

# A national risk analysis of Norwegian Cancer Care

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Nordic Supervision Conference

Tromsø May 26th, 2011.



# Content

- Why a national risk analysis in Norway?
- How did we do it?
- What did we find?
- What happened afterwards in the services and among major national players?
- Is patient safety first priority for Norwegian Cancer Care?



# A short CV

1985-1998	Oncology Clinical research
1999-2009	Management consulting Medical Director Regional Health Authority Medical Director University Hospital Chair Hospital Trust Project manager Norwegian Board of Health Supervision
2010-2011	Back on the floor as frontline Consultant in Oncology and advisor (20%) Health Supervision



# Why a risk analysis of Norwegian Cancer Care?

- **The NBHS** ran in 2009 a national project aimed to improve the supervision of hospitals.
- 86 possible points of improvement were identified and described
- One of these was to perform national risk analyses
  - To be proactive than reactive against the services
  - Try to transfer experiences from risk analyses more used in other industries such as aviation and oil
  - Cancer Care was chosen as a pilot

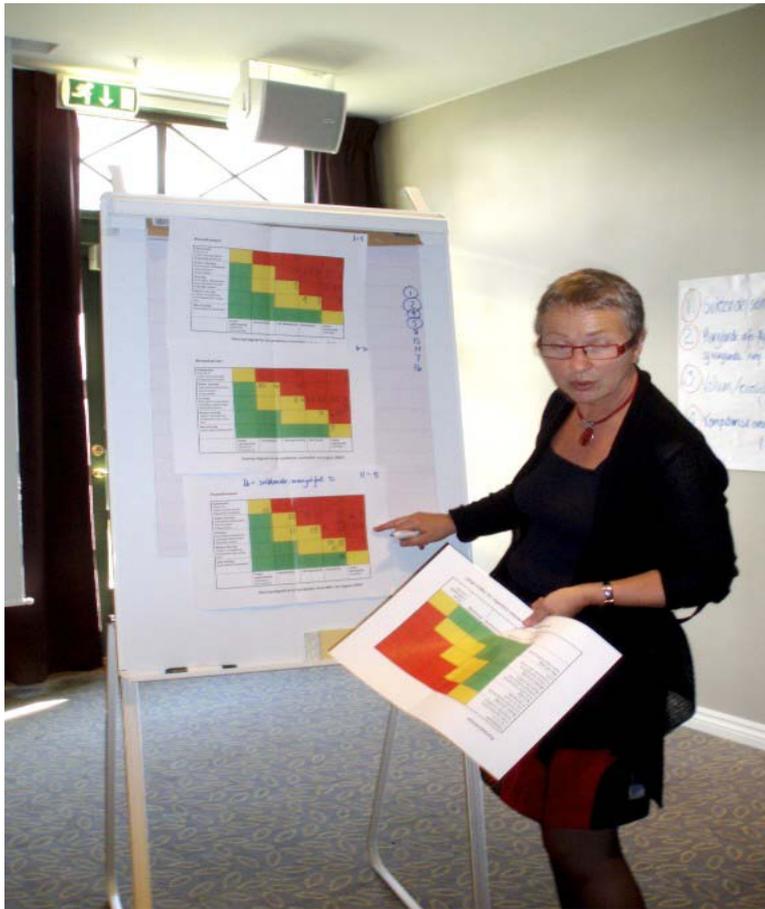


# Questions and design of the risk analysis

- Questions:
  - Will this quick and “express” approach give a better basis for risk-selected supervision?
  - How will the services and major players react?
- Design:
  - Review of relevant sources
    - 1-2 weeks used for search in archives and interviews about concerns in Cancer Care (diagnosis, treatment, follow-up, terminal care)
  - **50 concerns identified**, described and sent out to participants
  - A two day work-shop with 23 health personnel from all parts of Norway
  - Task: Select the 15 most important risk factors of the 50 (or define new ones)
    - Classify them into a risk matrix
  - Write a report



# Both working groups and plenary discussions



Chief medical officer,  
Norwegian Board of  
health supervision,  
West-Norway,  
managed the work-  
shop

