

ACVR - RO New Residency Program Application

Please review the <u>Radiation Oncology (RO) Residency Program Essentials Training Standards and</u> <u>Requirements</u> document prior to completing this form.

The following documents will be needed to complete the application:

- CVs (current within 1 year and a maximum of 2 pages each) for radiation oncology, diagnostic imaging, and medical oncology Diplomates involved in the training program
 - As a reminder, CVs will be publicly available on ACVR's website. We encourage you to **NOT** include personal information on the CVs that are uploaded with your application.
- Syllabi for coursework in medical physics, cancer biology, and radiation biology (including internal and external courses)
- Letters of agreement from cooperating institutions
- Letter of agreement from medical physics support for clinical training
- Resident calendar that includes the following:
 - 24 months of RO-specific activities (primary case responsibility, treatment planning, 1 week/year of radiation therapist activities)
 - 8 weeks of medical oncology
 - 4 weeks of diagnostic imaging
 - 40 hours of medical physics
 - 40 hours of clinical pathology
 - 80 hours of anesthesia in minimum 1-week blocks
 - 2 weeks of neurology
 - 2-week minimum off-clinic time per year (study, research, etc) not including vacation
 - Vacation time as mandated by state/institution
 - Required outrotations at cooperating institutions
- Resident evaluation forms

Submission Date	Sunday, February 18, 2024
Your Name	Kim A Selting
Your Address	1008 W Hazelwood Dr Urbana, Illinois, 61802
Your Email Address	seltingk@illinois.edu

Radiation Oncologists in support of the program (Must be Diplomate(s) of the ACVR):

First Name	Last Name	Title/Cre dentials	Email	Phone	Number of weeks per year Diplomat e is available to supervis e* the resident
Kim	Selting	DVM, MS, DACVI M (Onc), DACVR (RO)	selting k@illin ois.edu	217- 333- 5300	46

*Resident supervision is defined as being available on-site 40 hours/week (defined as a 4- or 5-day work week to equal a minimum of 40 hours) to support the resident in radiation oncology-related activities including patient consultation/management, review of treatment plans, position verification and participation in daily case-based rounds.

Which of the Radiation Oncology Diplomates listed above will serve as the Residency Director? This individual will be the primary contact for the residency program and will be responsible for completing all necessary forms/reviews and notifying the RO RSEC of any changes to the program. The Residency Director must be a Diplomate of the ACVR and must be located at the primary training institution. Kim A Selting

Please confirm that during the minimum 24 months of RO-specific activities, a Supervising Diplomate will be present on site to supervise the resident as defined above for 40 hours/week (4-5 days).

Yes

Comments:

As the sole radiation oncologist, Dr. Selting is responsible for clinic coverage at all times. The 46 weeks listed assumes some vacation and conference travel. During the work week, Dr. Selting is on site 4-5 days per week depending on the needs of the service and the residents.

A standard residency program is one that meets all of the residency program requirements set forth in the <u>ACVR-RO Residency Essentials Training Standards</u> document. An alternative or amended program is designed for one specific individual/resident and satisfactorily meets all of the residency program requirements, but is completed in an extended timeline (more than 3 years but fewer than 5 years).

This application is made for (check one):

Standard Program

Comments:

This is a re-application for an existing program for renewal.

What is the total length of the training 3 years program?

Number of months dedicated solely to 28 radiation oncology-specific activities as defined in the ACVR-RO Residency Essentials Training Standards document (RO-specific activities include primary case responsibility, treatment planning, 1 week/yr of therapist activities):

Primary Site:	Veterinary Teaching Hospital
Hospital/University:	University of Illinois
Department:	Veterinary Clinical Medicine
Address	1008 W Hazelwood Dr Urbana, Illinois, 61802

Advanced Degree and Research/Publication Requirement

Masters	Yes
PhD	Optional
Research Project	Yes
Publication	No

Documentation of residency completion is required to obtain Diplomate status. Is receipt of residency certificate dependent on completion of advanced degree/research/publication?

No

Yes

It is required that a residency in veterinary radiation oncology provide the trainee with experience in formulation of radiation treatment plans, dose calculation, and treatment administration for veterinary patients with cancer. This includes generation of both manual and computer-based treatment plans for megavoltage external beam irradiation. External beam planning experience must include both forward and inverse planning, even if only one of those types is utilized for treatment at the primary facility. Does the program fulfill these requirements?

