WENNBERG INTERNATIONAL COLLABORATIVE
SPRING POLICY MEETING 2018

Healthcare utilization and regional variation in end of life care

A study in Dutch lung cancer and colorectal cancer patients

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WIC WENNBERG INTERNATIONAL COLLABORATIVE

74 NRP Smarter Health Care National Research Programme

SSPH+ SWISS SCHOOL OF PUBLIC HEALTH

IQ Scientific Center for Quality of Healthcare

Radboudumc

Background

- Lung cancer and colorectal cancer belong to the top 5 cancers with the highest hospital costs en lowest five year survival

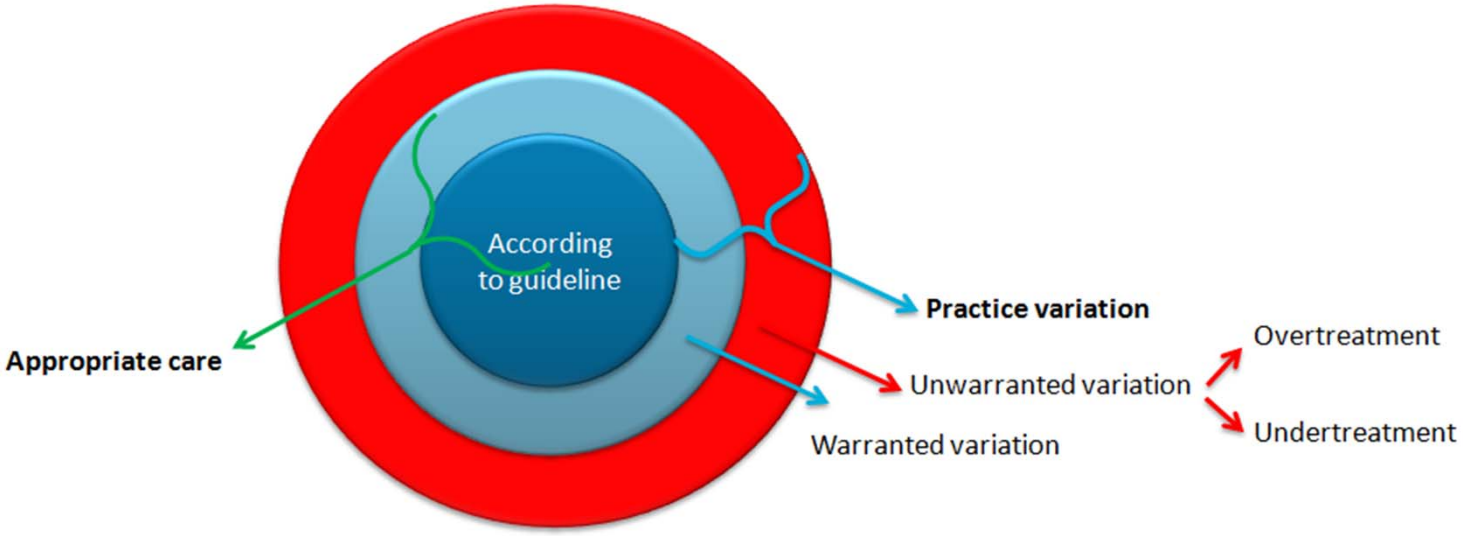
- Especially during final stage of life, each healthcare activity should add value in terms of appropriateness, quality and costs

However

- Care for patients near the End of Life (EoL) may not meet the desires of patients and families

- The aim of treatment is often still curative near EoL; the palliative phase is not recognized in time