# Risk factors – I

## Diagnosis – primary treatment

<b>Risk factors</b>	<b>Description</b>
Diagnosis	Different delay in the diagnostic process from primary care to final histopathological verification and staging
Radiology	Insufficient radiological service (waiting time, quality and coordination between institutions, both public and private actors)
Pathology	Wrong diagnosis or limitations in diagnostic panel
Surgery	Failure in surgical treatment
Volume and quality	Too low patient volumes in some trusts. This may reduce the quality and results of treatment



# Risk factors – II

## Interactions

Information exchange	Failure in information exchange/coordination between actors. Miss one national information portal which is complete and regularly updated (recommendations, clinical guidelines)
Referral	Referrals are lost or delayed in all parts of the treatment chain. Failure in reception and follow-up of laboratory tests and examinations
Patient communication	Failure in communication with and involvement of patients and their relatives
Overtreatment	The limits of treatment are stretched in advanced cancer. Difficult talks are postponed or pushed to another actor
Continuity	Failure in continuity in the treatment chain. Too many actors are involved, increasing the vulnerability for failure in information exchange
Competence	Failure in transferring competence between actors, limited recruiting and education of health personnel
Palliation	Failure in palliative care, especially for patients in terminal stages in the community health care
Working Environment	Burn-out of health personnel and insufficient working environment reduce the services delivered



# Risk factors – III

## Complications

Complications	Missing a national overview and surveillance of serious complications
Infections	Failure in infection prevention and treatment of serious infections
Radiotherapy	Long-time complications after radiotherapy can be overlooked, or detected too late. Follow-up after radiotherapy is not risk-based enough.
Surgery	Postoperative complications



# The 16 most important concerns in Norwegian Cancer Care

## Consequences

<b>Catastrophic</b> Loss of life.					<b>Diagnosis</b>
<b>Very serious</b> Loss of life time		<b>Radiotherapy</b>	<b>Surgery</b>	<b>Radiology</b>	<b>Pathology</b>
<b>Serious</b> Reversible damage.			<b>Volume- quality</b>	<b>Infections</b>	<b>Competence</b> <b>Information-flow</b> <b>Palliation</b> <b>Overtreatment</b>
<b>Less serious</b> Minor damage			<b>Referral</b>	<b>Complications</b>	<b>Working-conditions</b> <b>Continuity</b> <b>Patient communication</b>
<b>Not serious</b>					
	<b>Very unlikely</b> Less than yearly		<b>Less likely</b>		<b>Very likely</b> weekly

Probability for occurrence in a health region



# Some remarks

- A substantial underreporting of adverse events exist within hospitals and to national databases
- The risk level in Norwegian Cancer Care is too high
- The potential for reducing the risk level is significant and can partly be done with simple tools
- "Quality in the clouds" (as presented for the Ministry of Health) is definitively not the same as "quality on the floor" (the daily life in hospitals)

