

The Norwegian Program on Quality Assurance in Radiotherapy (KVIST)

Organisation, Benefits and Experiences of this initiative for
stakeholder's involvement



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Radiotherapy in Norway (4.8 million people)

Health care system

- Centralized, public founded
- 26 public hospital trusts and 72 hospitals

Radiotherapy provided in

1997: 5 departments
19 accelerators, 1 Cobalt unit

2009: 10 departments
40 accelerators

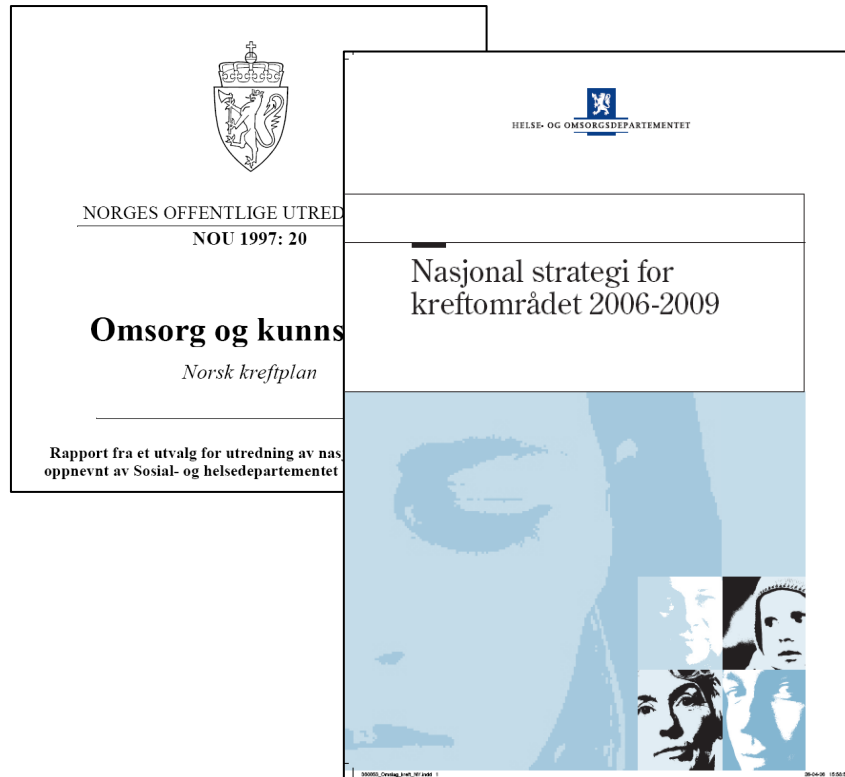
- All RT centres have external radiotherapy
- Four departments provide brachytherapy
- All RT centres have dedicated computed tomography (CT) for treatment planning
- Three of the departments also have a dedicated MR scanner

● RT department



Background for a RT quality assurance initiative

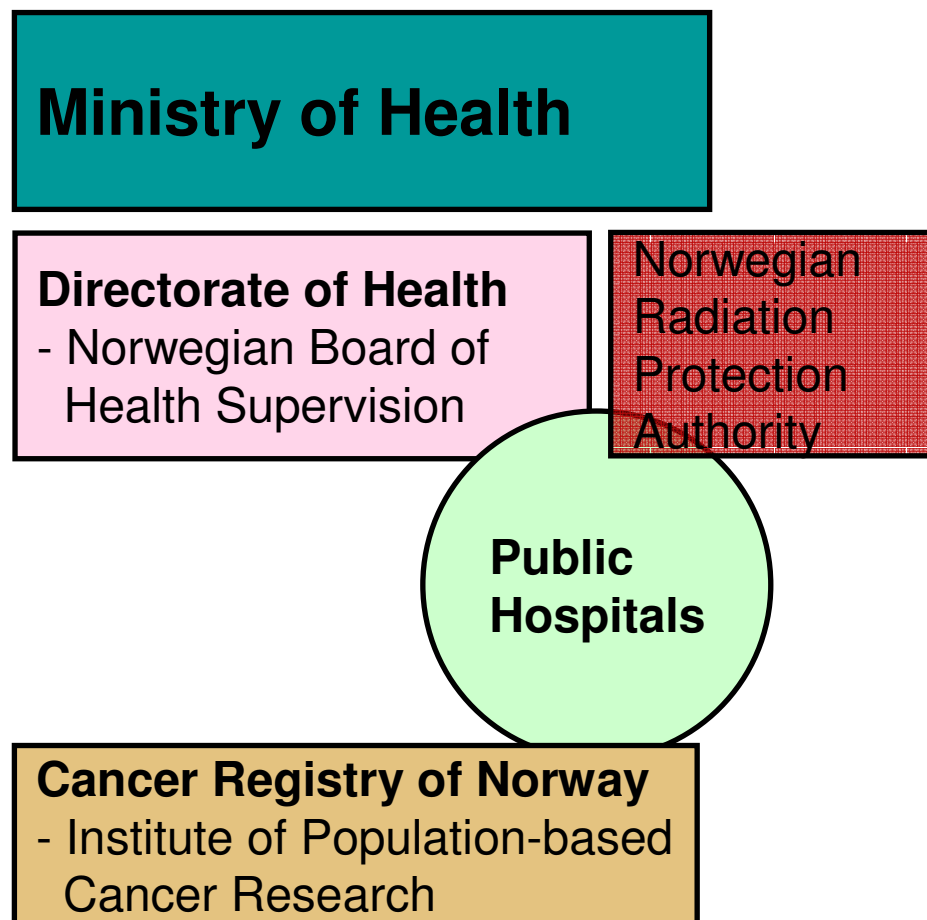
Ageing population
Dramatic increase in cancer incidence
Better palliative care
Establish “good medical practice”
Prevent RT accidents