Background



Based on: ZonMw/OMS, *Verstandig Kiezen, 2013*

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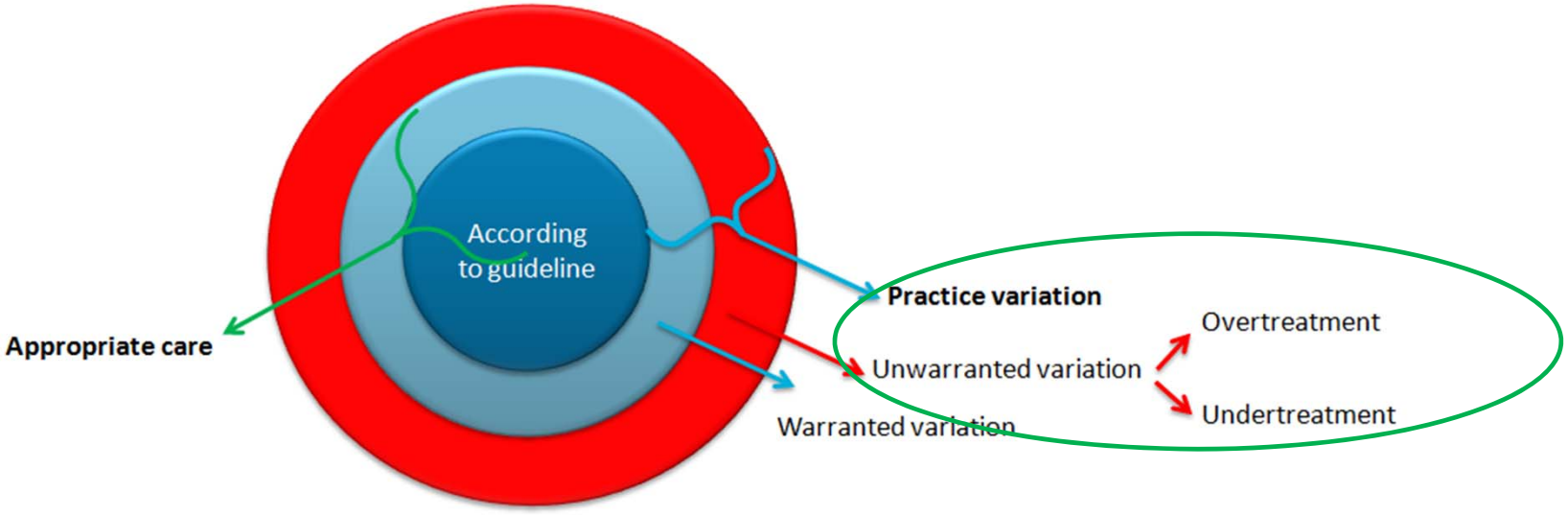

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Objectives

- To investigate healthcare utilization in the end of life phase in colorectal and lung cancer patients (‘healthcare profiles’)

- To identify potential unwarranted variation in the provided care during end of life in these patients

Methods - data

- 14,911 deceased colorectal cancer patients
- 25,553 deceased lung cancer patients
- Hospital data 2013-2015

Methods – healthcare utilization

- Expert panel

- Relevant clusters of care
  - Hospital admissions
  - ER-contacts
  - Biologicals
  - Surgeries
  - Lab tests
  - CT-scans
  - Chemotherapy
  - Radiotherapy fractions
  - Palliative care

- Descriptive analyses, 6 and 1 month before death

Methods – regional variation

- Geographical variation: 2-digit postal codes

- Logistic regression
  - → Standardized and adjusted variation scores
  - → Adjustments for Age, Sex, SES
  - → Factor scores: mean higest 3 regions / mean lowest 3 regions

- For the defined clusters of care

- Last 6 months

Results healthcare utilization

2015	Colorectal cancer (n=4123)		Lung cancer (n=6643)	
Months before death	6	1	6	1
Lab tetst	82%	27%	81%	28%
CT scan	56%	10%	61%	12%
Hospital admission	55%	19%	57%	21%
ER visit	43%	13%	47%	16%
Chemotherapy	27%	3%	40%	4%
Surgery	18%	2%	1%	0%
Biologicals	14%	2%	1%	0%
Radiotherapy	10%	1%	21%	4%
Palliative consultation	3%	1%	2%	1%