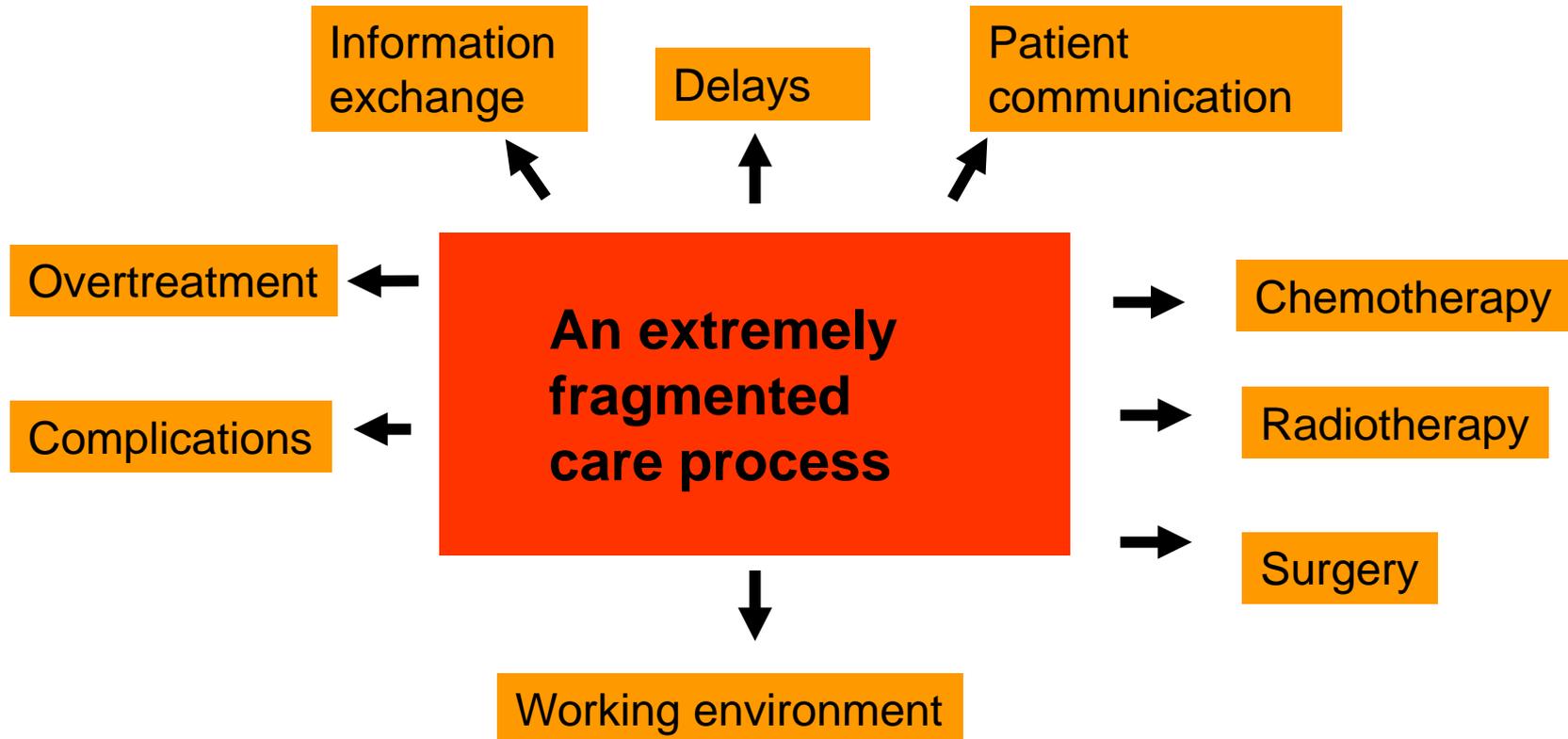


# Can we recommend risk analyses of this type?

- Yes
- The method is simple and requires little knowledge on beforehand
  - But the method is subjective, and requires a broad representation
- Affordable work load in preparations
- Affordable time span – 4 months and costs
- The participating health personnel were partly skeptical initially, but
  - 83% scored the process as "good or very good" afterwards
  - 65 % advised the NBHS to do audits of Cancer Care
- Many easy leads for follow-up



# Focus on some few key risk factors



# An extremely fragmented chain- improve continuity for medical doctors

- Good 75% solutions can easily be found
- If fewer doctors for each patient
  - More satisfied patients
  - Fewer errors
  - Better quality
  - Saving doctor time
  - Improving the system cost-effectiveness
- But why do the services not do it???
  - With such good and simple arguments !



# Rapid disease progression with delay in treatment of non–small-cell lung cancer

**Mohammed, N et al. William Beaumont Hospital, USA, 2011.**

**Purpose:** To assess rate of disease progression from diagnosis to initiation of treatment for Stage I-IIIb non–small cell lung cancer (NSCLC).

**Methods and Materials:** **40** patients with NSCLC underwent at least two sets of computed tomography (CT) and 18-fluorodeoxyglucose positron emission tomography (PET) scans at various time intervals before treatment. Progression was defined as development of any new lymph node involvement, site of disease, or stage change.

**Results:** Median time interval between first and second CT scans was 13.4 weeks, and between first and second PET scans was 9.0 weeks. Median initial primary maximum tumor dimension (MTD) was 3.5 cm (0.6–8.5 cm) with a median standardized uptake value (SUV) of 13.0 (1.7–38.5). The median MTD increased by a median of 1.0 cm (mean, 1.6 cm) between scans for a median relative MTD increase of 35% (mean, 59%).

