

**Revised 01/2014**

**AMERICAN COLLEGE OF VETERINARY RADIOLOGY  
RECOGNIZED VETERINARY SPECIALTY OF RADIATION ONCOLOGY (ACVR-RO)  
RESIDENCY TRAINING PROGRAM APPLICATION**

NOTE: Some questions in this form are included for data collection purposes. The inclusion of an item does not necessarily imply that the item is a program requirement for ACVR-RO residency program. Please refer to the current Radiation Oncology Training Program Guidelines for comprehensive residency training requirements. This document may be downloaded from [acvr.org](http://acvr.org), Members Only, Downloads.

**APPLICATION INSTRUCTIONS:**

Training program directors wishing to have their programs evaluated should electronically submit this form to the chair of the Radiation Oncology Residency Standards and Evaluation Committee (RSEC) and carbon copy the Executive Director of the ACVR (contact information is available at [acvr.org](http://acvr.org), Members Only, Administration). The application must be received at least 60 days before the meeting of Executive Council at which the program will be evaluated. There are two meetings of Executive Council each year; a midyear meeting in April, and the Annual Meeting held in conjunction with the Annual meeting of the ACVR. Exact dates of Executive Council meetings are available at [acvr.org](http://acvr.org), Calendars, and are also printed in each issue of *Veterinary Radiology & Ultrasound*. There will be no exceptions to the 60 day lead time requirement. The Residency Standards and Evaluation Committee will evaluate the application, a vote will be taken, and the results of the vote and the majority recommendation of the committee forwarded to the President of the Recognized Specialty of Radiation Oncology for consideration at Executive Council at one of the two annual meetings.

For the required ACVR and ACVIM Diplomates providing consultation in medical oncology and imaging, please provide a brief 2-page curriculum vitae and specify the number of weeks each year that the individual will be available to actively support the radiation oncology trainee.

## ACVR-RO RESIDENCY TRAINING PROGRAM APPLICATION

1. Date of Application

July 20, 2016

2. Program Director(s): (Must be a Diplomate of ACVR Recognized Veterinary Specialty of Radiation Oncology)

Monique Mayer

Number of weeks per year faculty member is available to resident on a daily basis.

45

### Program Director's Contact Information:

Work Phone:	306-966-7088
Fax:	306-966-7174
E-mail:	monique.mayer@usask.ca

3. Application is made for check one (see below):

Standard Program	Alternative Program
X	

The following conditions define an Alternative Program:

- a. If the program is not at least a minimum two-year continuous radiation oncology training program which fulfills all the trainee requirements of the training program guidelines, it will be defined as an Alternative Program.
- b. If exemption from any other requirement for a Standard program is requested in the application, the program must be submitted as an Alternative Program.

4. Location of Primary Institution

Primary Site:

Western College of Veterinary Medicine

Department

Small Animal Clinical Sciences

Hospital/University

University of Saskatchewan

Address

52 Campus Drive, Saskatoon, SK, Canada S7N 5B4

City, State, Zip, Country

5. Cooperating Institution(s) (If applicable):

Department

Hospital/University

Address

City, State, Zip, Country

For cooperating institutions, attach letters of agreement signed on behalf of the institution(s) by appropriate individual(s).

6. Length of Training Program (months):

36

If greater than 2 years, will this period include 24 months of continuous training in radiation oncology?

Yes

7. Number of months dedicated solely to radiation oncology training (excluding time on Medical Oncology service, Radiology/Imaging, etc.)

20

8. Advanced Degree:

	Yes	No	Optional
Masters:	X		
PhD:		X	

9. Essential Program Faculty: individual faculty member may serve in only one capacity

**Please list all qualified faculty in support of program**

a. Diagnostic Radiologist(s): (Must be Diplomate(s) of the ACVR)

Gregory Starrak, DACVR
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Number of weeks per year faculty member(s) is/are available to resident on a daily basis.  
Please list for each faculty member.

Gregory Starrak, DACVR 39* *at this time we have a single board-certified radiologist at the WCVI. Locum radiologists (ACVR or ECVDI) also support the program until our open Medical Imaging positions are filled. In 2015 we had locum support for 28 weeks provided by 6 ACVR diplomates (20 weeks) and 1 ECVDI diplomate (8 weeks). Between Dr. Starrak and the locum radiologists, there will be a board-certified radiologist available to the resident on the premises on a daily basis for at least 45 weeks a year.
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Faculty member on site?