Yes

It is required that a residency in veterinary radiation oncology provide the trainee with experience in primary case responsibility, including new referrals, ongoing radiation patients, and follow-up visits. This includes receiving patients, clinical rounds, client/referring DVM communications, and medical records keeping. Does the program fulfill these requirements as described on page 12 of the RO Essentials document?

It is required that a residency in veterinary radiation oncology provide the trainee with a minimum of 1 week per year of radiation therapist activities to include daily linear accelerator quality assurance and warm up, patient positioning for treatment planning CT and therapy, radiation delivery (as allowed by the state/province), and acquisition of position verification imaging. Does the program fulfill these requirements?

Yes

How will the resident be trained in radiation biology? Please provide a description of formal and informal training experiences, or indicate time allotted for self-study.

The radiation oncologist will direct training in radiation biology. This will be accomplished primarily through book clubs and independent reading using "Radiobiology for the Radiologist" by Eric Hall, as well as "Basic Clinical Radiobiology" by Michael Joiner and Albert van der Kogel. One book per year will be covered, including responsibility of the resident to summarize and present the contents. Currently there is no formal radiation oncology or radiation biology course, however starting in the spring of 2024 Dr. Selting will be giving four 2-hour radiation biology lectures within a radiation safety course on campus (through the college of Nuclear, Plasma, and Radiological Engineering) and residents will audit these lectures.

Please provide instructors' names and credentials for radiation biology formal and informal training:

Kim A. Selting, DVM, MS, DACVIM (Oncology), DACVR (Radiation Oncology)

How will the resident be trained in cancer biology? Please provide a description of formal and informal training experiences, or indicate time allotted for self-study.

Every fall or spring semester, the medical oncology residents work through a textbook on the Biology of Cancer such as those by Tannock and Hill (The Basic Science of Oncology), Pecorino (The Molecular Biology of Cancer), and Weinberg (The Biology of Cancer). This is a formal 1 credit course taught by Dr. Tim Fan. The resident will be required to audit this class and to participate fully. As part of coursework required for a master's degree, the course will be taken for full credit. Finally, the resident will attend the Veterinary Cancer Society at least one year and will attend the resident review workshop.

Please provide instructors' names and credentials for cancer biology formal and informal training:

Tim Fan, DVM, PhD, DACVIM (Oncology)

How will the resident be trained in medical physics? Please provide a description of formal and informal didactic (non-clinical) experiences, or indicate time allotted for self-study.

The resident will be trained in radiation physics in various ways. Our physicist currently provides physics rounds for one hour per week most of the year (some weeks there are conflicts due to absences or other committments). Content during those sessions includes practice RAPHEX problems and discussions about clinical scenarios, as well as reviewing select reading from textbooks such as "Kahn's The Physics of Radiation Therapy" or journal articles. The resident will be present during some machine and plan QA. The physicist is also available by phone, email, or text to answer any questions when needed. He is employed as an academic professional. In addition, the resident will be supported to attend one physics workshop (radiation physics bootcamp) if it is offered (most recently at the University of California at Davis).

Please provide instructors' names and credentials for didactic (non-clinical) medical physics formal and informal training:

Alex Gray, MS, DABR

Medical physics training requires 1 week or 40 hours of clinical contact with a qualified medical physicist. Please provide a description of the training experience.

As described above, residents will benefit from at least 30 hours per year of direct instruction in medical physics (for a total of over 90 hours over the duration of the residency). Though Alex Gray is not on-site full time, he is physically present when he is teaching or performing machine QA.

Medical Physicist(s) in support of clinical training in the residency	First Name	Last Name	Title/Credenti als	Physicist on- site? Y/N
program	Alexander	Gray	MS, DABR	No

A minimum of 1 hour of medical literature review with an ACVR-RO Diplomate is required monthly. Please describe this experience, and any additional formal or informal conferences available to the resident (including journal clubs, seminars, book reviews, etc.) that are not already listed above:

During the academic year (fall and spring), residents participate once weekly in a virtual radiation oncology journal club in collaboration with the University of Florida. There is at least one ACVR-RO diplomate present, and often 2 or 3 combined from the two institutions on any given week.

The resident is required to present at least 2 lectures or scientific presentations during the course of the residency. Please describe how the program will fulfill this requirement:

As a master's candidate, the resident will give a department seminar each year to share the progress they are making in their master's research. They would also be expected to present their research findings at a

scientific conference (ACVR or VCS most likely). If a master's degree is abandoned, they are still required to do at least one of these seminars, and are expected to complete a project that they would then present at a scientific conference.