Nineteen patients (48%) progressed between scans.

**Rate of any progression was 13%, 31%, and 46% at 4, 8, and 16 weeks, respectively.**

Upstaging occurred in 3%, 13%, and 21% at these intervals. Distant metastasis became evident in 3%, 13%, and 13% after 4, 8, and 16 weeks, respectively. T and N stage were associated with progression, whereas histology, grade, sex, age, and maximum SUV were not.

At 3 years, overall survival for Stage III patients with vs. without progression was 18% vs. 67%,  $p = 0.05$ .

**Conclusions:** With NSCLC, treatment delay can lead to disease progression.

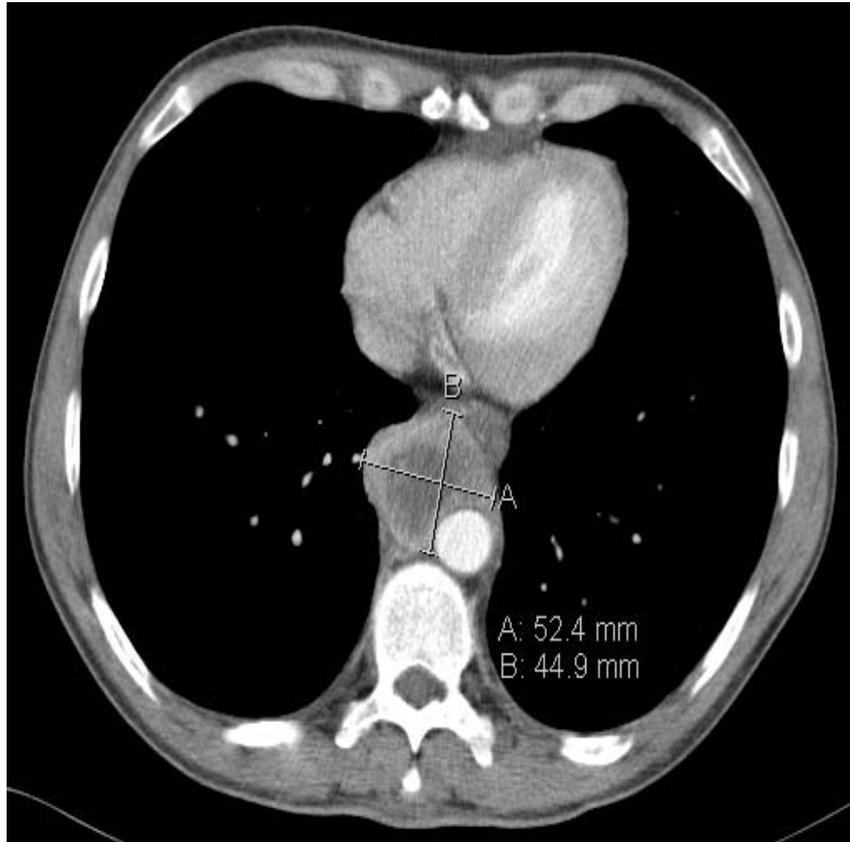
**Diagnosis, staging, and treatment initiation should be expedited.**

