Ludwig Boltzmann Institut
Health Technology Assessment

Quality in Cancer Care: Activities in and Experiences from Austria

December 16th, 2014

Krakow

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3 chapters

1. **Method: HSO/ Horizon Scanning in Oncology**
2. **National Roadmap for Coordinated Cancer Care**
3. **Indicators to measure quality of cancer care**

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Comparator Report on Patient Access to Cancer Drugs in Europe

February 15, 2009

Nils Wilking MD PhD, Karolinska Institutet, Stockholm, Sweden
Bengt Jönsson, Professor, Stockholm School of Economics, Stockholm, Sweden
Daniel Högberg, i3 Innovus, Stockholm, Sweden
Nahila Justo, i3 Innovus, Stockholm, Sweden

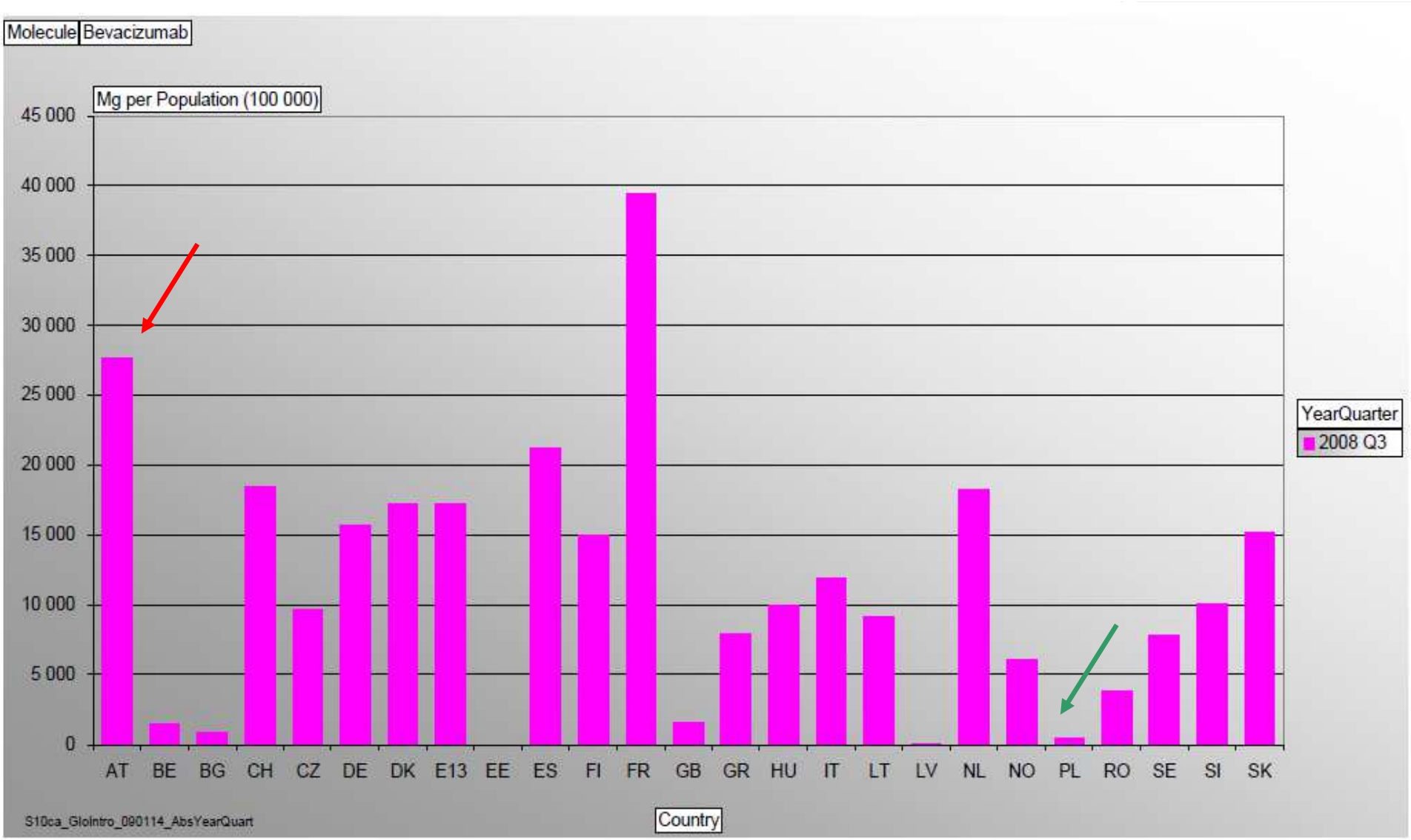

Figure 3-27. Usage of bevacizumab in 2007, expressed as sales in mg/100,000 inhabitants in E13 as well as 24 European countries. Please note that bevacizumab is also indicated for breast-, lung- and renal cell cancer.

Wilking N, Jönsson B.Comparator Report on Patient Access to Cancer Drugs in Europe Jänner 2009. Verfügbar unter: http://www.comparatorreports.se/

