

A Use of radiological examinations

1 The volume of radiological investigations is increasing in Norway. To what extent do you think this may be caused by the following factors?

	To a very small extent	To a small extent	To some extent	To a large extent	To a very large extent
a Increased morbidity in the population	☐	☐	☐	☐	☐
b Strengthening of patient rights	☐	☐	☐	☐	☐
c Peoples' increased demands for certain knowledge about own health	☐	☐	☐	☐	☐
d Referring physicians have less tolerance for uncertainty	☐	☐	☐	☐	☐
e Referring physicians have less competence to perform clinical examinations	☐	☐	☐	☐	☐
f Increased possibilities due to new radiological technology	☐	☐	☐	☐	☐
g Expanded clinical indications for radiology	☐	☐	☐	☐	☐
h Referring physician have less knowledge about accurate use of radiology	☐	☐	☐	☐	☐
i People's fascination for technological innovations	☐	☐	☐	☐	☐
j Increased availability of radiological equipment and personnel	☐	☐	☐	☐	☐
k Increased demand on health care professionals' effectiveness	☐	☐	☐	☐	☐
l Increased focus on economic issues in health care services	☐	☐	☐	☐	☐
m Health service providers' increased competition for patients	☐	☐	☐	☐	☐
n Increased demands for documentation from the National Service or insurance companies	☐	☐	☐	☐	☐
o Increased risk of litigation against health care providers	☐	☐	☐	☐	☐
p Other, specify: _____	☐	☐	☐	☐	☐

If you do not practice as radiologist at present, please jump to question 9

2 The list below shows the main causes for unnecessary use of radiological investigations (Source: European referral guidelines for imaging, in Norwegian translation).

To what extent do you think this occurs at your workplace?

	To a very small extent	To a small extent	To some extent	To a large extent	To a very large extent
a Repeating investigations which have already been done	☐	☐	☐	☐	☐
b Investigation when the results are unlikely to affect patient management, because the anticipated 'positive' finding is usually irrelevant or because a positive finding is so unlikely	☐	☐	☐	☐	☐
c Investigating too often, i.e. before the disease could have progressed or resolved or before the results can influence treatment	☐	☐	☐	☐	☐
d Doing the wrong investigation	☐	☐	☐	☐	☐
e Insufficient clinical information and unclear questions in the referral	☐	☐	☐	☐	☐
f Over-investigation, because some clinicians tend to rely on investigations more than others and some patients take comfort in being investigated	☐	☐	☐	☐	☐

B Participation in the decision-making process

3 How often are you asked about or requested to advice on choice of examination?

	Daily	Weekly	Monthly	Rarer than monthly
a From the referring physician	☐	☐	☐	☐
b From the patient	☐	☐	☐	☐

4 Do you refer to the Referral guideline for imaging when advising on choices of examination?

Yes, often	Yes, some-times	No, rarely	No, never
☐	☐	☐	☐

5 Assume that referrals with ambiguous indications or inappropriate choice of technique/modality occur. How often do you carry out the following actions?

	Daily	Weekly	Monthly	Rarer than monthly
a I check test results and/or information in the medical record	☐	☐	☐	☐
b I contact the referring physician to clarify the clinical problem	☐	☐	☐	☐
c I ask the patient for more information	☐	☐	☐	☐
d I perform a clinical examination of the patient	☐	☐	☐	☐
e I change technique/modality without contacting the referring physician	☐	☐	☐	☐
f I return the referral and give a reason for this	☐	☐	☐	☐
g Other, specify: _____	☐	☐	☐	☐

6 Assume that you doubt the usefulness of a requested examination. To what extent would the following factors contribute to you preventing it from being carried out as requested?

	To a very small extent	To a small extent	To some extent	To a large extent	To a very large extent
a The patient is young (child, youth)	☐	☐	☐	☐	☐
b The patient/next-of-kin does not want the examination	☐	☐	☐	☐	☐
c The examination is uncomfortable or a burden to the patient	☐	☐	☐	☐	☐
d High risk of serious complications or side effects	☐	☐	☐	☐	☐
e The examination is resource-demanding (time or money)	☐	☐	☐	☐	☐
f The referring physician is receptive to guidance	☐	☐	☐	☐	☐
g The examination requires a high radiation dose	☐	☐	☐	☐	☐
h High risk of false positive/negative findings	☐	☐	☐	☐	☐
i The radiographer questions the referral	☐	☐	☐	☐	☐
j Makes one's work as a radiologist feel meaningful	☐	☐	☐	☐	☐
k Other, specify: _____	☐	☐	☐	☐	☐

7 Assume that you doubt the usefulness of a requested examination. To what extent would the following factors contribute to you performing the examination as requested after all?