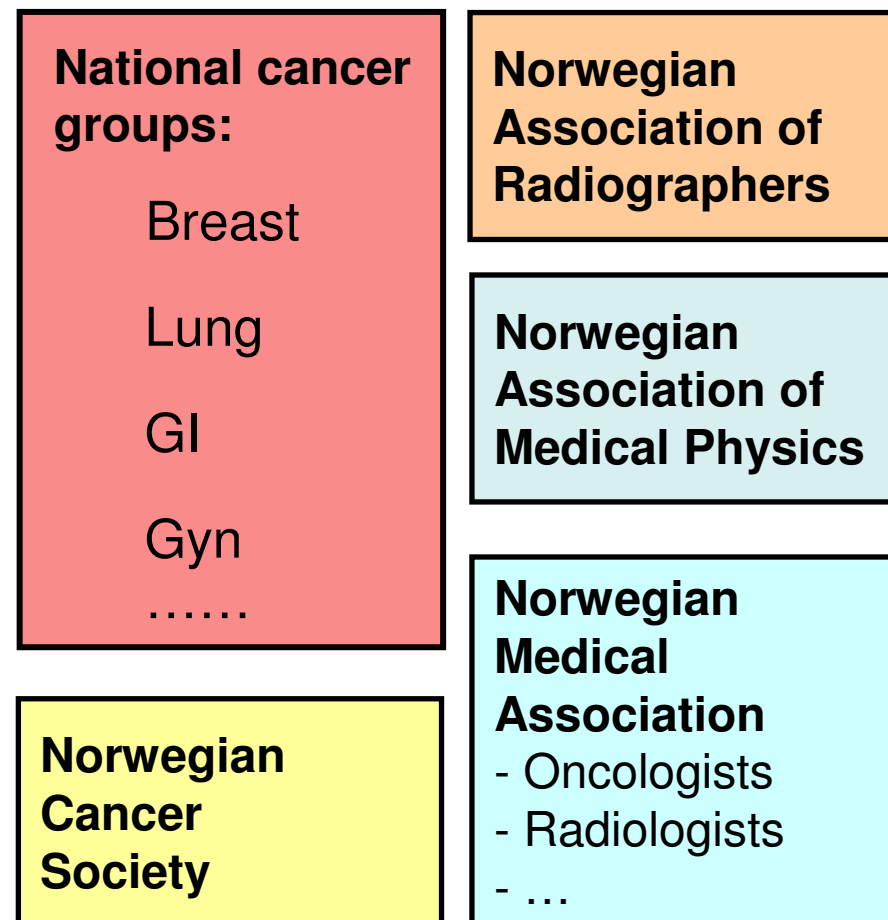
- Late 90ties: European political trend towards development of national QA programmes in health care
- 1997: Norwegian public cancer plan, NOU 1997:20
...since radiotherapy is given high priority in cancer care, good quality assurance is required...
- In 2000: Public budget 4 mill. NOK allocated NRPA (~ 500 kEUR) to establish a quality assurance programme in radiotherapy – KVIST
- The Ministry of Health’s strategic plan (2006 – 2009) – KVIST is recognised as part of it

Key players in Norwegian radiotherapy

Public entities



Associations



Regulations versus professional quality standards

SAFETY SERIES No. 115

SAFETY STANDARDS


safety series

International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources

JOINTLY SPONSORED BY FAO, IAEA, ILO, OECD/NEA, PAHO, WHO

INTERNATIONAL ATOMIC ENERGY AGENCY, VIENNA, 1996

96/29/Euratom BSS
97/43/Euratom "Patient directive"



- EURATOM directives, IAEA standards, IEC standards, etc, implemented in national radiation protection regulations
- **INSPECTIONS** using the national regulations as reference