Yes	No
X	

If off site, please explain relationship.

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b. Medical Oncologist(s): (must be Diplomate(s) of ACVIM, Specialty of Oncology)

Valerie MacDonald Jerome Gagnon
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Number of weeks per year faculty member(s) is/are available to resident on a daily basis.  
Please list for each faculty member.

Valerie MacDonald 26 weeks on clinic (alternating with Gagnon) Jerome Gagnon 26 weeks
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Faculty member on site?

Yes	No
X	

If off site, please explain relationship

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c. Surgeon(s): (must be Diplomate(s) of the ACVS)

Small Animal Surgeons: Curtis Cathcart Kathleen Linn Cindy Shmon (administrative)  Large Animal Surgeons: James Carmalt Spencer Barber David Wilson Joe Bracamonte
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Number of weeks per year faculty member(s) is/are available to resident on a daily basis.  
Please list for each faculty member.

Curtis Cathcart 26 weeks
Kathleen Linn 26 weeks
James Carmalt 26 weeks
Spencer Barber 26 weeks
David Wilson 26 weeks
Joe Bracamonte 26 weeks

Faculty member on site?

Yes	No
X	

If off site, please explain relationship.

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d. Pathologist(s): (must be Diplomate(s) of the ACVP)

Bruce Wobeser (Anatomic Pathology)
Marion Jackson (Clinical Pathology)
Ahmad Al-Dissi (Anatomic Pathology)
Ryan Dickinson (Clinical Pathology)
Beverly Kidney (Clinical Pathology)
Elemir Simko (Anatomic Pathology)
Sherry Myers (Clinical Pathology)
Soraya Sayi (Anatomic Pathology)
Helene Philibert (Anatomic Pathology)
Hilary Burgess (Clinical Pathology)
Melissa Meachem (Clinical Pathology)

Pathologists have at minimum 17 weeks of the year assigned to Practice of Professional skills (during which time they are available to the resident on a daily basis).
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Faculty member on site?

Yes	No
X	

If off site, please explain relationship.

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10. Please list all additional board certified specialists in direct support of the program. If offsite, please explain relationship.

Name	Certifying College / Board
Kevin Cosford	ACVIM (Internal Medicine)
Cheryl Vargo	ACVIM (Internal Medicine)
Susan Taylor	ACVIM (Internal Medicine)
Anthony Carr	ACVIM (Internal Medicine)
Barbara Ambros	ECVAA
Tanya Duke	ACVA, ECVA
Lynne Sandmeyer	ACVO
Bianca Bauer	ACVO

11. How will resident receive training in Medical Oncology? What is time allotted for this training? Please provide description of formal and informal training experiences?

The resident will rotate through the Medical Oncology clinical service as a clinician with direct patient management responsibility, including diagnosis, staging and treatment, for 8 weeks. The objectives in the ACVR/ACVIM Resident Training Objectives *Ad Hoc* Committee Report will be used as a guideline for training content. The resident will participate in daily, in-person patient rounds and discussion of case-related oncologic concepts with the supervising medical oncologist, as well as daily topic rounds. Reading requirements during the Medical Oncology training will include Withrow and MacEwen's Small Animal Clinical Oncology, as well as daily topic-related and case-related journal articles. The resident will be encouraged to attend the weekly Medical Oncology journal club throughout their residency.

12. How will resident be trained in diagnostic imaging? What time is allotted for this training? Please provide description of formal and informal training experiences.

The resident will be assigned to the Medical Imaging clinical service for 4 weeks, as well as informally interact with radiologists for imaging interpretation on clinical cases. In-person interaction with a radiologist is strongly encouraged. Radiologists are asked to contribute to delineation of gross tumor volume on the treatment planning system at the discretion of the radiation oncologist.