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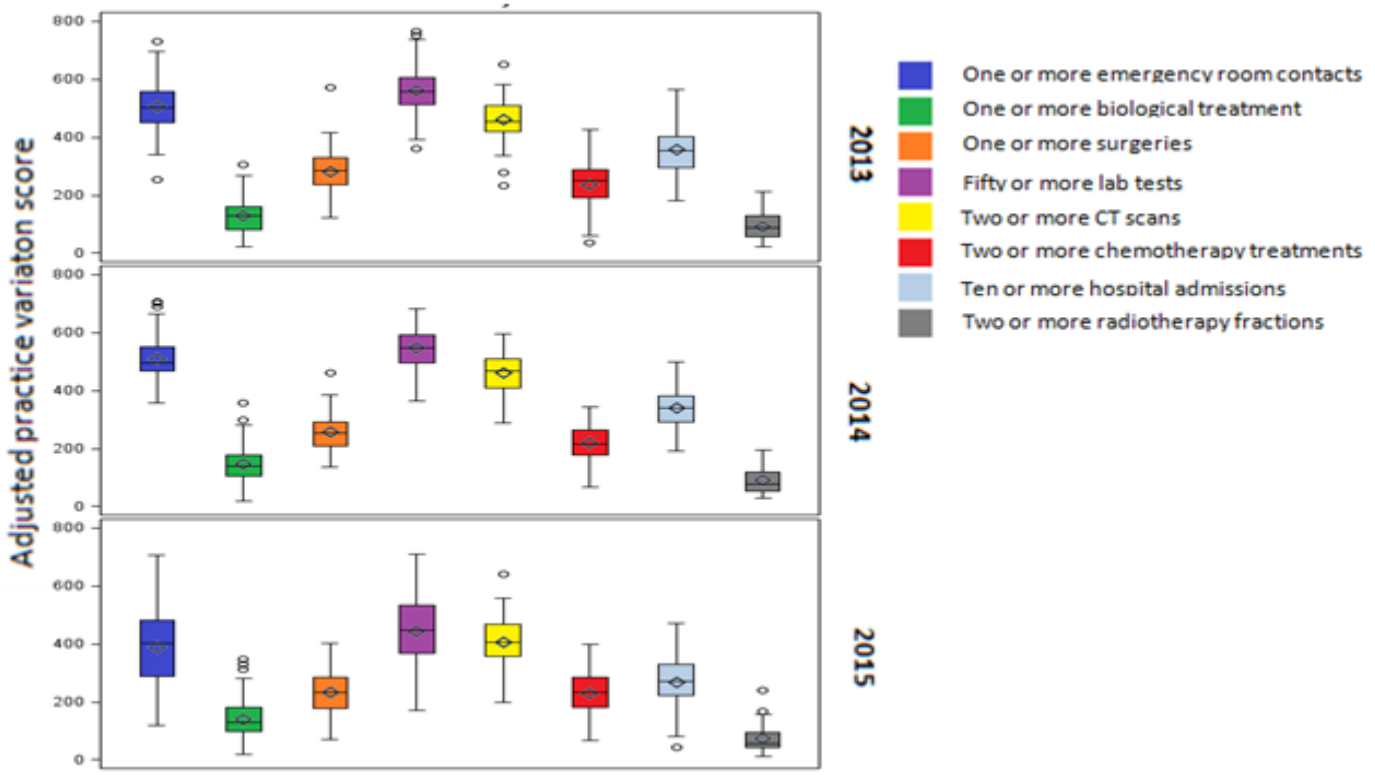
Results geographical variation

