



# Role of the regulatory authority in radiation protection and safety in veterinary medicine

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# RP in veterinary medicine: BSS

Application of:

1. Fundamental Safety Principles

Including general principles of radiation protection

2. Requirements for planned exposure situations

(exception: medical exposures)

**FOCUS: protection of humans and environment**

# Role of the regulatory body

→ Providing a **clear regulatory framework** that includes establishment of requirements / guidelines

- facilities

- different involved parties

→ **authorization and inspection** of facilities

→ **enforcement** of legislative and regulatory provisions

→ ...

# Traditional view on RP in veterinary medicine

“For veterinary workers, occupational exposures appear to be well below the maximum permissible dose limit and the risk or probability of harmful effects is low if stringent radiation safety practices are maintained.”

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## EFFECTS OF LOW-LEVEL EXPOSURE TO IONIZING RADIATION: CURRENT CONCEPTS AND CONCERNS FOR VETERINARY WORKERS\*

William R. Widmer DVM, MS<sup>1</sup>, Stanley M. Shaw PhD and Donald E. Thrall DVM, PhD

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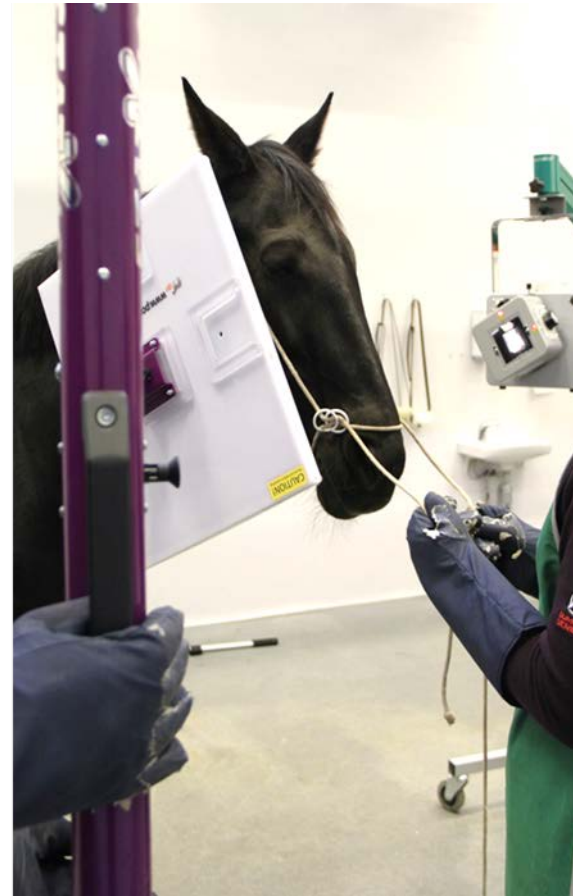
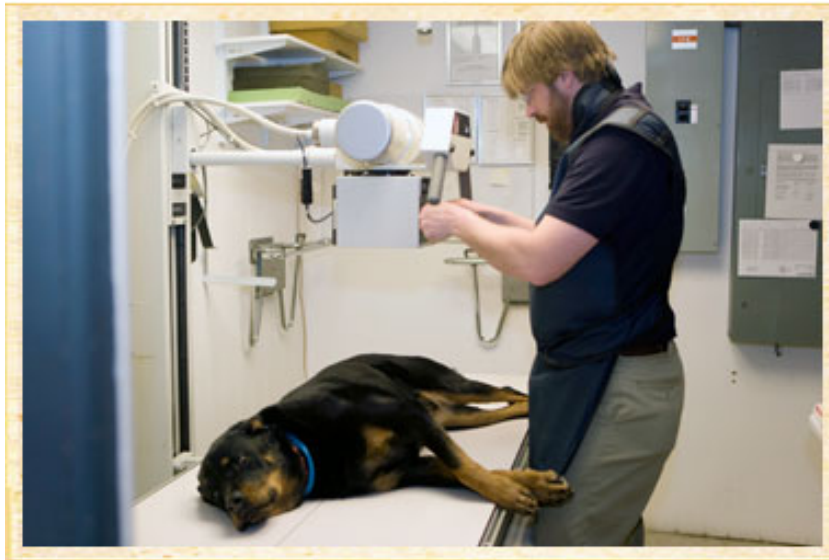
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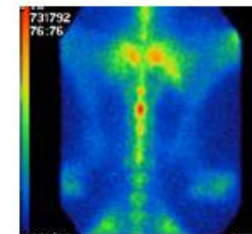
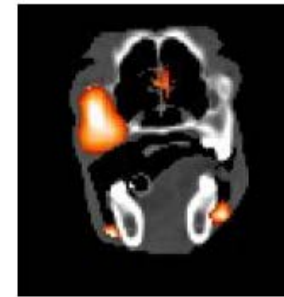
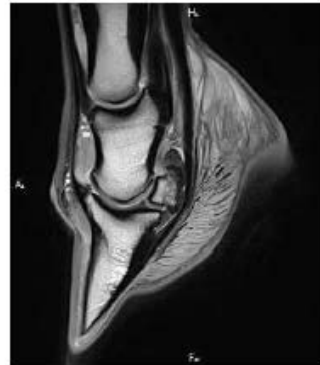
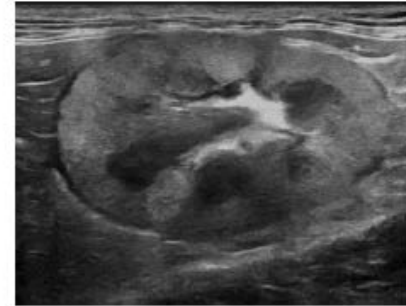
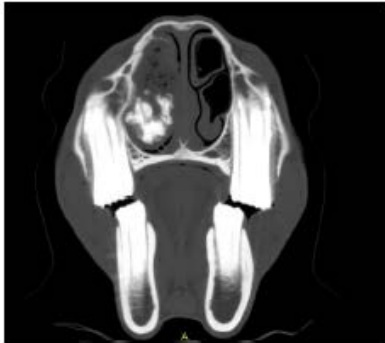
Veterinary Radiology & Ultrasound

