

ACVR - RO New Residency Program Application

Please review the [Radiation Oncology \(RO\) Residency Program Essentials Training Standards and Requirements](#) 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

Thursday, August 3, 2023

Your Name

Nicholas Jacob Rancilio

Your AddressIowa State University College of Veterinary Medicine, 1809 S
Riverside Dr.
Ames, IA, 50011**Your Email Address**

nicholas.rancilio@gmail.com

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

First Name	Last Name	Title/Credentials	Email	Phone	Number of weeks per year Diplomate is available to supervise* the resident
Nicholas	Rancilio	DVM, MS, DACVR (Radiation Oncology)	nicholas.rancilio@gmail.com	515-291-6161	48
Keiko	Murakami	BVM, MS, DACVR (Radiation Oncology), DACVIM (Medical Oncology)	murakami@ias.tate.edu	515-294-4900	6-8

*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.

Nicholas Rancilio

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:

Dr. Rancilio will serve as the primary supervising diplomate. Dr. Murakami's appointment is primarily in medical oncology but spends 6-8 weeks per year rotating through radiation oncology. She would be classified as a supporting diplomate.

A standard residency program is one that meets all of the residency program requirements set forth in the [ACVR-RO Residency Essentials Training Standards](#) 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

What is the total length of the training program? 36 Months

Number of months dedicated solely to 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): ~30 months

Primary Site: Iowa State University

Hospital/University: Lloyd Veterinary Medical Center

Department: Veterinary Clinical Sciences

Address 1800 S Riverside Dr
Ames, IA, 50011

Cooperating Institution(s) (if applicable)

Cooperating Institution (if applicable)	Hospital / University	Department	Street Addresses	City	State/Province	Postal/Zip Code
The University of Iowa	Carver College of Medicine	Radiation Oncology	200 Hawkins Drive, 01604 PFPW	Iowa City	IA	5224

Advanced Degree and Research/Publication Requirement

Masters	No
PhD	No
Research Project	Yes

Publication	No
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Documentation of residency completion is required to obtain Diplomate status. Is receipt of residency certificate dependent on completion of advanced degree/research/publication?

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?

Yes

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

Comments:

Candidate will operate the linear accelerator under the direct supervision of RO faculty as well as a certified radiation therapist employed by ISU for at least 1 week per year.

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.

Residents will participate in required book clubs each week with radiation oncology faculty where Hall (Radiobiology for the Radiologist) will be discussed through each chapter in detail. After completing Hall, the resident and faculty will go through Joiner (Basic Clinical Radiobiology). We will complete these book clubs at least once through the residency and may repeat them if the resident desires or perform other readings in radiation biology with faculty.

-Residents will have access to a bank of rabex questions maintained by the faculty.

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

Nicholas Rancilio DVM, MS, DACVR (RO), Dr. Rancilio has been a practicing and board certified Veterinary Radiation Oncologist for 9 years

Keiko Murakami BVM, MS, DACVR (RO), DACVIM (O), Dr. Murakami has been a practicing and board certified veterinary radiation oncologist for 5 years and is also board certified in medical 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.

Residents will participate in a weekly book club with the medical oncology residents where faculty will discuss each chapter of Tannock & Hill as well as Weinberg.

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

Nicholas Rancilio DVM, MS, DACVR (RO), Dr. Rancilio has been a practicing and board certified Veterinary Radiation Oncologist for 9 years

Keiko Murakami BVM, MS, DACVR (RO), DACVIM (O), Dr. Murakami has been a practicing and board certified veterinary radiation oncologist for 5 years and is also board certified in medical oncology.

Meg Musser DVM, DACVIM (O). Dr. Musser is a board certified medical oncologist.

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.

Residents will participate in the medical physics class offered by the University of Iowa Hospitals & Clinics. These Classes will be offered remotely. As ISU does not have combined graduate program they will function as an auditing student so no grade or transcript will be issued.. Attached are the syllabi for the course RSTH I, and RSTH II offered by The University of Iowa.

All exams and homework will be provided to the program director. The resident will be expected to take the exams as well as complete homework.

Please see attached letter of agreement.

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

Joel St. Aubin PhD FCCPM- Dr. St Aubin is the director of medical physics education at UI and a clinical associate professor of medical physics. Dr. St. Aubin is a Fellow of the Canadian College of Physicists in Medicine and has a PhD in medical physics.