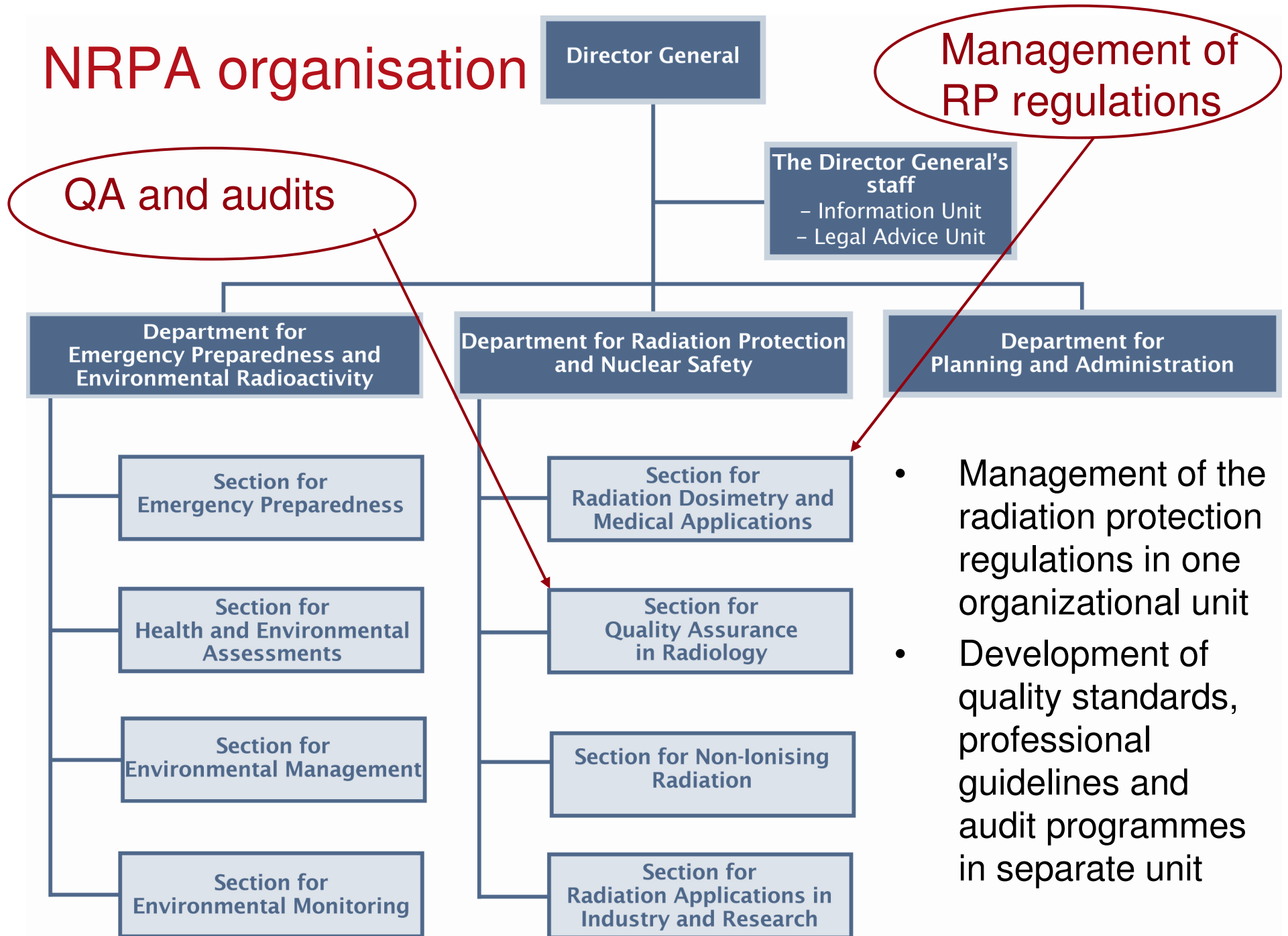


- Recommendation of scientific, medical or professional bodies
- Material published in well established scientific, medical or professional journals
- Advise of the medical society

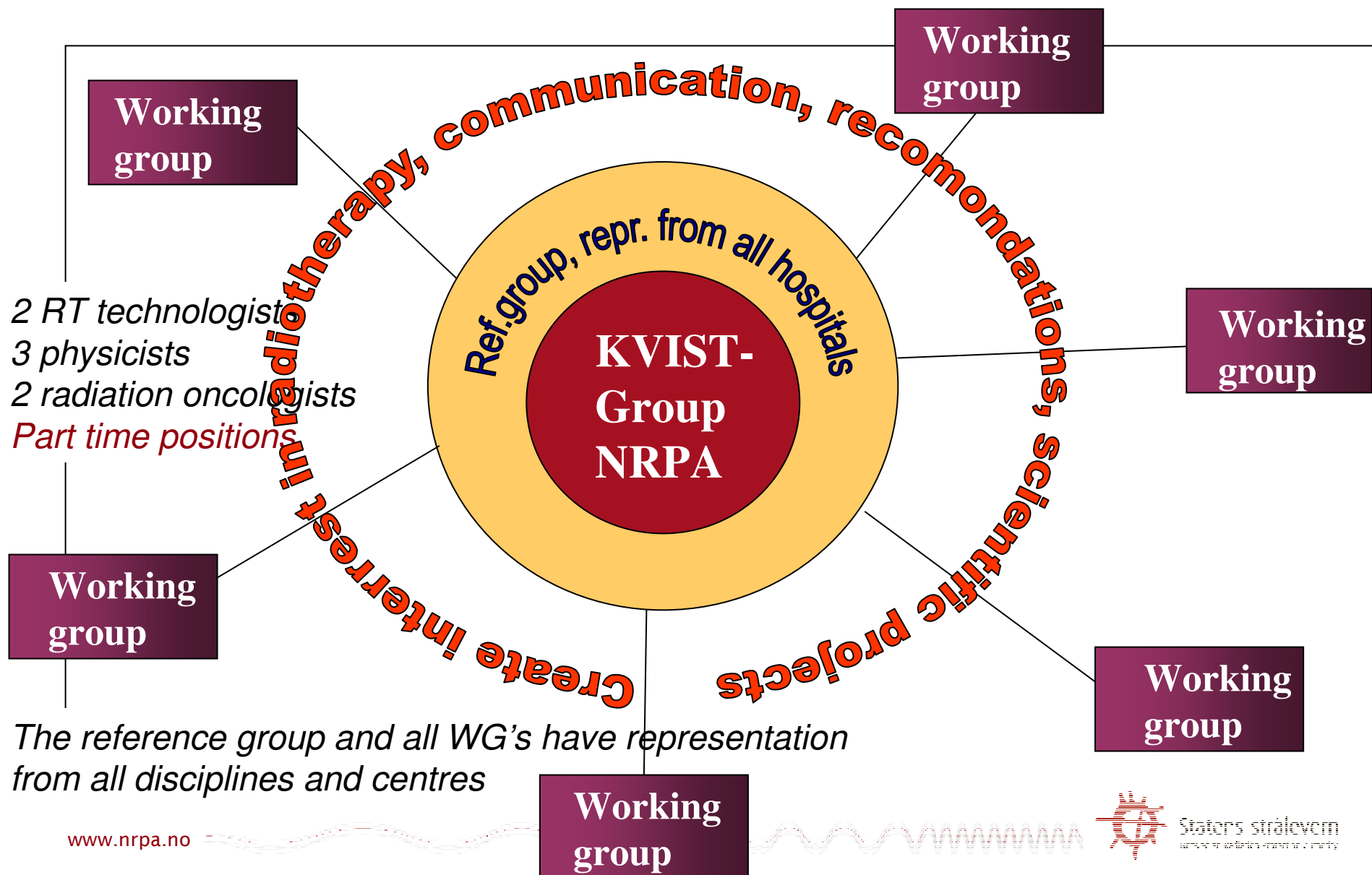
“GOOD MEDICAL PRACTICE” guidelines

- **TECHNICAL** or **CLINICAL AUDITS** using such professional guidelines as reference