The program must include an external beam radiation therapy machine in the megavoltage range and 3D computerized radiation treatment-planning capabilities to create treatment plans used for treatment delivery. Residents must have on-site access to treatment planning systems capable of forward and inverse planning even if both types of planning techniques are not deliverable at that institution.

Please list the manufacturer and model of the on-site external beam radiation therapy delivery system:

Varian TrueBeam 3.0

Please list the manufacturer and model of the on-site radiation therapy treatment planning system(s). Please indicate whether they are capable of forward or inverse planning, or both, and whether or not they are used clinically to deliver treatments:

Eclipse, currently version 15 and is scheduled for upgrade to version 18. Capable of both forward and inverse planning. This TPS is used for delivery of treatments to clinical patients.

The clinical training requirements in the following six questions, described on pages 15 and 16 of the <u>RO</u> <u>Essentials</u> document can be fulfilled at a cooperating institution if the primary institution lacks resources to accomplish them. Training at cooperating institutions must be supervised by a Supervising or Supporting ACVR-RO Diplomate and a letter of agreement from the cooperating institution is required. The training requirements can be combined into a single minimum 2-week learning experience at the cooperating institution.

The residency program requires hands-on clinical experience to develop expertise and selfsufficiency in manual setups and manual treatment planning with photons. How does the program fulfill this requirement?

We frequently deliver palliative radiation to distal limb osteosarcoma in dogs, and have an increasing caseload for both low dose, low dose rate, half body radiation therapy for consolidation of remission in dogs with lymphoma as well as whole abdomen radiation for intestinal small cell lymphoma or IBD in cats. All of these, in addition to occasional (approximately once per month) additional palliative treatments present regular opportunities to practice manual set ups and treatment delivery.

The residency program requires hands-on clinical experience to develop expertise and selfsufficiency in manual setups and manual treatment planning with electrons. How does the program fulfill this requirement?

We have a full array of electrons and periodically use them in treatment delivery for clinical cases (perhaps 3-6 cases per year).

The residency program requires hands-on clinical experience with forward planning for 3D conformal radiotherapy (non-IMRT). How does the program fulfill this requirement?

Eclipse has forward planning capabilities. Residents are encouraged to create a 3D CRT plan for all cases, time permitting, even if we know it will be treated with IMRT/VMAT. This allows them to compare the pros and cons of the different approaches. We prioritize 3DCRT for many palliative, computer guided treatments when possible.

The residency program requires hands-on clinical experience with inverse planning for IMRT. How does the program fulfill this requirement?

Eclipse has inverse planning capabilities. Residents are primarily responsible for contouring and planning of cases, with ACVR-RO oversight. IMRT or VMAT plans are commonly used, including for palliative therapy when appropriate if OARs are a concern with 3DCRT options. VMAT is used with all SRT/SBRT cases and with many definitive intent, conventionally fractionated treatment plans.

The residency program requires hands-on clinical experience in on-board imaging verification with MV or KV CT. How does the program fulfill this requirement?

The TrueBeam has an onboard kV CBCT and we use this for most positioning verification.

The residency program requires hands-on clinical experience in on-board imaging verification with kV digital radiographs. How does the program fulfill this requirement?

For verification of manual set ups we will use either kV imaging (one plane or orthogonal) or MV imaging.

The residency program requires hands-on clinical experience in on-board imaging verification with MV portal imaging. How does the program fulfill this requirement?

For verification of most manual set ups we use MV portal imaging. The TrueBeam has 2.5MV, 4MV, and 6MV options for megavoltage imaging which is acquired using an EPID.

Radiologist(s) in support of the residency program [Must be Diplomate(s) of the ACVB or ECVDI	First Name	Last Name	Title/Credenti als	Diplomate on- site? Y/N
	Audrey	Billhymer	DVM, DACVR (DI)	Yes
	Tannis	Lockhead	DVM, DACVR (DI)	Yes

The residency program requires at least 26 weeks/year of on-site diagnostic imaging support from a ACVR or ECVDI Diplomate and availability for remote support for at least 45 weeks/year. How will the institution fulfill this requirement?

Dr. Billhymer is on-site 4 days per week with an 80% clinical appointment. Dr. Lockhead is currently working at 25% appointment but is in the process of transitioning to 80-100%. Dr. Lockhead is present one week per month and alternates between on-site and remote.