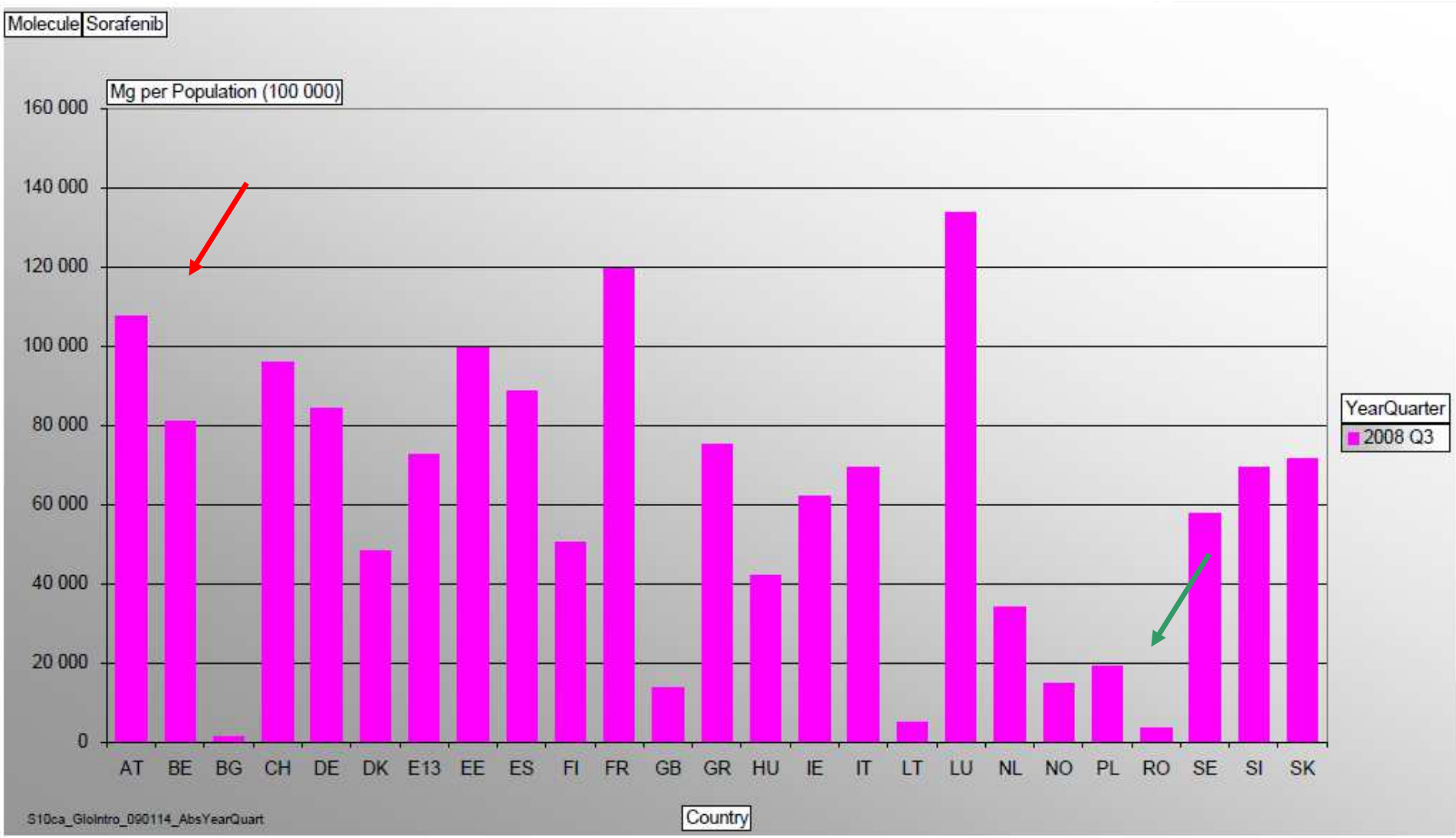

Figure 3-45. Usage of sorafenib in 2007, expressed as sales in mg/100,000 inhabitants in E13 and 24 European countries.

Wilking N, Jönsson B.Comparator Report on Patient Access to Cancer Drugs in Europe Jänner 2009. Verfügbar unter: http://www.comparatorreports.se/

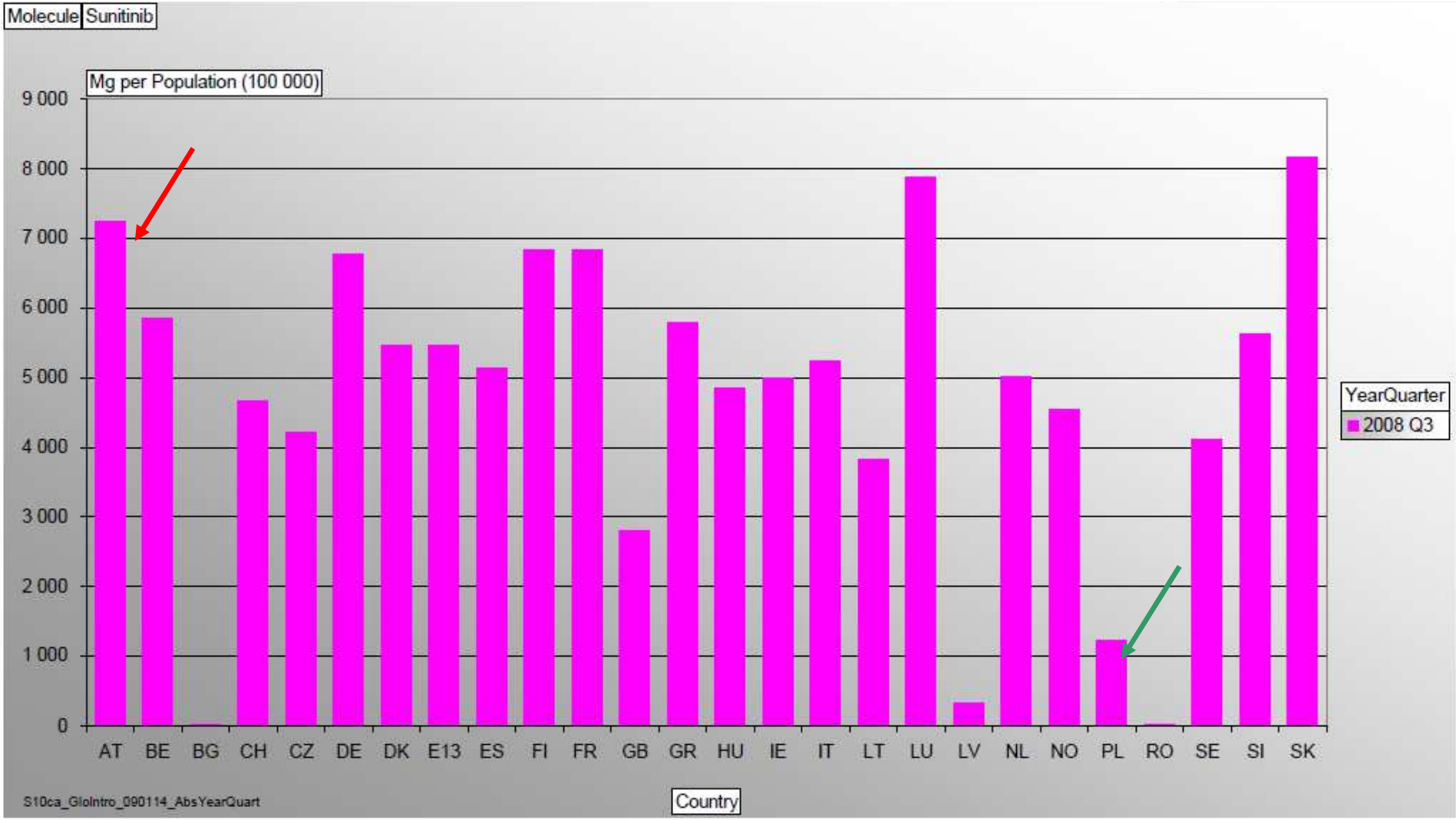

Figure 3-47. Usage of sunitinib in 2007, expressed as sales in mg/100,000 inhabitants in E13 and 25 European countries

Wilking N, Jönsson B.Comparator Report on Patient Access to Cancer Drugs in Europe Jänner 2009. Verfügbar unter: http://www.comparatorreports.se/

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2008: "early assessment"

(horizon scanning, early awareness & alert systems, early warning systems)

- To identify anticancer drugs with relevant therapeutic and financial impact
- To provide information to decision makers
  - Contribute to rational decision making
  - Facilitate estimation of budget implication for „real" innovations