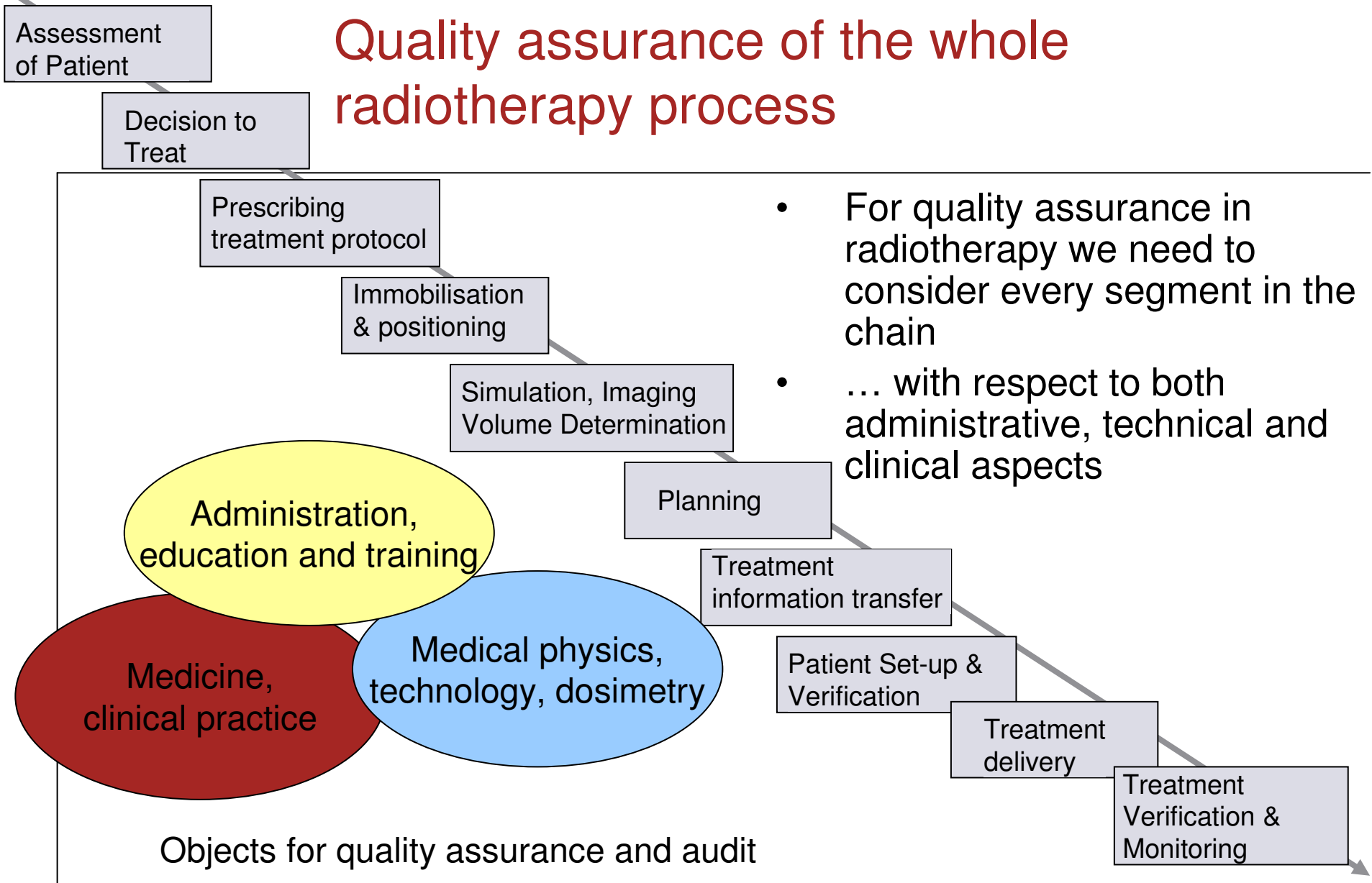
NRPA organisation



QA programme: KVIST organisation

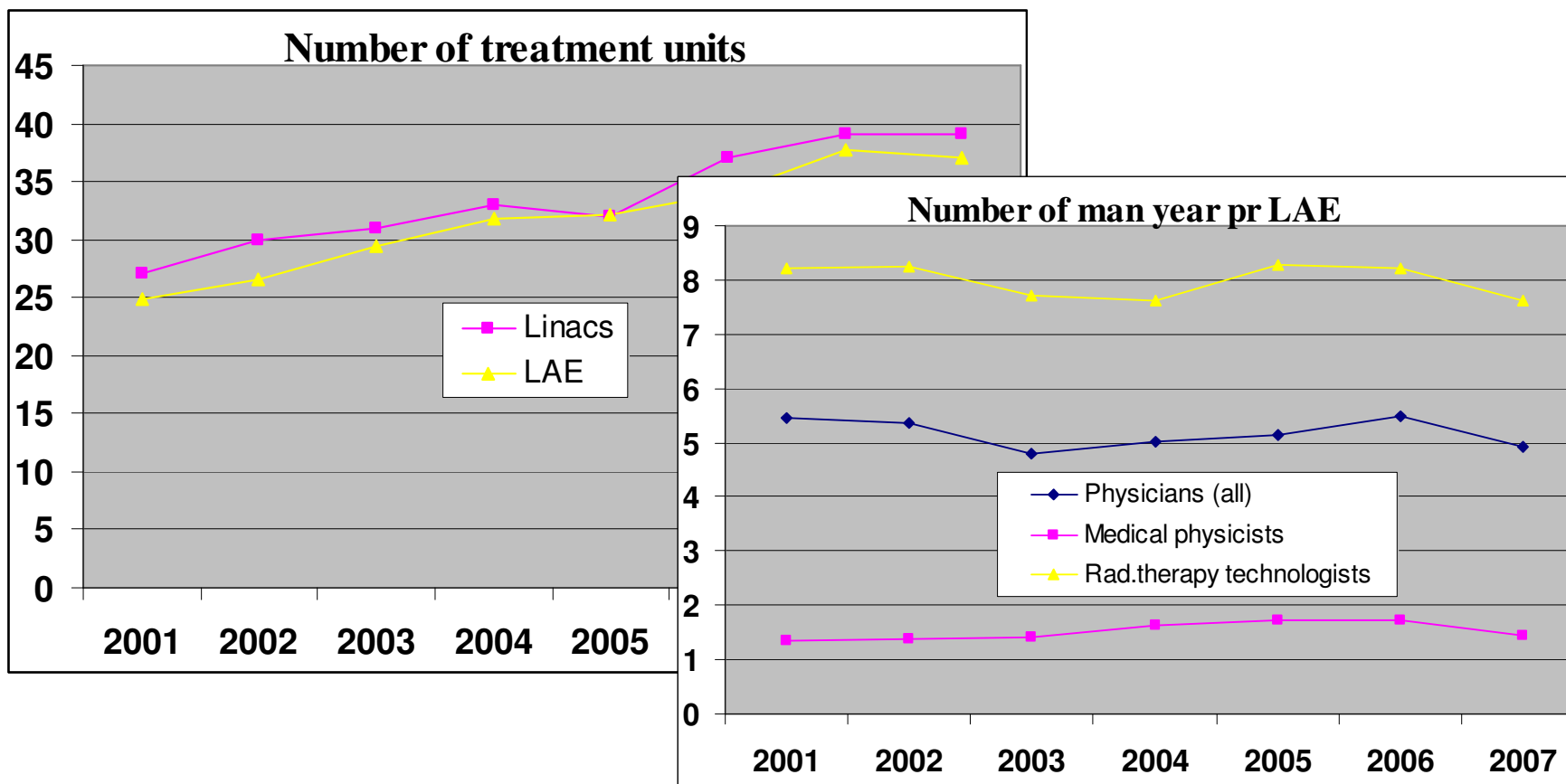


Quality assurance of the whole radiotherapy process



Reports from RT centres: Equipment and staff resources