How will the resident be trained in diagnostic imaging? Please provide a description of formal and informal training experiences as well as a description of the resident's role while rotating on a diagnostic imaging service:

Residents will spend at least 4 weeks dedicated to diagnostic imaging with an on-site radiologist in the course of their program. While rotating through imaging, residents will read images from CT, MRI, and radiography and then compare their findings with those of the radiologist in addition to observing the interpretation of imaging by the radiologist and listening to impromptu consultations. Residents will observe ultrasound studies and will spend time with the CT technician discussing methods for patient immobilization/set up for CT simulation.

The program must have on-site access to modern radiographic equipment, including digital or computed radiography, ultrasound, and CT. Does the institution fulfill this requirement?

Yes, we have a 128 slice CT scanner, a 3T MRI, and digital radiography as well as ultrasound. Ultrasound is available through our imaging department and also through oncology for point of care use. The radiation oncology service has a Butterfly ultrasound probe and the medical oncology service has a moveable ultrasound machine that can be used when needed.

Medical Oncologist(s) in support of
the residency program [Must be
Diplomate(s) of the ACVIM, Specialty
of Oncology]

First Name	Last Name	Title/Credenti als	Diplomate on- site? Y/N
Laura	Garrett	DVM, DACVIM (Oncology)	Yes
Tim	Fan	DVM, PhD, DACVIM (Oncology)	Yes

First Name	Last Name	Title/Credenti als	Diplomate on-site? Y/N
Matt	Berry	DVM, PhD candidate, DACVIM (Oncology)	Yes
Joanna	Schmit	DVM, MS, DACVIM (Oncology)	Yes

The residency program requires at least 26 weeks/year of on-site medical oncology support from an ACVIM (Oncology) Diplomate. How will the institution fulfill this requirement?

There is faculty coverage of the medical oncology service by board certified medical oncologists 52 weeks per year. The oncology service is a combined medical and radiation oncology service.

How will the resident receive training in medical oncology? Please provide a description of formal and informal training experiences as well as a description of the resident's role while rotating on a medical oncology service:

Residents will each spend a minimum of 8 weeks during their training program rotating through the medical oncology service and will have no responsibility to radiation oncology cases or needs during that time. The oncology service (medical and radiation) meets daily for case rounds together year-round. While rotating through medical oncology, residents will have primary case responsibility for 1-2 new consults per day when caseload permits under the supervision of a boarded medical oncologist. They will attend morning topic rounds and afternoon case rounds each day. They will be responsible for creating a diagnostic and therapeutic plan, and for prescribing chemotherapy with oversight when indicated.

Surgeon(s) in support of the residency program [Must be Diplomate(s) of the ACVS]

First Name	Last Name	Title/Credenti als	Diplomate on- site? Y/N
Heidi	Phillips	VMD, DACVS	Yes
Clara	Moran	DVM, MS, DACVS	Yes
Hadley	Gleason	DVM, MS, DACVS	Yes
Sophia	Topoulos	DVM, DACVS	Yes

The residency program requires at least 26 weeks/year of on-site surgical support from an ACVS Diplomate. How will the institution fulfill this requirement?

The surgery service is staffed with a faculty or board certified locum surgeon 52 weeks per year.

Pathologist(s) in support of the residency program [Must be Diplomate(s) of the ACVP (Anatomic or Clinical Pathology) or ECVP (Clinical Pathology)]

First Name	Last Name	Title/Credenti als	Diplomate on- site? Y/N
Wes	Baumgartne r	DVM, PhD, DACVP (AP)	Yes
Sara	Connolly	DVM, DACVP (CP)	Yes
Amy	Schnelle	DVM, MS, DACVP (CP)	Yes

First Name	Last Name	Title/Credenti als	Diplomate on-site? Y/N
Mike	Rosser	DVM, MS, DACVP (CP)	Yes
Jonathon	Samuelson	DVM, MS, DACVP (AP)	Yes
Miranda	Vieson	DVM, PhD, DACVP (AP)	Yes

The residency program requires at least 45 weeks/year of anatomic and clinical pathology support by ACVP Diplomates. If not on-site, a letter of support must be submitted. How will the institution fulfill this requirement?

All pathologists are on site and at least one clinical pathologist and one anatomic pathologist is available 52 weeks of the year.

At least 1 week or 40 hours in a clinical rotation or rounds with a clinical pathologist are required during the residency program. If off-site, a letter of agreement must be submitted. How will the institution fulfill this requirement?

Residents will be required to schedule one week with an on duty clinical pathologist. During that week, they will have no responsibilities for radiation cases.