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.

All manual plans are done with our medical physicist group in support of our facility. Typically this is checked remotely, but physicist is located within the Ames area and is often at our facility when we perform manual plans.

Our service requires that all treatment plans be reviewed/approved by the medical physicist prior to treatment approval unless there is an emergency situation. Plans are typically remotely reviewed and approved but as the physicists are in our building frequently for manual planning and QA there are opportunities to work with them directly.

Resident would be expected to coordinate with the medical physicist when he is on site to help with the monthly QA and essentially function as a physics assistant throughout their residency to add up to 40 hours (~10 sessions with the physicist during monthly QA, 4 hours each). Meeting with the physicist to go through the monthly QA and assist with this process will exceed contact time requirements.

Medical Physicist(s) in support of clinical training in the residency program

First Name	Last Name	Title/Credentials	Physicist on-site? Y/N
Brian	MacPhail	BS, MS, DABMP (Radiation Oncology Physics)	No
Viatcheslav	Zakjevskii	MS, DABR (Therapeutic Medical Physics)	No
Matthew	Roberts	MS, DABR (Therapeutic Medical Physics)	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:

Residents will meet weekly with faculty (including the medical oncology team) to review current literature. At least one diplomate of the ACVR-RO will be present.

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:

Residents are required to participate in the department house officer seminar and present once each year to the department on a topic of their choosing and/or their research project. A total of 3 lectures are required.

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 Clinac iX

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:

Varian Eclipse v16.0, IMRT & 3DCRT planning capability and delivery are commissioned and in use.

The clinical training requirements in the following six questions, described on pages 15 and 16 of the [RO Essentials](#) 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 self-sufficiency in manual setups and manual treatment planning with photons. How does the program fulfill this requirement?

A variety of cases present to our clinic for radiation therapy that may require manual planning. Residents will either use paper tables and calculation worksheet, eclipse irreg planning, and/or radcalc to accomplish this for appropriate cases.

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

Similar to the above resident has access to output tables for electrons as well as radcalc to assist with manual calculations.

The Clinac iX has cones and capability to deliver 6, 9, 12, & 16 MeV electrons.

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

The clinic is equipped with Varian Eclipse v16.0 treatment planning software capable of 3DCRT. The Clinac iX has a 120 Leaf Multileaf collimator with 5 mm and 10 mm leaves.

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

The clinic is equipped with a Varian iX Linac with 120 leaf MLC as well as Varian Eclipse v 16.0. Both are commissioned to plan and deliver IMRT and clinically in use.

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 clinic is equipped with a Varian Clinac iX Linear Accelerator with kV OBI capable of conebeam CT for position 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?

The clinic is equipped with a Varian Clinac iX linear accelerator with kV OBI capable of digital radiography for position verification.

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

The clinic is equipped with a Varian Clinac iX Linear accelerator with portal vision (MV OBI) for position and portal verification.

Radiologist(s) in support of the residency program [Must be Diplomate(s) of the ACVR or ECVDI]

First Name	Last Name	Title/Credentials	Diplomate on-site? Y/N
Kristina	Miles	DVM, MS, DACVR (Radiology)	Yes
Robin	White	DVM, MS, DACVR (Radiology)	No

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. Miles has an 85% clinical appointment at ISU and is on clinics/onsite approximately 44 weeks per year.

Dr. White helps to support our program through remote consultation and is available at least 40 weeks per year.

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:

Resident will have a 4 week imaging rotation with Dr. White. Dr. White is on site for this service each fall for 4 weeks. Cases that are undergoing imaging at the hospital will be discussed with Dr. White on a 1:1 basis for each resident with emphasis on special interest or need (i.e. CT/MRI).

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 are equipped with the following imaging equipment:

1. Canon Aquillon 42 Slice Big Bore CT scanner with flat SIM table
2. GE 1.5 T MRI
3. Phillips Ultrasound System
4. Canon Digital Radiography System (2 rooms)

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

First Name	Last Name	Title/Credentials	Diplomate on-site? Y/N
Meg	Musser	DVM, DACVIM (O)	Yes
Keiko	Murakami	BVM, MS, DACVIM (O), DACVR (RO)	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?