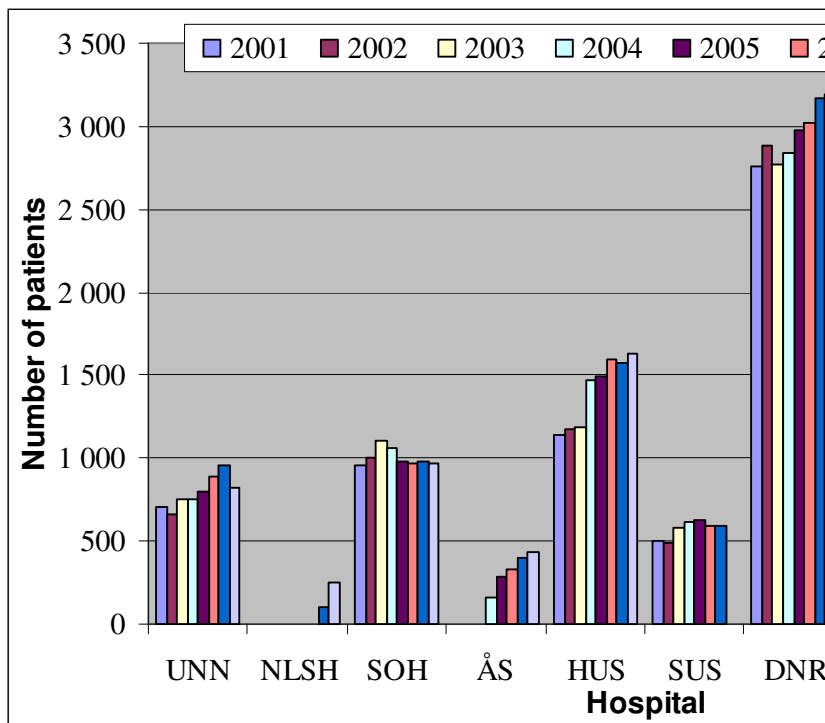
NRPA Report 2003:12: Definitions, documentation, reporting



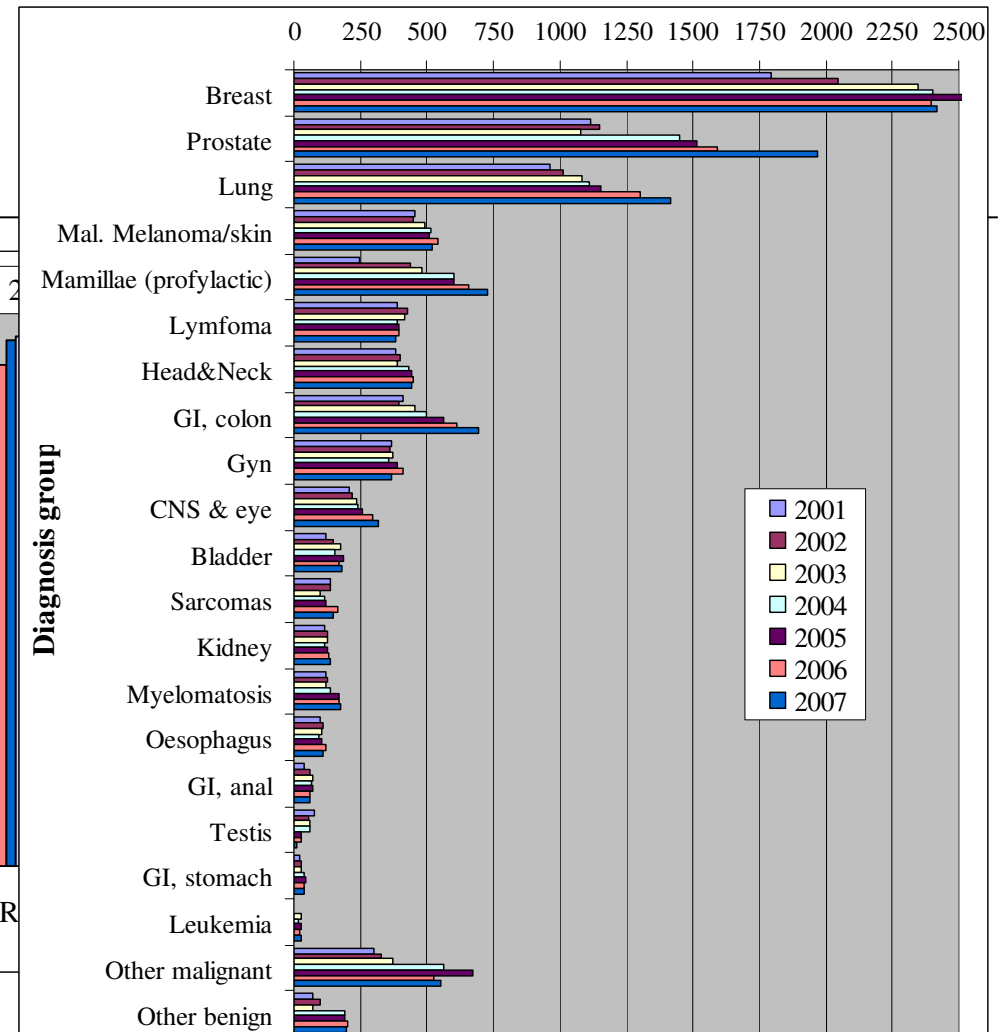
- Linear accelerator equivalent, LAE: 1 standard linac, staffed with 4 RT technologists, used 7.5 hours per day