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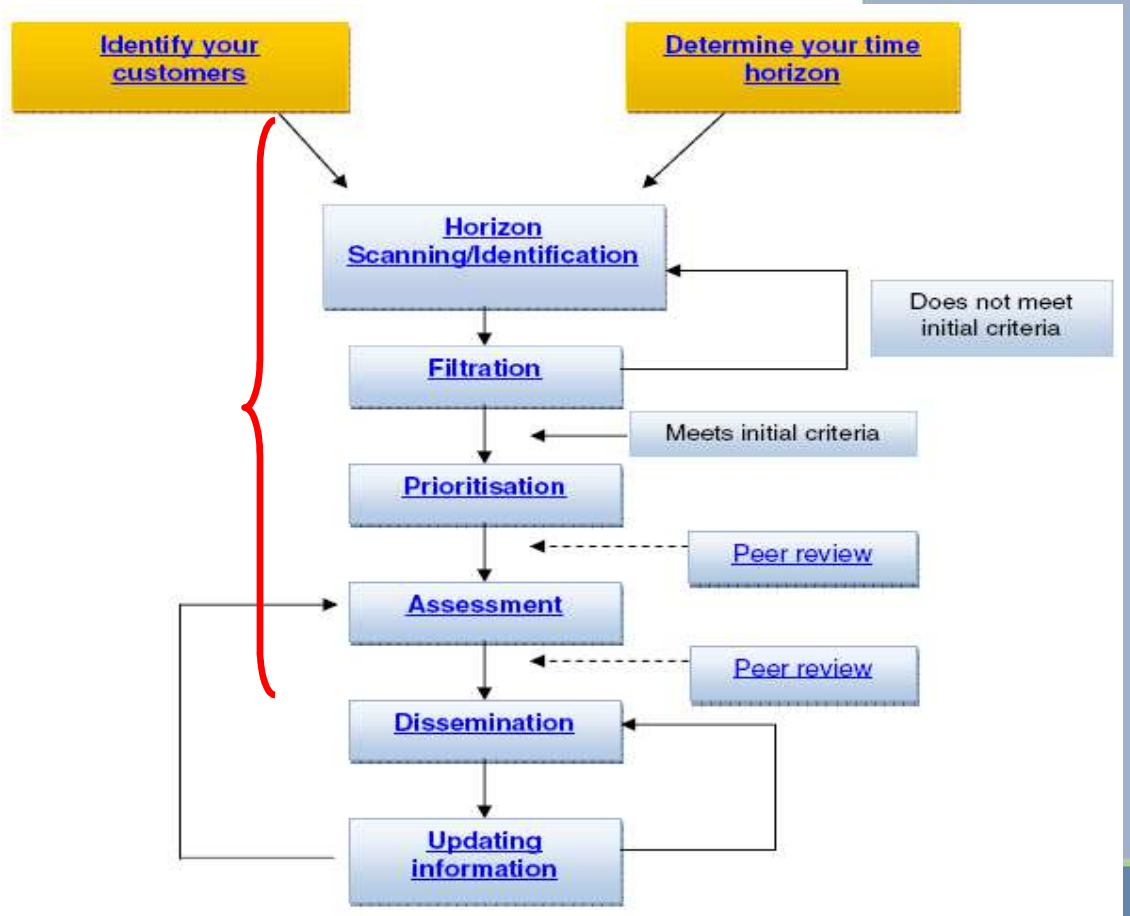
HSS stages

1. Scanning
2. Identification
3. Filtration
4. Prioritisation
5. Assessment
6. Dissemination



Source: „A toolkit for the identification and assessment of new and emerging health technologies“. EuroScan 2009

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1. Scanning

	E-Mail notification	once/ week	once/ month	once/ 6- 12 months
FDA oncology drug updates	X			
EMA Newsletter RSS-Feeds	X	X	X	
JCO, Blood, The Lancet, NEJM	X	X		
The Lancet Oncology, Annals of Oncology	X		X	
ASCO, ASH, ESMO annual meeting				X
EuroScan		X		

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2. Identification
Data extraction

PrioDate	drug name (brand name)	Company/ Developer	Short Drug description (substance categorie, mode of action)	Patient indications (detailed information on line of treatment, cancer stage etc)	Cancer Incindence in Austria (Source: Statistik Austria, 2006; new cases per year, absolute numbers, all stages) cancer / incidence	stage of development (phase III and later stages)	completed phase III trial with available data (Yes/No - duration of phase III) clinicaltrials.gov (ID)	Is the technology already approved for other indications (incl. Orphan drug designation) by the EMA?	Is the technology already approved for other indikations (incl. Orphan drug designation) by the FDA?	costs in € (if available) NA = not available Source: ami-info (AVP) or AID (hospital)
	Bexarotene (Targretin)	Cephalon	inhibition of Retinoid-X-Rezeptors, synthetic retinoid, orally	Targretin Capsules/Cisplatin/Vinorelbine Versus Cisplatin/Vinorelbine in Chemotherapy-Naive Patients With Advanced or Metastatic Non-Small Cell Lung Cancer	Lung cancer, all forms 3903	Phase III	YES - NCT00050973 completed 2004	Targretin capsules are indicated for the treatment of skin manifestations of advanced stage cutaneous T-cell lymphoma (CTCL) patients refractory to at least one systemic treatment since March 2001.	for the treatment of cutaneous manifestations of cutaneous T-cell lymphoma in patients who are refractory to at least one prior systemic therapy - since 2004	Targretin 75mg Weichkapseln 100 St.: € 1,432.8
	Bexarotene (Targretin)	Cephalon	inhibition of Retinoid-X-Rezeptors, synthetic retinoid, orally	Comparing Targretin Capsules/Carboplatin/Paclitaxel Versus Carboplatin/Paclitaxel in Chemotherapy-Naïve Patients With Advanced or Metastatic Non-Small Cell Lung Cancer	Lung cancer, all forms 3903	Phase III	Yes - NCT00050960 completed 03/2005	Targretin capsules are indicated for the treatment of skin manifestations of advanced stage cutaneous T-cell lymphoma (CTCL) patients refractory to at least one systemic treatment since March 2001.	for the treatment of cutaneous manifestations of cutaneous T-cell lymphoma in patients who are refractory to at least one prior systemic therapy - since 2004	Targretin 75mg Weichkapseln 100 St.: € 1,432.8
	Bortezomib (Velcade)	Janssen-Cilag	a first-in-class proteasome inhibitor	VELCADE With Rituximab or Rituximab Alone in Subjects With Relapsed or Refractory, Rituximab Naive or Sensitive Follicular B-Cell Non-Hodgkin's Lymphoma	Non-Hodgkin Lymphoma 991	Phase III	NO - NCT00312845 until 08/2010	VELCADE in combination with melphalan and prednisone is indicated for the treatment of patients with previously untreated multiple myeloma who are not eligible for high-dose chemotherapy with bone marrow transplant since July 2008. VELCADE is indicated as monotherapy for the treatment of progressive multiple myeloma in patients who have received at least 1 prior therapy and who have already undergone or are unsuitable for bone marrow transplantation since March 2005.	Multiple Myeloma and for Mantle Cell Lymphoma since 2003 and 2008	Velcade 1mg vial: € 421.35 Velcade 3.5mg vial: € 1,243.2

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3. Filtration

- Phase III results available OR application submitted to FDA/EMA
- 2 researchers

	A	B	L	M	N	O	P	Q	R	S	T
1	PrioDate	drug name (brand name)	Date of 1st announcement	Source(s) - Lit.No.	Entry in EuroScan database	ASCO Abstract/ presentation	ASH Abstract	Pubmed - publications / Journal	COMMENTS	WEB-LINKs	Evidenzupdate
26		Brentuximab vedotin, SGN-35	14.10.10	Medscape Pharmacist (426)	NHSC 01/2011 NHSC 01/2011	NO	NO	NO	lt. Firmenhomepage orphan drug designation **May 2011: FDA is reviewing brentuximab and will make separate decisions on the two applications (Hodgkin's disease and a type of lymphoma) by Aug. 30 (Lit 475)**	http://www.medscape.com/viewarticle/729509?src=mpnews&spon=7&uac=107625MK	09.05.2011
27		Calcitriol, DN 101, Asentar	NA	NA	no	No (only phase II)	no	Cancer. 2008 Jan 15;112(2):326-30	**April 2011: Phase III Study of Calcitriol in Castration-Resistant Prostate Cancer Disappoints (Lit 473)**	no weblink available	27.04.2011
28	Okt.09	Canfosfamide, TLK286 (Telcyta)	05.11.2008, 31.05.2009	drugs information (81), drugs.com (355)	NO	2007 ASCO Meeting Abstract Nr LBA5528 und LBA5529, 2009 ASCO annual meeting Abstr #5552	NO	Eur J Cancer. 2009 Sep;45(13):2324-32	experts commented that more studies are needed. New evidence available - not many alternatives available		01.09.2009