Volume 37, Issue 3, pages 227–239, May 1996

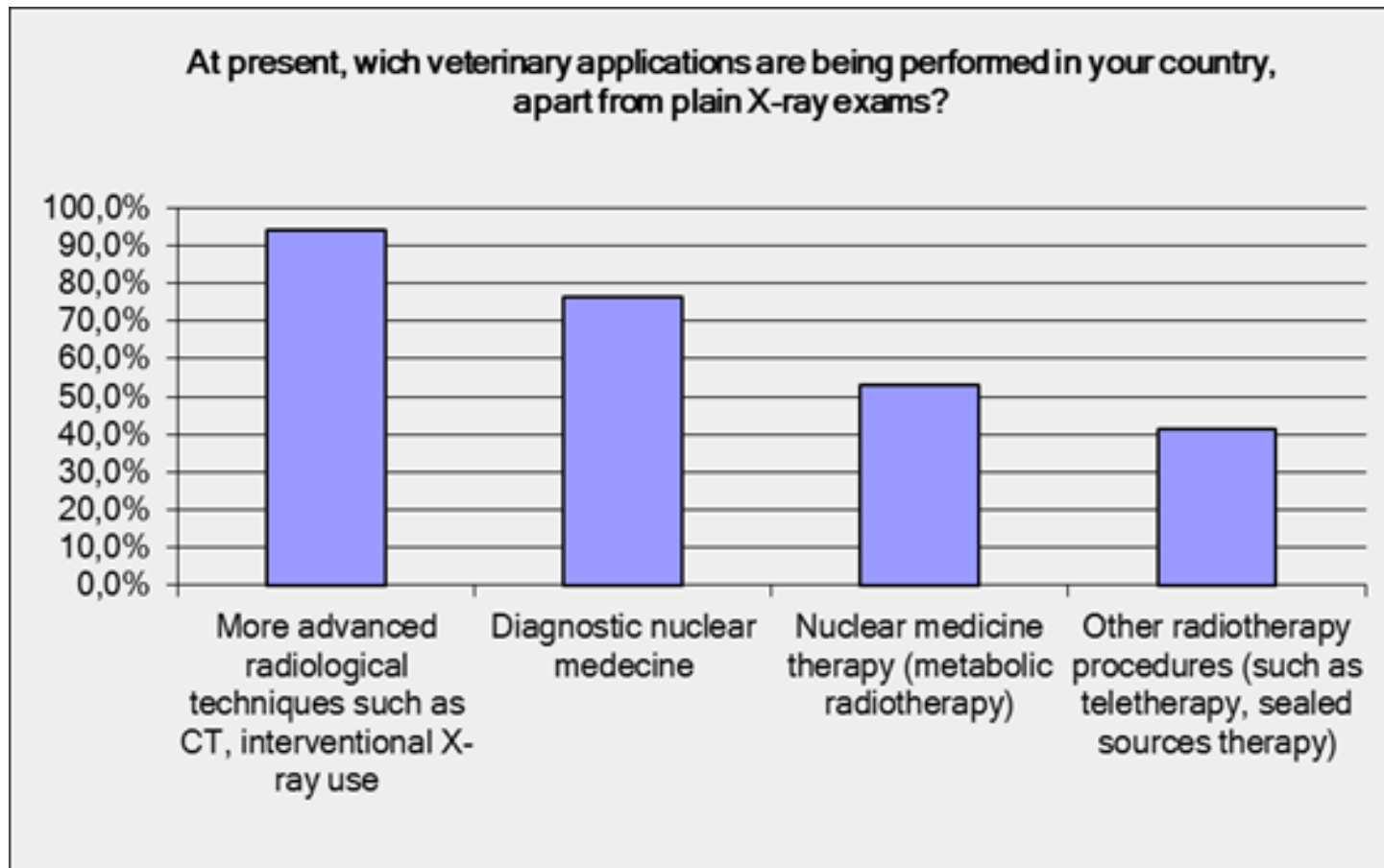
# Practices in veterinary medicine



# Evolution



# HERCA Task Force on Veterinary Applications (2013)



# Evolution in legislation?

in a lot of countries the legislation on veterinary applications hasn't changed a lot in recent years



# Implication to RP framework

Technologically advanced equipment/practices:

- increased room for **error**
- **E&T**: understanding the technology and the radiation protection
- high dose procedures: cause **deterministic effects** (personnel and animals)
- increasing potential for **exposure of the general public or environment** (ex. Nuclear medicine)

# Implication to RP framework

Technologically advanced equipment/practices



Framework needs to be adapted accordingly

# Regulatory authority: challenges (1/3)

## Education and knowledge is key!

- Understand the different techniques and practices
- Understand the specificity of the veterinary sector
- Get into contact with the sector
- Communication between countries is crucial
- Be **proactive**

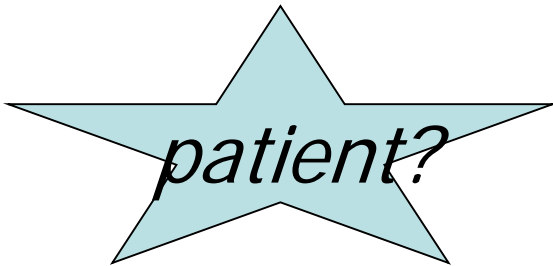
# Regulatory authority: challenges (2/3)

## **International approach:**

- Differences could promote veterinary tourism
- Global approach
- Particular need for communication
- Justification!

# Regulatory authority: challenges (3/3)

## Status of the animal?



Consideration of other principles such as 'animal welfare'?  
(cfr. the Five Freedoms)

**Freedom from hunger or thirst** by ready access to fresh water and a diet to maintain full health and vigour

**Freedom from discomfort** by providing an appropriate environment including shelter and a comfortable resting area

**Freedom from pain, injury or disease** by prevention or rapid diagnosis and treatment

**Freedom to express (most) normal behaviour** by providing sufficient space, proper facilities and company of the animal's own kind

**Freedom from fear and distress** by ensuring conditions and treatment which avoid mental suffering

# International initiatives

- ***IAEA Safety Report*** on Radiation Protection and Safety in Veterinary Medicine
- ***HERCA*** WG on Veterinary Applications
- ***ICRP TG107*** on Advice on Radiological Protection of the Patient in Veterinary Medicine
- ***ICRP TG110*** on Radiological Protection for Workers and the Public in Veterinary Practice
- ...

# The time is now:

It is time to start recovering lost ground and reinforce the radiation protection requirements while taking into account today's and presumably near future practice.



**Thank you  
for your  
attention**



Acknowledgement: Aste Sovik