- Man-labour year and number of persons employed of various professions are normalized to LAE

Reports from RT centres: Patterns of care data

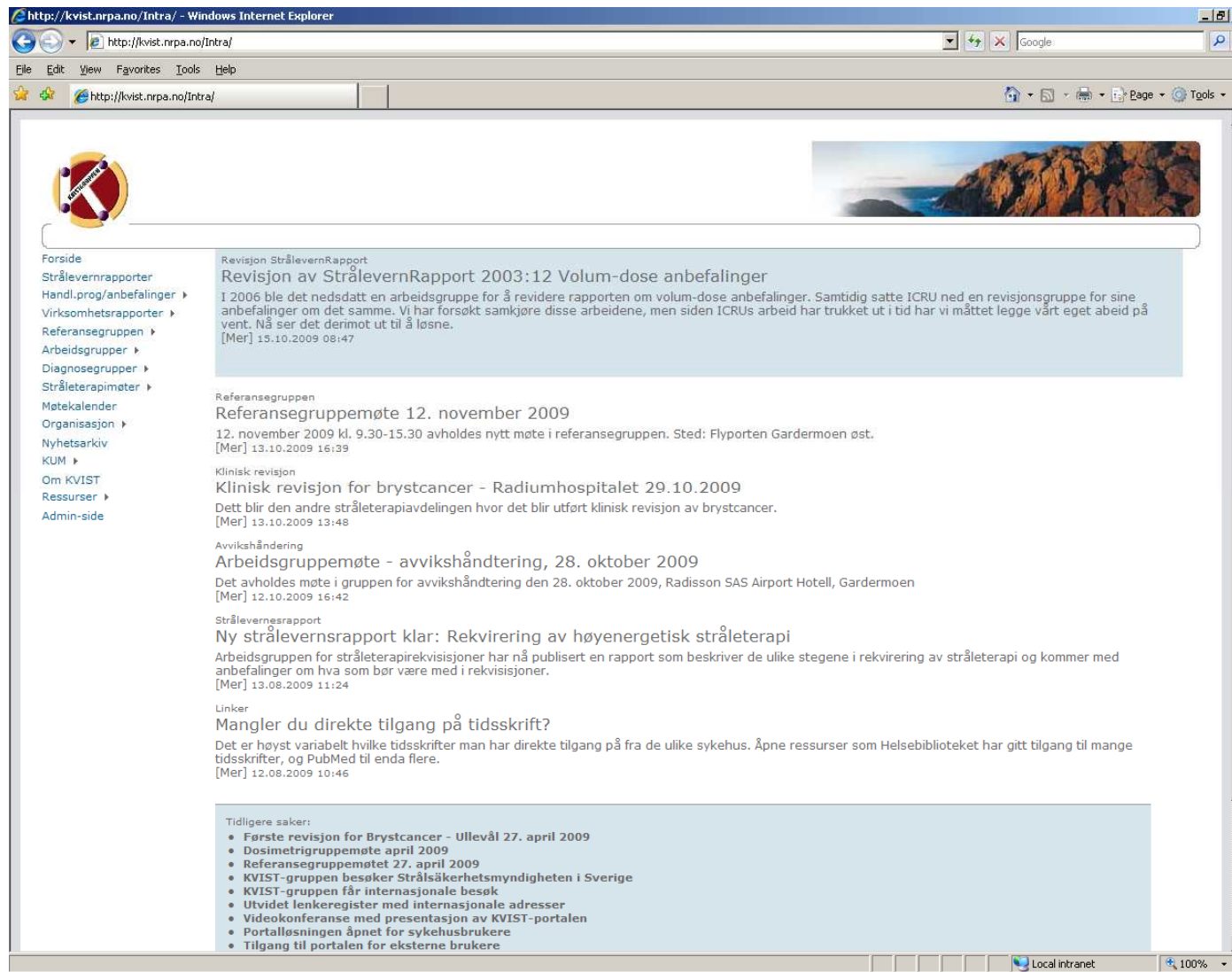


- No of patients treated in each radiation therapy centre over time



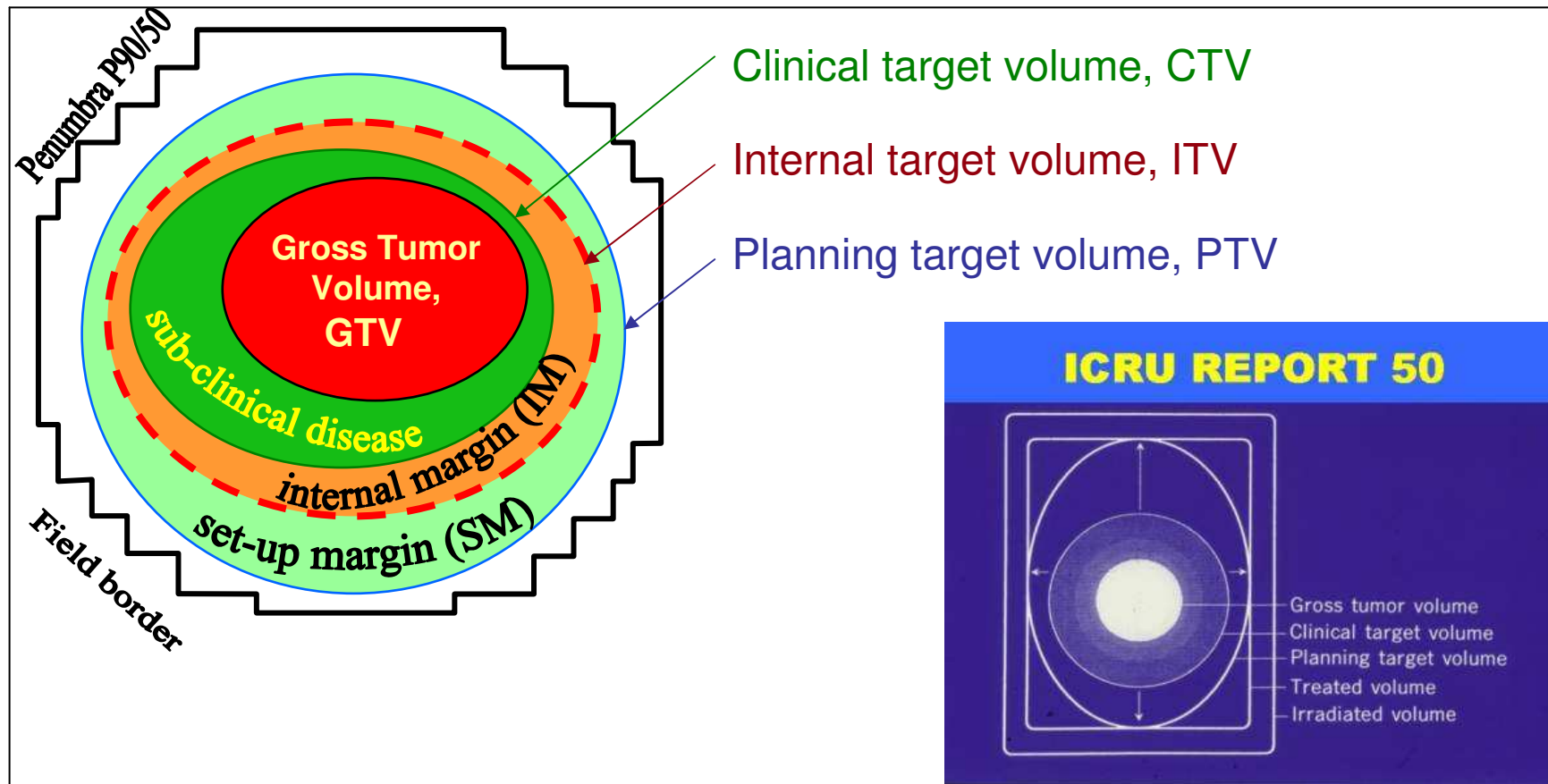
- No of patients treated in each diagnosis group over time