Colorectal cancer

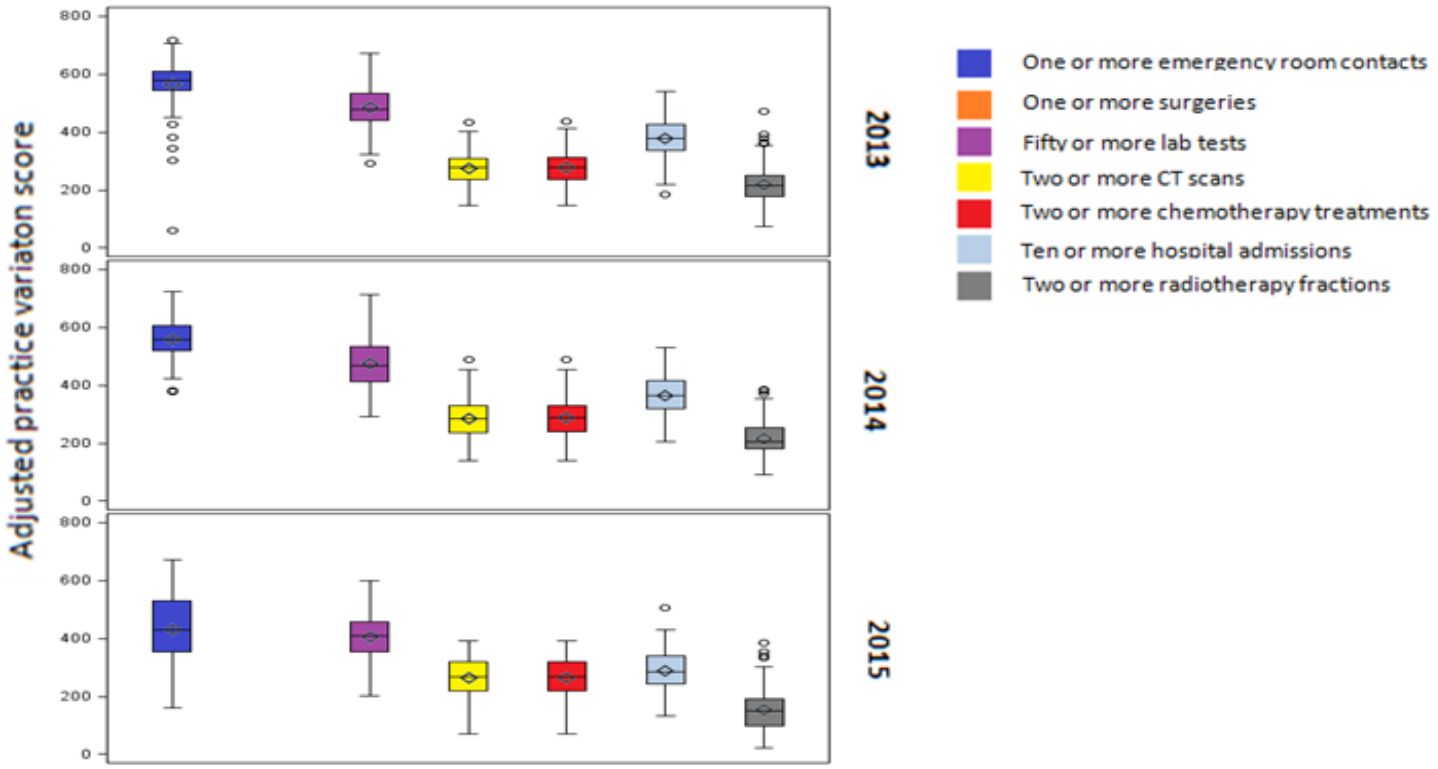
Factor scores	
ER-contacts (1+)	2.9
Biologicals (1+)	10.8
Surgery (1+)	3.7
Lab tests (50+)	2.3
CT-scans (2+)	2.2
Chemotherapy (2+)	5.1
Hospital admissions(10+)	3.6
Radiotherapy fractions (2+)	7.5



Results geographical variation

Lung cancer

Factor scores	
ER-contacts (1+)	2.8
Lab tests (50+)	2.3
CT-scans (2+)	3.1
Chemotherapy (2+)	3.1
Hospital admissions(10+)	2.7
Radiotherapy fractions (2+)	4.5



Conclusion

- Patients receive prolonged treatment during end of life
- The amount of palliative care is low
- Substantial variation between geographical regions
- Results persistent over 3 years

Key messages

- More attention for identifying the end of life phase
- Shift from curation to palliation
- Acknowledge geographical differences when improving end of life care

In collaboration with: Yvonne de Man, Stef Groenewoud, Gert Westert from IQ healthcare Nijmegen