Radiation Safety Survey Summary

47 questions total with comment section at end.

Max 210 respondents, but response rate per question decreased as the questionnaire went on.

*Demographics*

Respondents were primarily in private practice (46%), then academia (27%) and telemedicine (24%). Few ultrasound only/other (3%).

Most individuals are in metropolitan regions (65.5%) followed by telemedicine (29%) and rural areas (5.5%). 85% of respondents from USA, 4.3% from Canada, and rest from abroad

Most respondents 36-45 years (41%), 46-55 next (25%).

Respondents are primarily small animal practitioners (67%), 31% mixed, 1 % LA only.

Most respondents (40.5%) have been in practice 11-24 years, followed by 6-10 years (23%) and 1-5 years (22%). Few outside of that range. Approx. half of respondents were within 10 years of imaging specialty, while half were within 11-24 years. Depending on interpretation, this prob corresponds to age in which most people are within approx. 10 years of finishing residency.

Most respondents were women (60.5%), 39% male, 0.5% prefer not to answer.

*Radiation use in practice*

Approx. 22% practice nuclear medicine regularly, 69% do not, 9% do infrequently.

Most people do triple phase CT at least sometimes (77%). Almost all people do delayed datasets at least sometimes.

Varied distribution in percentage of collimation issues in radiographic cases (max answer is 51% or more). Most 11-30%, least none. Far fewer see collimation issues in CT (approx. half see it in 10% or fewer of images).

Many individuals think radiographs are obtained similarly to how they were obtained in the past (vague wording) (42%), while many think safety practices have slightly improved (29%).

Most respondents (67% hard no, 30% doubt it) do not think owners are notified about the risks of radiation exposure or safety implications when undergoing procedures involving radiation, fluoro, interventional procedures. Similar responses for CT. A few more think owners are notified about MRI safety.

Most respondents do not think images from GPs have adequate rad safety practices 66%.

Most respondents said images from specialists are adequate though (57% med, 61% surg). Most people didn’t answer large animal or food animal specialists (see demographics above), but those that did mostly thought they were inadequate (twice as many). Most people didn’t answer zoo specialists but only slightly more said inadequate rad safety over adequate.

Most respondents think veterinary technicians have inadequate knowledge regarding radiation safety and good practices (77%).

*Documenting Violations*

While 21% of respondents see radiation safety violations 1% of less of cases, 54% of respondents see cases with obvious radiation safety violations 1-10% of the time. ~23% of respondents see violations 11%->21% of the time. Most people think they see approx. 10% or less or 11-30% of cases with limited quality due to technical factors. More people attribute more cases to limited quality due to positioning errors.

Most people think the private practice/telemed radiologist has a teaching role about safety violations (57% total), almost equally split between private notifications and official report notifications. Very few people thought there was no role or that state regulators should be notified.

Most respondents (50%) document the violations in some way approx. 10% or less of the time. 12% never do. Half document it in the report. The others are split between all other options (report to work group, report to academia chief, call the client, email to practice). Approx. 11% don’t report (matches the ones that say they never document it).

*Radiation safety knowledge*

Vast majority are not aware of the NCRP report 148. (Maybe people just don’t remember the number… Q18)

Many respondents (31%) feel that the shorter lifespan of animals mitigates the importance of limiting patient dose, while 43% do not. The remainder were unsure.

While many respondents believe radiation sensitivity can vary between species (41.5%), 48% do not know.

Vast majority think that their knowledge base has remained strong regarding radiation protection. Most credit this to residency (59%) or self-study (36%), though more people answered this question than answered yes to the previous question (Q32 and Q31).

Vast majority of respondents think patient exposure is important because technical staff are also involved. (This answer was not developed well; it avoids the actual question topic of patient safety. Q19). Most think radiation sensitivity varies by species or doesn’t know. (Odd question that isn’t very clear Q22). Equally split between having a shorter lifespan mitigating the importance of patient dose (yes/no/don’t know).

*Position on ACVR involvement in radiation safety and CE*

Almost all (96.4%) think we need to assess radiation safety culture and practice.

All people are very or somewhat interested in rad safety refreshers being offered at the ACVR (No option for “not interested” Q29), and the vast majority (~71%) do no attend rad safety CE annually.

Most respondents split equally between average to very high interest in radiation safety best practices. Only 6% “disinterested.” Most people say their interest in rad safety has not changed “since veterinary school and residency,” followed by increased. (Prob should have separated vet school and residency Q33).

Almost all think the ACVR can better define radiation safety “best practices” to “stakeholders.”

Vast majority think ACVR should offer CE and training to people who perform imaging on animals (no specific topic for CE mentioned Q34). Even distribution for how often this CE should be offered, annual to every 3 years.

Most people think this CE should be web-based with modules (57%), followed by through the AVMA (23%), then state boards (12%), then private companies (6%), then academic (2%).

Overall lack if interest in people wanting contribute content to training modules, but 36% said they would be willing to contribute.

Most people not interested in a rad safety society (prob should have asked if they would be willing to pay society dues for it).

*Comments from respondents*

\*Awareness important. Rec require CE on topic at state level.

\*More support from radiation safety officers rather than radiologists.

Rec not reading images with safety violations.

Feel need for a study addressing patient rad safety in veterinary patients.

\*Think indifference as important as ignorance.

\*Want ACVR statement to put in reports.

Remember dental rad units for safety too.

\*Tech school trained vs on-the-job trained technicians differ in knowledge. Vet assistants too.

Multiple sites with CT an issue.

\*Lack of adequate sedation is a huge problem.

Suggest note in employee file for technicians that violate rad safety.

Too busy or understaffed to address rad safety possibly.

UK impressions vs USA/Canada practices.

Recommend fine or legal result.

Teleradiologist removed from the acquiring of images and not able to comment on safety during exposure.

Concern for non-ionizing radiation safety too.

Collimation may be not used in case pick up lesion on edge or to cover more of patient.

Survey had confusing questions, missed some answer options, poorly ordered answer options (region of US), and people couldn’t go back to a question if picked wrong by accident.

\*Rec hands on training at conferences such as AVMA. Rec training in practices too.