

Radiographs: Take in the Whole View

Heather Prendergast, RVT, CVPM, SPHR
Synergie Consulting
Las Cruces, New Mexico

Radiography machines have been used as a diagnostic tool in veterinary medicine for years. If well managed, radiology can be an effective profit center for a veterinary practice, yet practice owners rarely look at the true cost of the equipment and instead base their prices on “the way it has always been.”

When practice owners consider pricing radiology services or upgrading equipment, they should evaluate the complete picture:

- Team member training, education, and communication
- Inspections and maintenance
- Dosimeters
- Cost of technology upgrades
- Appropriate client fees for the service

Team Member Training, Education, & Communication

Training

Team members responsible for radiographs and animal safety must be trained on the following important topics.

- OSHA requirements and personal protective equipment
- Scatter radiation reduction
- Patient sedation techniques, when possible, for veterinarians and credentialed veterinary nurses
- Radiograph techniques to ensure perfect views are obtained on the first attempt
- Settings (ie, kVp, mAs) and developing and fixing techniques, if using analog machines

Education

Standard operating procedures (SOPs) should be implemented to keep all team members accountable for upholding patient and team member safety when obtaining radiographs. Practice managers should create a budget that includes CE costs. With proper training, fewer views are needed to obtain high diagnostic quality, and client compliance grows when effective communication techniques are used. SOP training and development costs must be integrated into the amount clients are charged for the service. (See **Resources**.)

Communication

Team members may be responsible for recommending radiographs to clients, so they must understand why radiographs are necessary and be able to explain the cost, the advantages, and the disadvantages, especially if sedation will be used. Team members must pay attention to their own communication skills, both nonverbal (eg, body posture, facial expressions, hand gestures) and paraverbal (eg, tone of voice, word emphasis and inflection), when they make recommendations because this conversation often determines client compliance.

Inspections & Maintenance

Most states require radiography machines to be registered, although the rules vary. Every machine should be inspected regularly, not only to maintain compliance with legal requirements but also for team safety, and the certificate should be posted in the radiography room with other legally required postings.

Radiography machines also require maintenance. Ensure each machine is maintained according to manufacturer guidelines and a log of checks and repairs is kept.

Resources

- *Financial Management of the Veterinary Practice*. Chamblee J, Reiboldt M. AAHA Press; 2010.
- Patterson Veterinary University. pattersonvet.com/SignatureSolutions/Education/Patterson-Veterinary-University
- *Practice Made Perfect: A Complete Guide to Veterinary Practice Management*. 2nd ed. Heinke ML. AAHA Press; 2012.

Dosimeters

States do not always require dosimeters; however, the practice should always require them for team member safety. Each team member should have his or her own dosimeter to allow for evaluation of regular exposure rates. Inspection, maintenance, and dosimetry costs should also be built into the pricing.

Technology Upgrades

All technology has a life expectancy, which must be considered when purchasing new equipment or upgrading existing equipment. Always build in a replacement pricing plan that considers the following. (See **Equipment Key Performance Indicators**.)

- Number of expected cases per year × fee charged for service = **Potential annual revenue**

- Total purchase price ÷ (profit × number of views) = **Payback period in years**
- Total purchase price ÷ profit per examination = **Break-even point**

Appropriate Client Fees

How much should clients be charged for radiographs? First, decide whether to charge *per view* or *per examination*. If the standard of care is to always obtain 2 views of the abdomen or appendages or 3 views of the thoracic cavity, why not charge per examination instead of per view? Always have a policy in place to prevent team members from practicing less than excellent medicine or missing charges.

Consider the following points when developing a client charge. (See **Radiograph Pricing Plan**.)