Anesthesia Specialists in support of Title/Credenti **Diplomate on-**Last Name First Name the residency program [Must be site? Y/N als Diplomate(s) of the ACVAA or ECVAA, DVM, DVSc, or Veterinary Technician Specialists Stephanie Keating Yes DACVAA (VTS) DVM, MSEd, Strahl-DACVAA, Danielle Yes Heldreth certified in acupuncture DVM, MS, Fillipe Martins Yes DACVAA

The residency program requires two 1-week (40-hour per week) clinical rotations (80 hours in total) in anesthesia with an Anesthesia Specialist, as defined above. Please provide a description of this training experience and the resident's role on this rotation.

Residents will be required to rotate through the anesthesia service. During that time they will anesthetize and manage cases under anesthesia, attend rounds, and contribute as needed. They will have no responsibilities in radiation oncology during that time.

Neurologist(s) in support of the residency program [Must be Diplomate(s) of the ACVIM, Specialty of Neurology or ECVN]	First Name	Last Name	Title/Credenti als	Diplomate on- site? Y/N
	Devon	Hague	DVM, DACVIM (Neurology)	Yes
	Kari	Foss	DVM, MS, DACVIM (Neurology)	Yes

First Name	Last Name	Title/Credenti als	Diplomate on-site? Y/N
Rose	Peters	DVM, DACVIM (Neurology), certified in acupuncture	Yes

The residency program requires a 2-week clinical rotation supervised by a Diplomate of the ACVIM (Neurology) or ECVN. Please provide a description of the training experience and resident's role on this rotation.

Residents will be required to rotate through the neurology service. They will participate to the extent that is decided by the supervising neurologist which might include, but is not limited to, primary case responsibility, rounds attendance and participation, and observation of procedures and communication with owners. During this time they will have no responsibilities in radiation oncology.

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

Name	Certifying College/Board	Subspecialty (if applicable)	Explain Relationship if offsite
Sam Sander	ACZM		
Michelle Borsdorf	ACZM		
Ryan Fries	ACVIM (Cardiology)		
Saki Kadotani	ACVIM (Cardiology)		
Carl Toborowsky	ACVIM (Cardiology)		
Erin Long	ACVECC		
Lisa Bazzle	ACVECC		
Ana Aghili	ACVECC		
Jenica Haraschak	ACVECC		
Jennifer Reinhart- Dungar	ACVIM (SAIM)		
Arnon Gal	ACVIM (SAIM)		
Marcella Ridgeway	ACVIM (SAIM)		
David Williams	ACVIM (SAIM)		
Patrick Barko	ACVIM (SAIM)		

Name	Certifying College/Boar d	Subspecialty (if applicable)	Explain Relationship if offsite
Clarissa Souza	ACVD		

Evaluation of resident performance and progress must be documented every 6 months through appropriate techniques, including faculty appraisal, or oral or written tests, or a combination of these. Institutional resident evaluation forms should be submitted as part of the residency application. How will the program fulfill this requirement?

ACVR standard forms will be used to confirm that the resident is making satisfactory progress. In addition, an internal evaluation form, adapted from our medical oncology training program will be used to give detailed feedback. The supervising RO will meet in person with each resident to review this feedback, allow time for questions and concerns from the resident, and give constructive directions for continued improvement.

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 possible, provide the status of each individual with respect to the board certification process.

Dr. Jennifer Yee, completed 2 year training program in 2022 - board certified

Dr. Celina Morimoto, completed 2 year training program in 2023 - board eligible

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

We have grown to have 3 dedicated technical positions, one of which is now filled with an RT(T) who had been working in human medicine.

Upload the following information

- CVs (current within 1 year and maximum of 2 pages) for each radiation oncologist, radiologist and medical oncologist involved in the training program
- Resident calendar that includes the following:
 - 24 months of RO-specific activities (primary case responsibility, treatment planning, 1 week/year of radiation therapist activities)
 - 8 weeks of medical oncology
 - 4 weeks of diagnostic imaging
 - 40 hours of medical physics
 - 40 hours of clinical pathology
 - 80 hours of anesthesia in minimum 1-week blocks
 - 2 weeks of neurology
 - 2-week minimum off-clinic time per year (study, research, etc) not including vacation
 - · Vacation time as mandated by state/institution
 - Required outrotations at cooperating institution(s)
- · Letters of agreement from cooperating institutions
- · Letter of agreement from medical physics support for clinical training
- Residency evaluation forms

CVs

• Syllabi for any formal or informal coursework