The KVIST portal solution <http://kvist.nrpa.no>



- Password protected portal administered by KVIST
- Minutes from meetings of the national reference group and WG's
- Each working groups has dedicated area on the portal
- Database solution for reporting of data from the RT centres
- Information, NEWS, meeting calendar

Harmonised target volume definitions from 2003



- Our national recommendation on target volume definitions will be revised according to the currently revised ICRU50/62 report

National guidelines for radiotherapy

- in cooperation with National Cancer Groups

AIM to ensure that all important elements in the RT process are described in national harmonized guidelines

- Template for radiotherapy guidelines based on ICRU and KVIST specifications

Guidance provided on the following cancer groups:

- Lung cancer
 - Non-small cell lung cancer, NSCLC
 - Small cell lung cancer, SCLC
 - Palliative radiotherapy of lung cancer
- GI cancer
 - Preoperative radiotherapy
 - Postoperative radiotherapy
 - Oesophagus cancer

Work currently in progress on

- Prostate cancer
- Gynecologic cancer
- Anal cancer

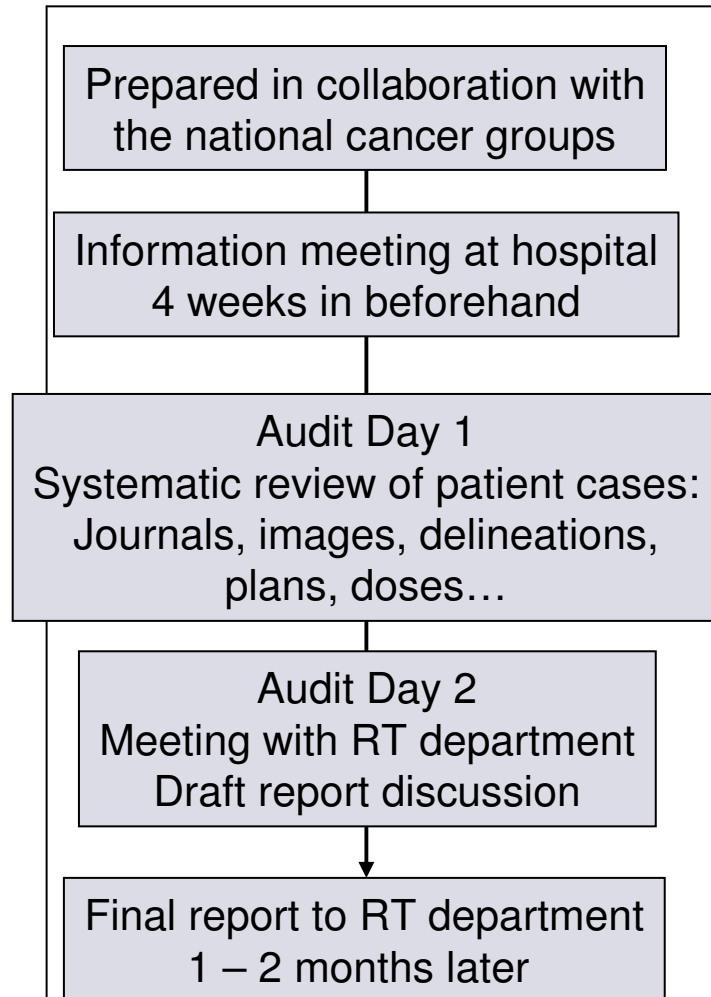
New future initiatives on

- Lymphoma cancer group
- Head & neck cancer group

Reports available on www.nrpa.no

Draft reports on <http://kvist.nrpa.no>

Peer review clinical audit in radiotherapy



- Organisation
 - Peer review, site visit, multidisciplinary group
 - Indications, planned treatment, performed treatment (dose, monitor calculations, verification ...) in relation to local, national or international guidelines of “good practice”?
 - The audit report is owned by the RT department (not public)
- 2003/04; Treatment of 40 patients with skeletal metastasis (6 RT centres)
- 2009; Treatment of 20 patients with breast cancer (2 RT centres so far)