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4. Prioritisation

- Quarterly
- 8 experts
  (5 Oncologists,
  3 Pharmacists)
- 6 criteria

Drug XY	
Choose Category	Highly relevant – assessment Relevant – monitor Not relevant – drop off
Are there already other treatment regimen(s) available for this specific indication or is this drug a completely new therapy?	Treatment available New therapy
Will the new drug replace a current drug regimen or is it an add-on therapy for this indication?	Add-on Replacement New therapy
Is there potential for a significant health benefit to the patient group (high clinical impact)?	Major Minor
Is there potential for a significant impact on drug budgets if the technology diffuses widely (because of expected moderate to high unit costs and/or because of high patient numbers)?	Major Minor
Is there potential for inappropriate use (off-label) of the technology?	Major Minor
Expert's Comment(s)	

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Horizon Scanning in Oncology

Results
20th Prioritisation – 3rd quarter 2014

No	Filtered Drugs - 20th prioritisation 3rd quarter 2014	Overall category
1.	Ramucirumab (Cyramza®) for the second-line therapy of stage IV NSCLC	Relevant
2.	Exemestane (Aromasin®) for premenopausal women with endocrine responsive breast cance	Relevant
3.	Idelalisib (GS-1101) for relapsed chronic lymphocytic leukaemia	Highly relevant
4.	Lenalidomide (Revlimid™) induction/maintenance therapy in patients with newly diagnosed multiple myeloma	Highly relevant
5.	Lenalidomide (Revlimid™) for first line therapy in transplant-ineligible patients with multiple myeloma	Highly relevant
6.	Trebananib (AMG 386) for recurrent epithelial ovarian, primary peritoneal or fallopian tube cancers	Relevant
7.	Enzalutamide, MDV3100 (Xtandi®) in chemotherapy-naive patients with castration resistant prostate cancer	Highly relevant

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5. Assessment

- Drugs rated „highly relevant“ by majority of experts
- English
- ~14 p
- Efficay and Safety (only)
- Literature search: EMBASE, OVID, CRD Database, Cochrane Library, free text search, manufacturer
- No grading of quality of evidence, no recommendations

- Discussion on patient-relevant endpoints: Prolongation of survival, Relief/ prevention of symptoms/ complications of disease, Improved quality of life, Reduction of syptomatic toxicity compared with standard therapy, prolongation of disease-free survival

http://hta.lbg.ac.at/page/horizon-scanning-in-der-onkologie-berichte

Nov 2014:

48 Early Assessment + 3 Priorisation-Documents

Ca 10-12 p.a.

Onco-Drugs: OS/ Overall survival (2009-12)

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Produktname	Arzneistoff	Indikation/Erkrankung	OS
Afinitor®	Everolimus	Nierenzellkarzinom	0
Afinitor®	Everolimus	Pankreas	0
Yondelis®	Trabectedin	Weichteilsarkom	0
Hycamtin®	Topotecan	Lungenkrebs	0
MabThera®	Rituximab	diffuses großzelliges B-Zell Lymphom	
MabThera®	Rituximab	chronische lymphoblastische Leukämie/CLL	
Sutent®	Sunitinib	Pankreaskarzinom	
Glivec®	Imatinib	chronische myeloische Leukämie/ CML	
MabCampath®	Alemtuzumab	diffuses großzelliges B-Zell Lymphom	
Sprycel®	Dasatinib	chronische myeloische Leukämie/CML	
Tasigna®	Nilotinib	chronische myeloische Leukämie	
Zevalin®	Ibritumomab tiuxetan	follikuläre NHL vom B-Zell-Typ	0
MabThera®	Rituximab	follikuläres Lymphom	
Tarceva®	Erlotinib	Bauchspeicheldrüsenkrebs	+ 12 Tage
Teysuno®	Tegafur/Gimeracil/Oteracil	Magenkrebs	+ 21 Tage
Xeloda®	Capecitabin	Darmkrebs	27 Tage
Xeloda®	Capecitabin	Magenkrebs	+ 36 Tage
Avastin®	Bevacizumab	Brustkrebs	+ 51 Tage
Erbitux®	Cetuximab	Darmkrebs	+ 51 Tage
Sutent®	Sunitinib	gastrointestinale Stromatumoren/ GIST	+ 1,8 Monate
Avastin®	Bevacizumab	Nierenkrebs	+ 60 Tage
Vectibix®	Panitumumab	Darmkrebs	+ 60 Tage
Avastin®	Bevacizumab	Lungenkrebs	+ 60 Tage
Tarceva®	Erlotinib	Lungenkrebs	+ 60 Tage
Hycamtin®	Topotecan	Eierstockkrebs	+ 2,2 Monate
Jevtana®	Cabazitaxel	Prostatakrebs	+ 2,4 Monate
Votrient®	Pazopanib	Nierenzellkarzinom	+ 2,4 Monate
Tyverb®	Lapatinib	Brustkrebs	+ 2,4 Monate
Halaven®	Eribulin	Brustkrebs	+ 2,5 Monate
Torisel®	Temsirolimus	Mantle Zelllymphom/MCL	+ 2,5 Monate
Javlor®	Vinflunine	Urothelkarzinom	+ 2,6 Monate
Pixuvri®	Pixantrone dimaleate	NHL vom B-Zell-Typ vom B-Zell-Typ	+ 2,6 Monate
Erbitux®	Cetuximab	Kopf-und Halskrebs (2st line)	+2,7 Monate
Alimta®	Pemetrexed	Lungenkrebs	+ 2,8 Monate
Alimta®	Pemetrexed	Brustfellkrebs	+ 2,8 Monate
Nexavar®	Sorafenib	Leberzellkarzinom	+ 2,8 Monate
Hycamtin®	Topotecan	Gebärmutterhalskrebs	+ 2,9 Monate
Irissa®	Gefitinib	Lungenkrebs	+ 2,9 Monate
Afinitor®	Everolimus	Nierenzellkarzinom	+ 3,0 Monate
Hycamtin®	Topotecan	Lungenkrebs	+ 3,0 Monate
Xeloda®	Capecitabin	Brustkrebs	+ 3,0 Monate
Yondelis®	Trabectedin	Ovarialkarzinom	+ 3,3 Monate
Nexavar®	Sorafenib	Nierenzellkarzinom	+ 3,4 Monate
Irissa®	Gefitinib	nicht kleinzelliger Lungenkrebs (1st line)	+ 3,5 Monate
Torisel®	Temsirolimus	Nierenzellkarzinom	+ 3,6 Monate
Zelboraf®	Vemurafenib	Melanom mit BRAF V600-Mutation	+ 3,6 Monate
Yervoy®	Ipilimumab	Melanom	+ 4,0 Monate
Herceptin®	Trastuzumab	Magenkrebs	+ 4,2 Monate
Zytiga®	Abiraterone acetate	Prostatakrebs	+ 4,6 Monate
Avastin®	Bevacizumab	Darmkrebs	+ 4,7 Monate
Sutent®	Sunitinib	Nierenzellkarzinom	+ 4,5 Monate
Afinitor®	Everolimus	Bauchspeicheldrüsenkrebs	+ 6,4 Monate
Herceptin®	Trastuzumab	Brustkrebs	+ 7,0 Monate
Vidaza®	Azacitidine	Myelodysplastisches Syndrom	+ 9,5 Monate
Velcade®	Bortezomib	Multiples Myelom/MML	+ 13,3 Monate
Erbitux®	Cetuximab	Kopf-und Halskrebs	+ 19,7 Monate

