	10,9	1 191	157	13,2



	All Tumours			Acute Tumours			Chronic Tumours		
2012	10 040	1 123	11,2	8 781	923	10,5	1 259	200	15,9
2013	10 087	1 060	10,5	8 864	868	9,8	1 223	192	15,7
2014	10 003	1 003	10,0	8 835	854	9,7	1 168	149	12,8
2015	9 838	905	9,2	8 634	763	8,8	1 204	142	11,8
Total	78 822	8 454	10,7	69 050	7 124	10,3	9 772	1 330	13,6

Table 125 – Proportion of patients receiving chemotherapy in the last 14 days of life by tumour type (all patients, maximum 3 years of follow-up)

	Total	n with chemotherapy	
	N	n	%
Acute	84 602	8 688	10,3
• Oesophagus	4 967	354	7,1
• Stomach	7 014	367	5,2
• Liver, primary	3 995	213	5,3
• Gallbladder and biliary Tract	2 357	106	4,5
• Pancreas	10 298	1 008	9,8
• Lung, bronchus and trachea	47 365	5 625	11,9
• Pleura	1 703	76	4,5
• Brain	4 479	155	3,5
• Acute myeloid leukaemia	2 424	784	32,3
Chronic	11 890	1 605	13,5
• Head and Neck	5 034	557	11,1
• Small Intestine	655	27	4,1
• Nasal cavities and sinuses	363	19	5,2
• Ovary and uterine adnexa	3 068	361	11,8
• Multiple Myeloma	1 983	353	17,8
• Acute lymphatic leukaemia	238	85	35,7



• Chronic myeloid leukaemia	549	203	37,0
Total	96 492	10 293	10,7

Source: BCR linked to IMA data

Table 126 – Proportion of patients who received chemotherapy in the last 14 days of life, by region (year of death=2015, incidence year 2006-2009 excluded)

	All Tumours			Acute Tumours			Chronic Tumours		
	Total	N with chemotherapy in the last 14 days of life		Total	N with chemotherapy in the last 14 days of life		Total	N with chemotherapy in the last 14 days of life	
	N	n	%	N	n	%	N	n	%
Brussels-Capital Region	903	88	9,7	761	73	9,6	142	15	10,6
Flemish Region	6426	483	7,5	5505	396	7,2	921	87	9,4
Walloon Region	3996	435	10,9	3328	349	10,5	668	86	12,9
Total	11325	1006	8,9	9594	818	8,5	1731	188	10,9

Source: BCR linked to IMA data

Key points

- **The administration of chemotherapy during the last days of life of patients dying from cancer is an indicator of the aggressiveness of care.**
- **Belgian data demonstrate that at least one out of ten cancer patients received chemotherapy in the last 14 days of life (average of 10.7% of the cancer patients who died in the period between 2008 and 2015).**
- **Substantial variation in the administration of chemotherapy in the last 14 days of life is observed between different tumour types, with generally high percentages in haematological tumour types in comparison to other tumour types.**

References

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