Annual radiation therapy meeting

Medicine

Education

Physics

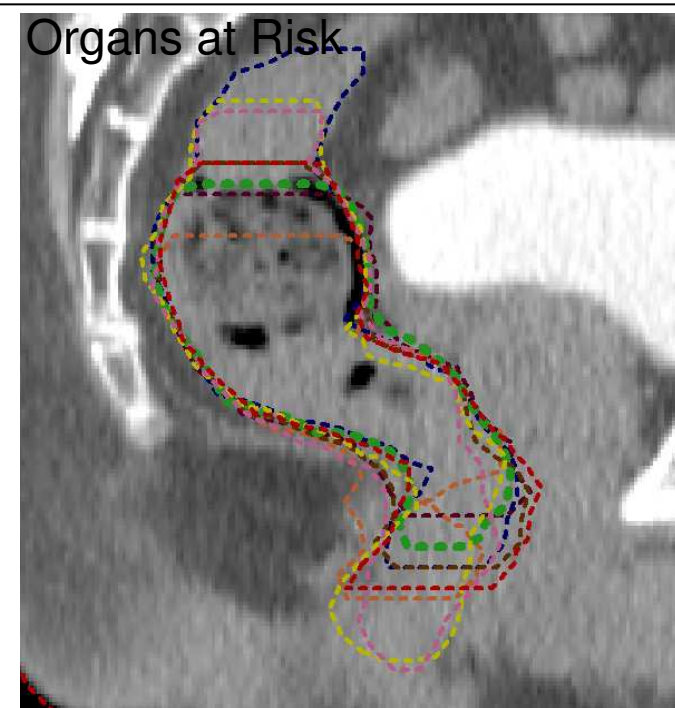
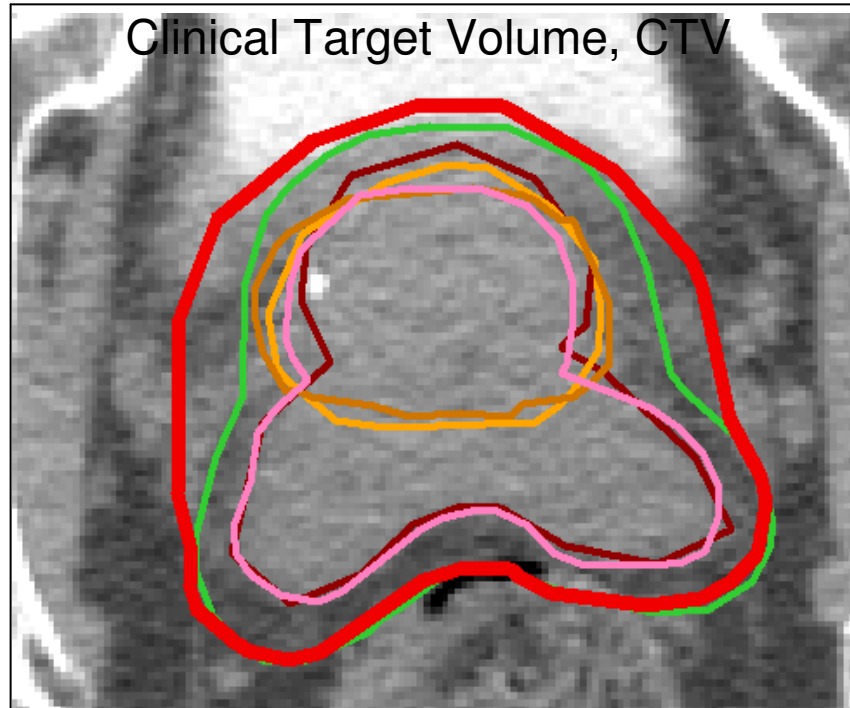
- Annually forum from 2001
- Multidisciplinary fro oncologists, medical physicists and RT technologists
- National and international experienced lecturers are hired to provide updated knowledge and promote the interest for radiation therapy
- "Workshops" as part of the meeting
- Approved course to give credits for the specialty of oncology in Norway

NB: In Norway the oncology speciality is including both medical and radiation oncology



Pierre Scalliet, Røros 2001

National Workshop as a tool for clinical audit

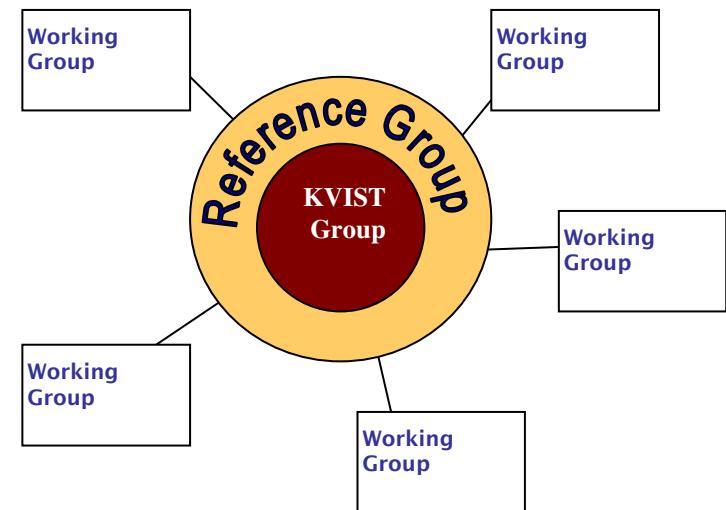


Comparing local practice for delineation and treatment planning

- Two cases with all work up material distributed to all RT departments
- Delineation of target volumes and organs at risk. Treatment planning based on local guidelines
- Electronically collocation of volumes, plans and dose distributions
- Arranged workshops where the results were presented and discussed

What is unique with the KVIST-project?

- The KVIST initiative is founded in a national body
- The member of the KVIST group work part time in radiotherapy departments which gives legitimacy
- All KVIST activities are multidisciplinary with multi centre representation
- Key actors are the national reference group and working groups
- The KVIST group acts as secretariat and coordinates all types of national QA projects in radiotherapy
- The KVIST group act as editors for harmonized national guidelines
- The recommendations and guidelines are developed by national consensus
- **The work is performed by the radiotherapy community it self, thus creating an atmosphere of ownership**



Compliments from the "KVIST" group at NRPA



Visit our poster at stand No 81

The KVIST group is the core and secretariat in the Norwegian QA initiative, with roots in clinic but also founded in a national body