25% no add-on in OS

50% several days to 3 months

25% more than 3 months

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Challenges (= problems)

1. Not-representativeness of study population
2. Study-designs (cross over, comparators)
3. Validity of surrogate endpoints
4. Severity of AE/ discontinuation due to AE
5. Orphan drugs – lack of evidence
6. Validity of Companion Diagnostics

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The latest version is at http://jco.ascopubs.org/cgi/doi/10.1200/JCO.2013.53.8009

JOURNAL OF CLINICAL ONCOLOGY | ASCO SPECIAL ARTICLE

American Society of Clinical Oncology Perspective: Raising the Bar for Clinical Trials by Defining Clinically Meaningful Outcomes

Lee M. Ellis, David S. Bernstein, Emile E. Voest, Jordan D. Berlin, Daniel Sargent, Patricia Cortazar, Elizabeth Garrett-Mayer, Roy S. Herbst, Rogerio C. Lilenbaum, Camelia Sima, Alan P. Venook, Mithat Gonen, Richard L. Schilsky, Neal J. Meropol, and Lowell E. Schnipper

Clinically for patients meaningful outcomes: at least (relative) + 20% OS

- At least 3-5 months OS add-on
- If less, good data on better QoL necessary

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ASCO's Value in Cancer Care Task Force: „cost-benefit score card for cancer drugs"

"Financial Toxicity" Scale For Cancer Treatments Suggested.

Medscape (9/12, Castellino) reports Nandita Khera, MBBS, MPH, from the Division of Hematology/Oncology at the Mayo Clinic in Phoenix proposed in an essay published online September 8 in the Journal of Clinical Oncology "a provocative and novel use of the Common Terminology Criteria for Adverse Events (CTCAE) from the National Cancer Institute" to grade cancer treatment's "financial toxicity." S. Yousuf Zafar, MD, MHS, associate professor of medicine at Duke Cancer Institute, Durham, North Carolina, said that identifying the issue early allows physicians to advocate for patients and connect them with resources. The American Society of Clinical Oncology's (ASCO) "Quality Care Symposium next month will highlight this issue in its opening session." Also, ASCO "is developing a cost-benefit score card for cancer drugs with the intent that **'drugs that offer borderline benefits to patients, but sell at a premium, would find themselves without ASCO backing**.'" Dr. Zafar said, "ASCO's Value in Cancer Care Task Force has been focused on this issue for quite some time. The Task Force is working to integrate value considerations into medical decision-making."

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Nov 2014:
56 Onco-Drug Assessements in EUnetHTA POP Db

2 von 3 Institutionen
15 von 2 Institutionen zeitgleich

Topic (Drug and indication)	Agency 1	Agency 2	Agency 3
Dabrafenib for the treatment of BRAF V600 mutation-positive unresectable or metastatic melanoma	ZIN	NICE	AHTAPol
Pertuzumab for breast cancer (HER2 positive, metastatic)	NICE	ZIN	Reg.Veneto

Environment analysis
(worldwide, engl./german only !)

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Drug	Indication	FDA approval date	EMA approval date	Early assessment reports of other HTA institutes
Gefitinib	1st-line NSCLC	05/2003	06/2009	NHSC 01/2003 (before EMA approval) CADTH 02/2004 (before EMA approval) NICE 07/2009 (1 month after EMA approval) NETSCC 11/2009 (5 months after EMA approval) HAS 11/2009 (5 months after EMA approval) **LBI-HTA 12/2009 (6 months after EMA approval)** NCPE 11/2010 (17 months after EMA approval) Ontario Ministry of Health 12/2010 MSAC 12/2010 BCBS 03/2011 CADTH 04/2011
Everolimus	Advanced/metastatic kidney cancer	03/2009	08/2009	NHSC 04/2008 (before EMA approval) **LBI-HTA 09/2009 (1 month after EMA approval)** AKDAE 11/2009 (3 months after EMA approval) HAS 01/2010 (5 months after EMA approval) NETSCC 03/2010 (7 months after EMA approval) NICE 04/2011 (19 months after EMA approval)
Lapatinib	1st-line advanced/metastatic breast cancer	01/2010	06/2010	NHSC 07/2005 (before EMA approval) HAS 07/2007 (before EMA approval) NCPE 01/2008 (before EMA approval) NOKC 06/2008 (before EMA approval) NHSC 01/2010 (before approval) **LBI-HTA 05/2010 (around EMA approval)** AKDAE 12/2010 (7 months after EMA approval) CVZ 06/2011 (13 months after EMA approval) SMC 01/2012 (20 months after EMA approval)

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13 Collabs on onco drugs (among 5 agencies)

1. LBI-HTA + AHTAPol: **Dasatinib (Sprycel®) for the 1st-line treatment of Philadelphia-chromosome positive chronic myeloid leukaemia in the chronic phase; April 2011**
2. LBI-HTA + HTA Centre Bremen: **Second-line chemotherapy with Cabazitaxel (Jevtana®) for the treatment of castration-resistant metastatic prostate cancer; May 2011**
3. LBI-HTA + AHTAPol + UVEF (Reg. Veneto): **Eribulin (Halaven®) as third- or late-line monotherapy for advanced/metastatic breast cancer, July 2011**
4. LBI-HTA + HTA Centre Bremen: **Abiraterone acetate (Zytiga™) as 2nd-line therapy for the treatment of metastatic castration-resistant prostate cancer after docetaxel therapy; December 2011**
5. LBI-HTA + ULSS20: **Vemurafenib for patients with BRAF V600E mutation positive advanced/metastatic melanoma; January 2012**
6. LBI-HTA + ULSS20: **Axitinib (Inlyta®) for the 2nd-line treatment of metastatic renal cell carcinoma; February 2012**
7. LBI-HTA + UVEF (Reg. Veneto) + AHTAPol: **Lenalidomide (Revlimid®) for the treatment of low /intermediate-1 risk myelodysplastic syndrome with chromosome 5q deletion; May 2012**
8. LBI-HTA + ULSS20: **Ipilimumab for the first line therapy of advanced/metastatic melanoma; July 2012**
9. LBI-HTA + ULSS20: **Lenalidomide (Revlimid®) for the first-line therapy of transplant-ineligible patients with multiple myeloma; November 2012**
10. LBI-HTA + ULSS20:**Trametinib for advanced or metastatic BRAF V600E mutation-positive melanoma; January 2013**
11. LBI-HTA + AHTAPol + ULSS20:**Trastuzumab emtansine (Kadcyla™) for previously treated patients with HER2-positive advanced/metastatic breast cancer; June 2013**
12. LBI-HTA + ULSS20 + AHTAPol: **Radium-223 dichloride (Xofigo®) for the treatment of patients with castration-resistant prostate cancer, symptomatic bone metastases and no known visceral metastatic disease; March 2014**
13. LBI-HTA + ULSS20 + AHTAPol: **Obinutuzumab (Gazyva®) for previously untreated patients with chronic lymphocytic leukaemia; June 2014**

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BUNDESMINISTERIUM
FÜR GESUNDHEIT