- Fixed costs per minute (eg, administrative, facility, equipment, machine maintenance), which can be obtained from the practice profit and loss (P&L) statements
- Direct costs associated with the machine multiplied by 2. (This step will likely be eliminated if a digital machine is used.)
 - If an analog machine is used, include film, chemicals, and other needed supplies.
 - Multiplying by 2 covers any ordering and holding costs associated with inventory management.
- Team costs per minute, including training
 - Payroll, benefits, and taxes that apply to nonveterinary team members can be obtained from P&L statements.
- Veterinarian costs per minute
 - Payroll, benefits, and taxes that apply to veterinarians can be obtained from P&L statements.
- Costs to replace or upgrade machines
- Desired profit

Equipment Key Performance Indicators

| | |
|--|-------------|
| Radiograph machine purchase price | \$30 000 |
| Current fee per examination | \$171 |
| Number of examinations per week | 24 |
| Number of examinations per year | 1248 |
| Cost per examination | \$136 |
| Profit per examination | \$35 |
| Annual revenue | |
| 1248 examinations × \$171 = | \$213 408 |
| Payback period | |
| \$30 000 ÷ (\$35 × 1248) = | ≈8.5 months |
| Examinations needed to break even | |
| \$30 000 ÷ \$35 = | 857 |

If the equipment will be leased or financed, be sure to include the finance charges.

Radiograph Pricing Plan

PRACTICE FIXED COSTS PER MINUTE (FROM P&L STATEMENTS)

- \$8.25 per minute × length of procedure
- \$8.25 × 5 minutes = \$41.25

DIRECT COST PER EXAMINATION (2 VIEWS) IF USING AN ANALOG MACHINE

- \$10.00 × 2 = \$20.00

TEAM COSTS PER MINUTE (FROM P&L)

- (\$6.25 per minute × 2 team members) × 5 minutes
(length of time to produce radiographs) = \$62.50

VETERINARIAN COSTS PER MINUTE (FROM P&L—USED FOR INTERPRETATION ONLY)

- \$1.73 per minute × 3 minutes = \$5.19

REPLACEMENT COSTS (ANTICIPATE REPLACEMENT IN 3 YEARS)

- \$10,000 per year; average 1248 examinations
per year = \$8.00 per view

PROFIT: 20%

- \$41.25 + \$20.00 + \$62.50 + \$5.19 + \$8.00 = \$136.94
- \$136.94 × 20% = \$27.39
- \$136.94 + \$27.39 = \$164.33

SERVICE PRICE TO CLIENT: \$164.33


TAKE ACTION

- 1 Do a complete analysis of every cost involved in taking radiographs to be able to calculate an appropriate client fee that allows the practice to make a profit.
- 2 Develop an SOP that includes guidelines for taking radiographs and ensuring team safety.

According to *Benchmarks 2015: A Study of Well-Managed Practices*,¹ the median charge for 2 digital radiographic views is \$160. However, knowing the practice's own costs rather than charging what other practices charge is important to ensure costs are accurately covered.

Conclusion

Once an appropriate charge has been established, make sure each team member is charging for the service. The cost of a radiograph taken for diagnostic purposes without charging the client should still be entered into the system and then discounted. This not only allows the client to value the discount but, more importantly, allows the practice to track and analyze how much is given away and how much that hurts the bottom line. When a practice gives a 10% discount, 14.7% must be generated to recoup that loss.²

Put medicine to work in the practice by creating a dynamic team that delivers phenomenal service and cutting-edge medicine, while charging appropriately for each service. 

References

1. *Benchmarks 2015: A Study of Well-Managed Practices*. Columbus, OH: WTA Veterinary Consultants and Veterinary Economics; 2015:15.
2. Ackerman L. *Blackwell's Five-Minute Veterinary Practice Management Consult*. Ames, IA: Wiley Blackwell; 2014:215.



HEATHER PRENDERGAST, RVT, CVPM, SPHR, has been in the veterinary industry for more than 20 years, working in small animal practice and as a consultant. She authored the book *Front Office Management for the Veterinary Team* and lectures nationally on practice management and veterinary nurse-related initiatives.

FUN FACT: Heather drives a Harley Davidson custom Fat Boy when time allows.