**After 4–8 weeks of delay, complete restaging should be strongly considered.**

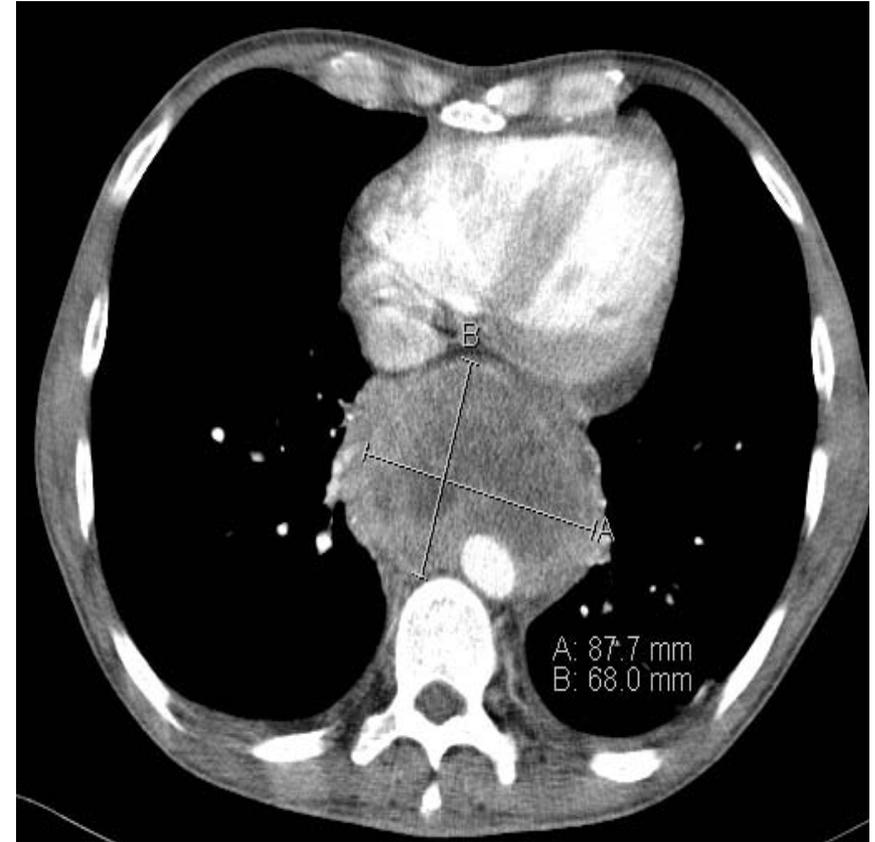
Int. J. Radiation Oncology Biol. Phys., Vol. 79, No. 2, pp. 466–472, 2011



# Delay: 54 days until start radiotherapy



Diagnosis Sept 3rd - 2010



Oct 19th - 2010

# Tumor progression in waiting time for radiotherapy in head and neck cancer

Jensen, AR et al. Århus University Hospital, Denmark, 2007.

Introduction: Waiting-time prior to radiotherapy is a well-known problem. This study aims to determine the impact of time on tumor growth in a patient population with squamous-cell carcinoma of the head and neck (SCCHN). Material and methods: In a consecutive cohort, all patients with both a diagnostic scan and a treatment-planning scan were identified. In total 648 patients were seen, and 414 treated with primary radiotherapy. Ninety-five had two scans and **61** sets were eligible for comparison. Endpoints were change in tumor volume, **tumor volume doubling time (TVD)** and disease progression measured by TNM-classification and RECIST criteria.

**Results:** Median interval between eligible scans was 28 (5–95) days. Thirty-eight (62%) had measurable increase in tumor volume, median 46% (6–495%). **For all patients TVD was median 99 days, but for the half of patients with fastest growing tumors TVD was 30 days (15–41).** Tumor volume increase was significantly correlated to time and histological differentiation. Twelve (20%) developed new lymph-node metastasis and 10 (16%) progressed in TNM-classification. Evaluated by RECIST criteria 18 (30%) patients had progressive disease.

**Interpretation:** This study shows a negative impact of waiting time in patients with SCCHN. Within an average time of 4 weeks the majority of the patients developed significant signs of tumor progression. It was not possible to define a threshold for acceptable time intervals in order to avoid volume changes, or to define a subgroup that has no negative impact of delay.

Radiotherapy and Oncology 84 (2007) 5–10.