2014

Krebsrahmenprogramm Österreich

Tabellarische Kurzfassung

Inhaltsverzeichnis

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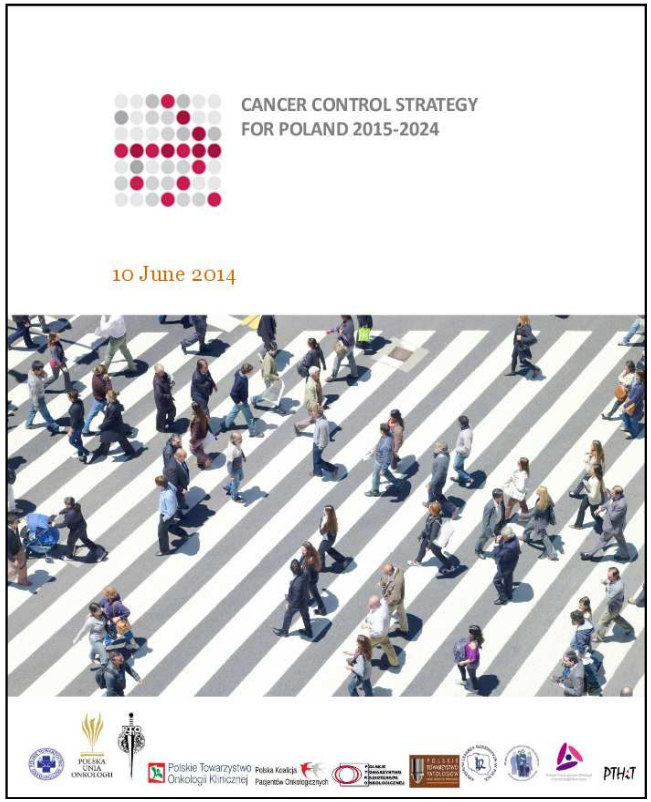
Poland 2014, Germany 2012, Switzerland 2010 etc.



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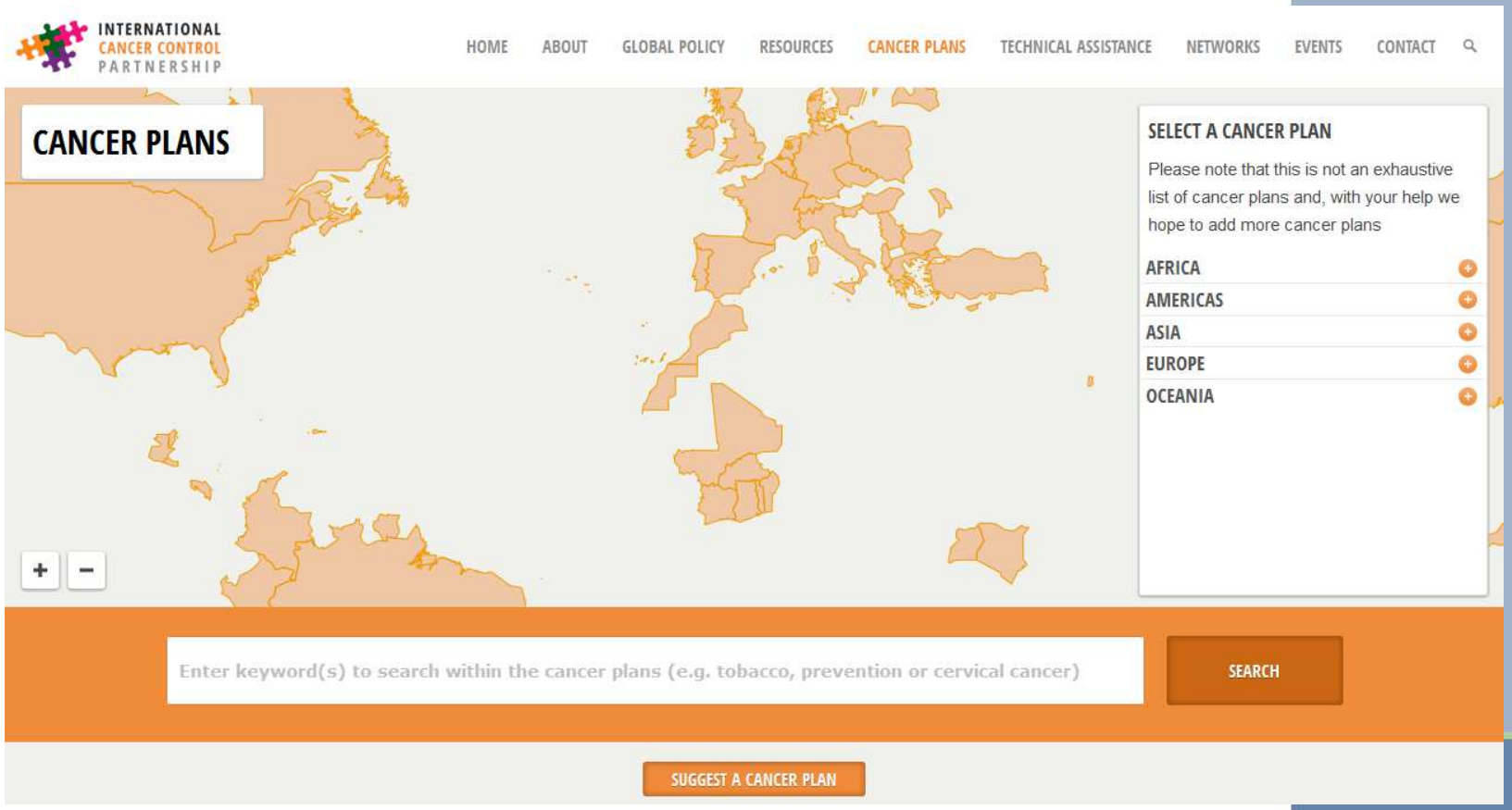
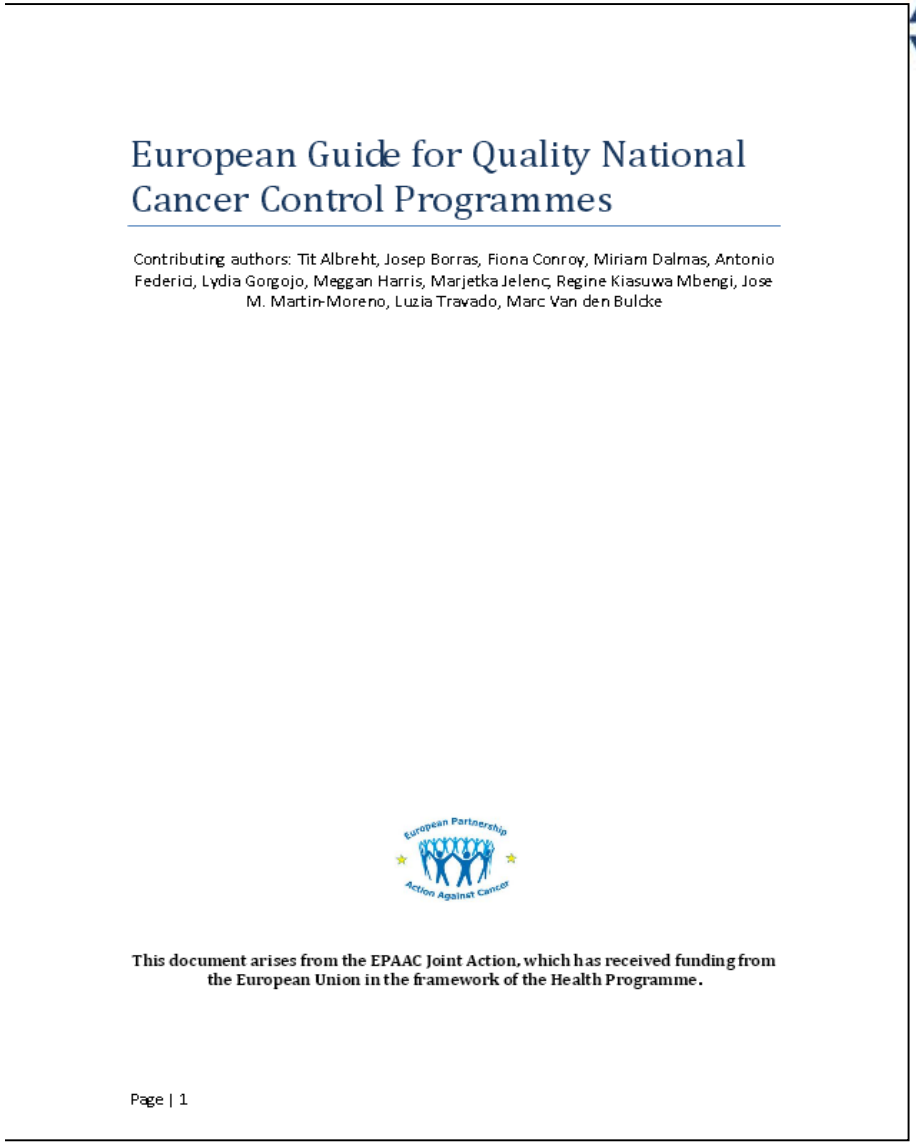
http://www.iccp-portal.org/cancer-plans