	To a very small extent	To a small extent	To some extent	To a large extent	To a very large extent
a The patient/next-of-kin want the examination	☐	☐	☐	☐	☐
b The patient has already arrived	☐	☐	☐	☐	☐
c Great respect for the referring physician's professional judgement	☐	☐	☐	☐	☐
d The referring physician is difficult to contact	☐	☐	☐	☐	☐
e Ambiguous guidelines for use of the examination	☐	☐	☐	☐	☐
f High reimbursement rate for the examination	☐	☐	☐	☐	☐
g Fear of legal consequences	☐	☐	☐	☐	☐
h Time pressure	☐	☐	☐	☐	☐
i Demand for efficiency at work	☐	☐	☐	☐	☐
j Other, specify: _____	☐	☐	☐	☐	☐

8 Do any procedural or organisational conditions at your workplace prevent you from influencing decisions regarding what examinations that is to be performed?

C Role perception

9 Some statements concerning radiology and radiologists in general follow below. To what extent do you agree or disagree with these statements?

	Completely agree	Partly agree	Neutral	Partly disagree	Completely disagree
a Radiology is a suitable expedient for comforting anxious patients	☐	☐	☐	☐	☐
b Patients expect the radiologist to become involved in their total clinical situation	☐	☐	☐	☐	☐
c Radiation doses from radiology can probably reduce the risk of cancer	☐	☐	☐	☐	☐
d High quality imaging procedures presuppose clearly specified clinical questions	☐	☐	☐	☐	☐
e Radiology should more often be included in ordinary health check-ups	☐	☐	☐	☐	☐
f Radiologists gain professional respect when they actively discuss with and guide clinicians in appropriate use of radiology	☐	☐	☐	☐	☐
g Patients' confidence in their physician is swayed if the radiologist questions the referral	☐	☐	☐	☐	☐
h In the referral, physicians should just explain the clinical problem clearly, and not request specific examinations	☐	☐	☐	☐	☐
i Radiologists must accept that referring physicians and patients may request examinations for other than strictly medical reasons	☐	☐	☐	☐	☐
j Radiologists have part of the responsibility for limiting the total Norwegian health costs	☐	☐	☐	☐	☐
k Liberal use of radiology is generally cost-effective	☐	☐	☐	☐	☐
l Prioritisation based on disease severity, outcome and cost-effectiveness is most relevant in therapy, less in diagnostics	☐	☐	☐	☐	☐

10 Unnecessary use of imaging procedures may have negative consequences. To what extent do you perceive the following consequences to be ethically challenging?

	To a very small extent	To a small extent	To some extent	To a large extent	To a very large extent
a Reduced access to radiological services for other patients	☐	☐	☐	☐	☐
b Fewer resources for other health services	☐	☐	☐	☐	☐
c Unnecessary radiation exposure to patients	☐	☐	☐	☐	☐
d Unnecessary risk of false positive findings which require medical follow-up	☐	☐	☐	☐	☐
e Harm the radiologists' professional self-esteem (integrity)	☐	☐	☐	☐	☐
f Other, specify: _____	☐	☐	☐	☐	☐

D Background information

11 Gender Female ☐ Male ☐

12 Are you approved as specialist in radiology? Yes ☐ No ☐

13 Subspecialty/main field of work (please mark only one of the alternatives below):

Angio/inter- vention	Pediatric radiology	Neuro- radiology	CT	MRI	Ultra- sound	Mammo- graphy	General radiology	Other or additional subspecialty/main field of work:
☐	☐	☐	☐	☐	☐	☐	☐	_____

14 For how many years have you practice as radiologist?

The remaining questions concern only those who practice as radiologist at the moment

15 What percentage of a full-time radiologist position do you work? %

16 How much of your working time (%) is devoted to other work than clinical radiology (research, teaching and administration etc.)? %

17 At what type of institution do you work?

Large public hospital (university or regional)	☐
Small public hospital (community or county)	☐
Private radiological institute	☐
Other, specify: _____	☐

18 How is the capacity of radiology supply within your field of work at your workplace?

Free capacity for receiving more patients	☐
Sufficient according to patient population	☐
Insufficient with long waiting time for patients	☐

19 What is the travel time from your workplace to the closest other radiology service? Approx. _____ hour(s)

Thank you very much for your answers!