While assigned to the Medical Imaging service, the resident will attend daily rounds. They will review the service's core curriculum of images in musculoskeletal, thoracic and abdominal cases. During the remainder of the day they will be assigned a specific area (i.e. cross sectional imaging, radiographs, US) and be involved in the clinical cases. The resident will be responsible for writing reports for cases in the area they are assigned to, and will be graded on several assigned cases. There will be assigned reading from *The Essential Physics of Medical Imaging* (Bushberg et al), with a written quiz for each chapter. In addition, they will attend journal club and be assigned reading from *Thrall's Textbook of Veterinary Diagnostic Radiology*.

13. How will resident be trained in radiation biology?

I plan to offer a course in radiobiology to support the residency. I have not developed the course yet, as I was developing the physics course VSAC 855 Physics of Radiation Oncology in 2015-2016. I am now taking a six month sabbatical from January to July 2017 and will develop the course during this time. It will be based on Hall's Radiobiology for the Radiologist. ASTRO radiation and cancer biology practice examinations will be administered throughout the training period.

14. How will resident be trained in cancer biology?

A cancer biology graduate course, The Science of Veterinary Oncology: Basic and Applied Tumor Biology, will be offered by Dr. Valerie MacDonald during the residency training program (syllabus attached).

15. How will residents be trained in radiation oncology physics?

A web-based (WebEx) 3 credit (39 hour) graduate level course, Physics of Radiation Oncology, will be offered during the winter semester of the first or second year of the residency (syllabus attached).

RAPHEX practice examinations will be administered throughout the training period after completion of the physics course in year 1.

16. Please list any formal courses and their instructors included in the residency training curriculum. Please attach syllabi and instructor credentials for each listed course.

Physics of Radiation Oncology, Monique Mayer (ACVR-RO)

The Science of Veterinary Oncology: Basic and Applied Tumor Biology, Valerie MacDonald (ACVIM, Medical Oncology)

VSAC 878.3 Small Animal Anesthesia Tanya Duke, Barbara Ambros

17. Will the resident participate in clinical rounds on a daily basis while on clinical rotations? Is a supervising Diplomate available for the majority of rounds? If no, please describe how rounds are attended and supervised.

Yes	No
X	
Comments:	The supervising Diplomate is present for the majority of clinical rounds. In addition to morning review of cases, ongoing interaction regarding current and incoming cases takes place throughout the day.

18. Are formal conferences, such as clinicopathologic conferences, journal clubs, or seminars held on a weekly basis?

Yes	No
X	
Comments:	

19. Please provide a description of the conferences, etc., that are provided and the typical schedule.

Medical Oncology journal club weekly: review of 3-4 current journal articles Radiation Oncology topic review monthly: the resident is responsible for a comprehensive literature review on a specific tumor type (the focus will be on those tumors for which radiation therapy may be indicated) and presentation of clinically
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relevant conclusions related to diagnosis, staging, treatment and outcomes

Radiation Oncology journal club weekly: two publications from within the last 6 months will be reviewed

The resident will be encouraged to attend Surgical Pathology and Clinical Pathology rounds, which are held weekly

20. Is the resident required to give one or more formal presentations at a conference or in an educational setting on a yearly basis?

Yes	No
X	
Comments:	The resident is required to present a 45 minute case-based seminar at the Small Animal Clinical Sciences weekly seminar on a yearly basis

22. How many major veterinary medical or medical meetings is each resident able to or expected to attend during his/her training program?

None	One	Two	> Two
		X	
Comments:	The resident will be encouraged to attend the ACVR annual meeting twice and will be required to present an abstract at an ACVR annual meeting a minimum of one time. A travel stipend of \$1300/year is provided to the resident.		

23. Does the training program require a research project? Please indicate the number of

research projects required.

Yes	No	Optional	Number
X			2
Comments:		Project 1: MS project Project 2: Retrospective review	

24. Are one or more publications required as part of the training program?

Yes	No	Number
X		
Comments:		The resident will be required to submit two manuscripts for publication (arising from the projects listed above)

25. Please indicate the availability of the following facilities or equipment. Indicate if these are available at the primary training site, or at a different location. For facilities that are not on-site, please describe the situation and availability in the space at the end of this section.