European Guide for Quality National Cancer Control Programmes

Contributing authors: Tit Albreht, Josep Borras, Fiona Conroy, Miriam Dalmas, Antonio Federici, Lydia Gorgojo, Meggan Harris, Marjetka Jelenc, Regine Kiasuwa Mbengi, Jose M. Martin-Moreno, Luzia Travado, Marc Van den Bulcke

This document arises from the EPAAC Joint Action, which has received funding from the European Union in the framework of the Health Programme.

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Programme Elements:

- Analysis of „State-of-the-Art“
- 5 (to 10 year) Planning
- Concrete goals (step-by-step)
- Implementation, follow-up, updating and adapting

Aims of all cancer plans

- Advancement of prevention and early detection
- Advancement of care infrastructure
- **Quality and efficiency of care**
- Enforcement of patient orientation

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Data !!

- Cancer Registries !
- Poland (Measure 2.7): Systematic monitoring of treatment (costs) and treatment outcomes
- Austria: From compulsory epidemiological registries (Focus Population) to clinical registry (focus individual patient)!
- Routine data from Admin/ Accounting, from clinical patient files

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Health Policy Question

Measuring the effects of (reform-) initiatives

- Establishment of interdisciplinary tumorboards
- Introduction of Certifications of Cancer Centers (CCC/ Comprehensive Cancer Centers = Centralization of Decision-Making and Decentralization of Care)
- Introduction of „care-pathways“, evidence-based guidelines, SOPs
- Specification of minimal quantities/ volume-quality

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Further aims of monitoring

Long-term:

- Improvement of Care (mortality, morbidity, QoL)

Short-term:

- Benchmarking
- Accrediation
- Remuneration
- Health Services Research (Under-/ Oversupply, Identification of good-practices, allocation of resources for best results etc.)
- Development of Quality Indicators

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LBI-HTA Project

European Journal of Cancer Care

Feature and review paper

Measuring quality in cancer care: overview of initiatives in selected countries

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WILD C. & PATERA N. (2013) *European Journal of Cancer Care*
Measuring quality in cancer care: overview of initiatives in selected countries

To inform the Austrian National Cancer Plan on possible generic quality indicators that might be derived from routine data a systematic literature search in three databases, followed by extensive hand-searching to locate initiatives and their publications was carried out in spring 2011. Twenty-one initiatives that developed indicators for measuring quality of cancer care were identified: longer standing and decentralised initiatives are characteristics of the USA. The Canadian province of Ontario publishes the Cancer System Quality Index, centralised audit and peer review programmes are undertaken in the National Health Service in the UK. Methodologically sound cancer type-specific pilot projects in Belgium have been implemented, the Netherlands and Denmark are running national initiatives. Germany recently started quality measurement activities, too. Generic indicators often focus on end-of-life care, multidisciplinarity, advance care planning and documentation. Indicators measuring the quality of care during an entire episode of cancer are rare, as are those for less common cancers and for care in the outpatient setting. Access, equity and the patient's perspective are only beginning to be incorporated into indicators. After having identified a range of candidate indicators that can be implemented with routinely collected data alone, piloting them in Austria would be the next step to go.

Keywords: health technology assessment, evidence-based medicine, quality indicators, quality measures.

INTRODUCTION

In most Western countries national committees have been formed to develop national 'cancer plans', 'cancer programmes' or 'cancer care strategies' (Atun *et al.* 2009; Domittner *et al.* 2009). Some countries started to plan, develop and implement cancer programmes already in the late 1990s (Canada, France, England, Ireland, Denmark), others (Germany, Austria) are still in the process to structure a 'roadmap' for more coordinated efforts. They all share the goal to reduce cancer mortality and incidence and to set priorities for improvements along the continuum of cancer care from prevention, early diagnosis (screening) to treatment (with multimodal regimes) and end-of-life care (palliation). The rationale behind these initiatives is that the current state of quality of cancer care is considered suboptimal with potential for improvement. To evaluate outcomes and changes due to the initiatives launched within such cancer programmes – such as the introduction of clinical pathways or evidence-based medicine guidelines or health technology assessments of costly cancer drugs, the certification of designated cancer centres, the establishment of multi-disciplinary tumour boards – data and indicators for quality measurement and reporting are necessary and increasingly being demanded.

The requirement to measure quality of care poses challenges in all medical disciplines. Quality of care in the broad spectrum of conditions classified under the

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LBI-HTA Report on Quality Indicators

Only GENERIC (not cancer-specific)

22 Initiatives in 7 countries (USA, CAN, GB, G, NL, BE, DK)

17 detailed Indicatorlists with examples from

e.g.