# What happened afterwards – among major national players?

- The Ministry of Health have accepted the risk analysis and followed up the report in several ways
  - Included in a broad discussion of the legal framework for patient safety in Norway.
  - Refined the 2010-2011 goals for the Regional Health Authorities (Hospital trusts)
  - The report was mentioned as important follow-up in State Budget 2011
- The National Health Directorate:
  - Intensified the work with clinical guidelines
  - Not started the work to define master national portals for cancer information
- Norwegian Cancer Society
  - Orally interested
  - But did not support a 3 yr PhD program of how major players address/follow-up the report
- NBHS
  - Performed an audit in West-Norway
    - Finds delays in breast cancer diagnosis – pathology
  - Preparing a paper about the risk analysis
  - Preparing a national supervision of the referral process



# What happened afterwards in the services?

- The report was published May 2010
- May 2011, phone interview of:
  - The 6 biggest oncology departments (all with radiotherapy)
  - 4/6 department managers had read the report
  - None had made any specific follow-up of the risk analysis !
    - “need more resources”



# Are Cancer Care/oncologists more resistant to quality improvements?

- Some indications for yes:
  - Focus on patient safety has low status
  - Improvement of work-flow has low priority
  - Doctors are not measured on patient safety
  - A dislike of checklists
  - A lack of arenas for “safe debriefing and learning”
  - A culture of secrecy
  - Cancer increase “normalization” of events



# International agreement: Cultural challenges important

## ***When Things Go Wrong: How Health Care Organizations Deal With Major Failures***

*Important opportunities for improvement will be missed if we fail to investigate and learn from the “airplane crashes” of health care.*

by Kieran Walshe and Stephen M. Shortell, Health Affairs 2004: 23; 103-111.

ABSTRACT: Concern about patient safety, caused in part by high-profile major failures in which many patients have been harmed, is rising worldwide. This paper draws on examples of such failures from several countries to analyze how these events are dealt with and to identify lessons and recommendations for policy. Better systems are needed for reporting and investigating failures and for implementing the lessons learned.

**The culture of secrecy, professional protectionism, defensiveness, and deference to authority (autoritetstro) is central to such major failures, and preventing future failures depends on cultural as much as structural change in health care systems and organizations.**

With special greetings to doctors

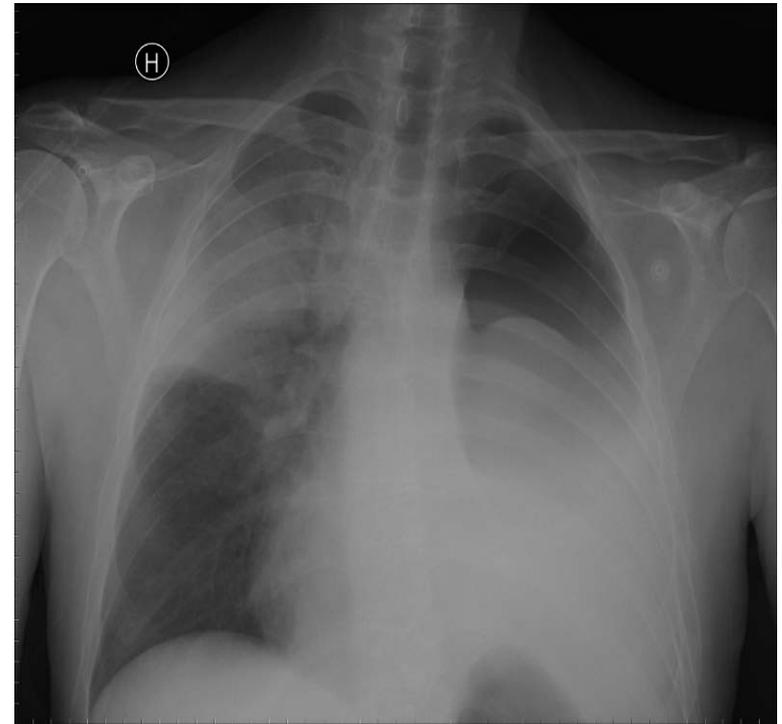


# The strong “normalisation” in Health Care (Walshe 2004)

“It happened because the patient had cancer – The Lord gives, The Lord takes”



Day 1 - Chemotherapy



Day 8 – Pneumonia

# Summary

- Cancer care is indeed a high risk part of health care
- We recommend this type of simplified risk analysis
- Several identified risk factors are easy to reduce
- A follow-up of actions induced by the risk analysis is necessary
- Cancer Care/oncologists are under-focused and somewhat resistant to improve patient safety
- We need to create more movement on the floor
- Cancer Care need more supervision in Norway