Equipment / Service	Available?		On-Site?	
	Yes	No	Yes	No
Megavoltage Teletherapy Machine Please specify manufacturer and model: Varian 21EX with OBI/CBCT	X		X	
3D - Computer based treatment planning system Please specify manufacturer and model: Eclipse version 11	X		X	
2D/2½ D - Computer based treatment planning system Please specify manufacturer and model: NA		X		X

LDR Brachytherapy treatment and planning	X	X	
HDR Brachytherapy treatment and planning	X		X
Diagnostic Radiology / Imaging Services			
Conventional Radiography	X	X	
Fluoroscopy	X	X	
Ultrasound	X	X	
Nuclear Medicine	X	X	
Computed Tomography	X	X	
Magnetic Resonance Imaging	X	X	
Positron Emission Tomography	X		X
Intensive Care Facility - 24 hours	X	X	
Clinical Pathology capabilities: (includes CBC, serum chemistries, blood gases, urinalysis, cytology, parasitology, microbiology, and endocrinology)	X	X	
Veterinary Library w/Literature Searching Capabilities	X	X	
Medical Library w/Literature Searching Capabilities	X		X
Computerized Medical Records w/Searching Capabilities	X	X	

26. If any of the above equipment or facilities are available off-site, please explain how the resident can access them for case management, research, or study.

Positron Emission Tomography: available on campus

Medical Library w/Literature Searching Capabilities: available on campus

27. Please list numbers of patients treated in the last 12 months using the listed radiation treatment modalities.

Modality	Number Treated*
Megavoltage Gamma / X-ray Teletherapy: *I have not been back at work for a full year so the numbers are based on 9 months and previous years prior to my two-year leave	80-100*
LDR Brachytherapy	NA
HDR Brachytherapy	NA
Injectable Radionuclide therapy	
Radioiodine	21
Other (please specify)	NA
<sup>90</sup> Strontium Plesiotherapy: *probe just acquired but not in clinical use yet	NA*
Other - please specify	NA

\* indicate N/A (not applicable) if the treatment modality is not available

28. Describe procedures for resident record recording of radiation treatment details of all patients.

Radiation treatment details are available from the Eclipse planning computer (backed up nightly), ImSure calculations (stored electronically with nightly backup), and ARIA records are available for all treated patients. An ARIA summary is imported into the in-house EMR system (VetNet).

29. What procedures are in place to facilitate collection of follow up information of patients treated?

All patients are followed for life. Palliative patients are contacted every 2 months and curative intent patients every 3 months by the radiation therapist or radiation oncology clinical associate (DVM), by email or phone. Information regarding tumor response, side effects of radiation and, in the event of death, cause of death (tumor-related, primary disease or metastatic disease, non-tumor-related) is collected. All conversations (phone or electronic) are entered into the hospital EMR system.

30. By what mechanisms and how often will trainees be evaluated? Please attach form used in this evaluation (required).

Trainees will be evaluated every 6 months. The six month evaluation will be performed by the residency director and include a review of progress towards their specific yearly

goals (as indicated in calendar), and specific milestones achieved (this form will be completed by the supervising radiation oncologist, and is loosely based on ACGME guidelines). In addition a meeting of the MS committee will take place every six months to review progress towards the completion of the MS degree. Once a year, a summary of feedback from hospital team members will be performed by the residency director (the department issues a survey to clinicians and staff members in the Veterinary Medical Centre yearly, and this survey is shared with the supervising faculty member).

Attached are the two forms, 'Radiation Oncology Milestones' and 'Department Resident Evaluation Survey'.

31. If applicable, please list the residents who have completed the training program within the last five years, including the year that each individual's training program ended. If at all possible, please provide an address, and any information you have on the status of each individual with respect to the board certification process.

NA

32. Please list any additional information of interest in support of this residency application.

**Attachments:**

Please attach the following documents to the application if applicable. Please mark box to indicate which documents are included. Please list any addition documents attached in support of this application.

<b>Attached?</b>	<b>Documents</b>
X	Twenty-four (24) month calendar of resident's activities - <b>Required</b>
X	CV - ACVR-RO Diplomate - Program Director(s) - <b>Required</b>
X	CV - ACVR-R Diplomate(s) - <b>Required</b>
X	CV - ACVIM-O Diplomate(s) - <b>Required</b>
X	Syllabi of formal course work included in the training program – <b>Required</b>
X	Credentials of instructors providing formal course work - <b>Required</b>
X	Forms used in resident evaluation - <b>Required</b>
	Letters of agreement from cooperating institutions - <b>Required</b>