- *USA: American Society of Clinical Oncology/* ASCO, *National Comprehensive Cancer Network/* NCCN, *National Quality Forum/* NQF
- *CA: Cancer Quality Council of Ontario/ CQCO, Cancer System Quality Index/ CSQI*
- *NL: Nationaal Programma Kankerbestrijding/NPK*
- *DK: Det Nationale Indikatorprojekt*

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LBI-HTA Report on Quality Indicators

Good practice examples for

1. Operationalisation on Denominator (group of population) + Nominator (percentages)
2. Presentation of Results to Public (NPK-Monitor/ NL)
3. methodologically sound process

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Indicator domains: Top 10

Table 3. Generic indicator domains ($n = 11$) (also summarised in Patera 2012a)

No.	Indicator domain	Sources for single indicators
1	End-of-life	9 different indicators in: CQCO; AMA/ASCO; NQF; Lorenz *et al.* 2006 summarising 9 indicator sets
2	Symptom management: * Pain * Dyspnoea * Depression/emotional well-being * General symptom and toxicity management	6 different indicators in Lorenz *et al.* 2006 summarising Georgia Cancer Coalition, University Health Consortium; RAND
3	Documentation	5 different indicators in: AMA/PCPI; ASCO/QOPI (2011); CSQI (2011); NPK-Monitor (2009); CQCO
4	Waiting time	4 different indicators in: CQCO; NPK-Monitor (2009); NIP (2011); AQUA (2011); Greenberg *et al.* 2005
5	Multidisciplinarity	2 different indicators in: CSQI (2011); NCASP (2011); Vlayen *et al.* (2011); NIP (2011)
6	Advanced Care Planning ACP	2 different indicators in: Lorenz *et al.* (2006) summarising Georgia Cancer Coalition, University Health Consortium; RAND
7	Guideline adherence	1 indicator: Greenberg *et al.* (2005); NPK-Monitor (2009)
8	Clinical trial participation	1 indicator: Greenberg *et al.* (2005), Vlayen *et al.* (2011)
9	Reporting to registries	1 indicator: CSQI (2011); Greenberg *et al.* (2005); CQCO
10	Patient communication	1 indicator: Greenberg *et al.* (2005); CSQI (2011); ASCO/QOPI (2011)
11	General processes	1 indicator: ASCO/QOPI (2011); Greenberg *et al.* 2005; CSQI (2011); CQCO

1. **End-of-Life Care**
2. Symptom Management
3. Documentation
4. Waiting times
5. Multidisciplinarity
6. Adanced Care Planning
7. Guideline adherence
8. Clinical trial participation
9. Reporting to registries
10. Patient communication

Example
Canada, Ontario

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End-of-Life Care

Key findings

Cancer patients at the end of life and their families may not have adequate access to the resources and supports they need to live and die in the setting of their choice. More up-to-date data and a cohesive province-wide strategy is urgently needed to support quality improvement initiatives in this area.

What is end-of-life care?

- End-of-life care is the care provided to people in their final stages of life. It incorporates the principles of hospice and palliative care[1].

	Goal	As of this Report
End-of-life care		

69,900

Number of new cancer cases projected to be diagnosed in Ontario in 2011

Example
Canada, Ontario

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- Screening
- Diagnosis
- Treatment
- Palliative and End-of-Life Care
  - End-of-Life Care
    - Technical Information
  - Chemo in the last two weeks of life
- Recovery

End-of-Life Care

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Figure 1: Of the patients who died of cancer, the percentage who were admitted to the intensive care unit (ICU) in the last two weeks of life, Ontario, 2004-2007, by LHIN

Figure 2: Percentage of cancer patients in Ontario who visited the emergency department (ED) in the last 2 weeks of life, by LHIN, 2004–2007

Figure 3: Percentage of lung cancer patients in Ontario who visited the emergency department (ED) in the last 2 weeks of life, by LHIN, 2004–2007

Figure 4: Percentage of Ontario cancer patients who died in acute care hospital, by LHIN, 2004–2007

Figure 5: Median length of stay (days) in acute care for last 6 months of life, for patients who died of cancer in Ontario, by LHIN, 2000–2006

Example
Canada, Ontario

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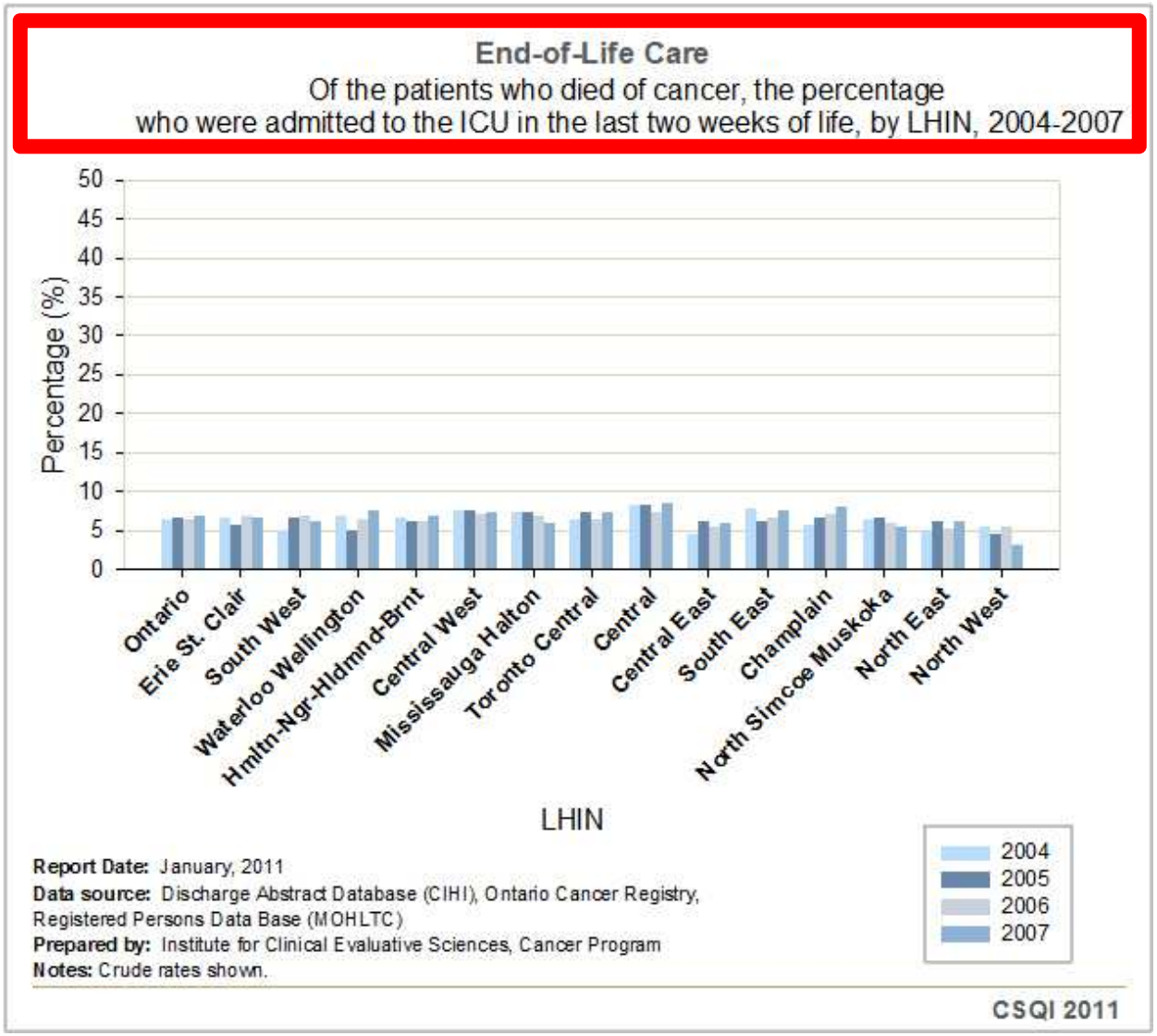

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3 chapters

1. **Method: HSO/ Horizon Scanning in Oncology**
2. **National Roadmap for Coordinated Cancer Care**
3. **Indicators to measure quality of cancer care**

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HTA as decision support instrument

HTA / Health Technology Assessment ...

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How HTA operates?

The best currently available knowledge on the real life benefit of medical interventions is presented ...

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HTA as decision support instrument

... which services bring the most benefit to patients.

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