The medical oncology service operates throughout the year. At least one of the above directly supervises the service ~50 weeks/year

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:

Resident will participate in at least 4, 2 week blocks of medical oncology rotation where they will function as a resident on the service under the direct supervision of one of the diplomates of the ACVIM (oncology) above.

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

First Name	Last Name	Title/Credentials	Diplomate on-site? Y/N
Andy	Law	BVM, DACVS-SA	Yes
Allison	Kenzig	DVM, DACVS-SA	Yes
Karl	Kraus	DVM, DACVS	Yes
Adrien	Aertesens	DVM, DECVS	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 above named faculty run the small animal orthopedic and soft tissue surgery service and are available for consultation of cases at least 50 weeks/year. An ACVS diplomate is on clinics at least 26 weeks/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/Credentials	Diplomate on-site? Y/N
Amanda	Fales-Williams	DVM, PhD, DACVP (Anatomic)	Yes
Olufemi	Fasina	DVM, PhD, DACVP (Anatomic)	Yes
Tyler	Harm	DVM, PhD, DACVP (Anatomic)	Yes
Michael	Yeager	DVM, PhD, DACVP (Anatomic)	Yes
Cheryl	Lawson	DVM, MS, DACVP (Clinical)	Yes
Claire	Andreason	DVM, PhD, DACVP (Clinical)	Yes
Mark	Morton	DVM, DACVP (Clinical)	Yes
Ariel	Nenninger	DVM, PhD, DACVP (Clinical)	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?

The department of pathology employees the above named pathologists who are on clinical service at least 45 weeks/year onsite.

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?

The resident will rotate through the clinical pathology service and read cases with the clinical pathologist for a 1 week (40 hours) clinical rotation at ISU.

Anesthesia Specialists in support of the residency program [Must be Diplomate(s) of the ACVAA or ECVA, or Veterinary Technician Specialists (VTS)]

First Name	Last Name	Title/Credentials	Diplomate on-site? Y/N
Bonnie	Hay-Krause	DVM, DACVAA	Yes
Masako	Fujiyama	BVSc, MSc, DACVAA	Yes
Brandon	Whaler	DVM, MS, DACVAA	Yes
Emily	Wheeler	DVM, DACVAA	Yes
Craig	Willette	DVM, MS	Yes

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.

The resident will rotate through the ISU anesthesia service for a 2 week rotation (80 hours) where they will anesthetize cases under the supervision of a diplomate of the ACVAA.

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/Credentials	Diplomate on-site? Y/N
Rod	Bagley	DVM, DACVIM (SAIM, Neurology)	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.

The resident will perform a 2 week rotation under the direct supervision of Dr. Bagley. This will be in conjunction with the 4th year student rotation. Approximately 70 neurologic cases, including imaging, and laboratory data will be reviewed with Dr. Bagley from a teaching databank. Resident would also perform any neurological consultations in the hospital at that time with Dr. Bagley.

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
Darren Berger DVM	ACVD		
Jason Pieper DVM	ACVD		

Name	Certifying College/Board	Subspecialty (if applicable)	Explain Relationship if offsite
James Noxon DVM	ACVIM	(SAIM-Dr Noxon practices dermatology)	
Laura Van Vert Loo DVM	ACVIM	Small Animal Internal Medicine	
J.S. Palarme DVM	ACVIM	Small Animal Internal Medicine	
Erin McQuinn DVM	ACVIM	Small Animal Internal Medicine	
Al Jergens DVM	ACVIM	Small Animal Internal Medicine	
Meredith T'Hoan DVM	ACVECC, ECVECC		
Victoria Miller DVM	ACVECC		
April Blong DVM	ACVECC		
Rachel Allbaugh DVM	ACVO		
Melissa Kubai DVM	ACVO		
Jessica Ward DVM	ACVIM	Cardiology	
Melissa Tروف DVM	ACVIM	Cardiology	

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?

Please See the attached standardized evaluation form from our department.

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.

NA

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
- Syllabi for any formal or informal coursework

CVs

	MILES_KRISTINA CV_2023_R... .pdf
	Robin White CV_Redacted.pdf
	Keiko Murakami CV.docx
	MILES_KRISTINA CV_2023_RS.pdf
	Musser CV.pdf
	Robin White CV.docx
	St-Aubin - CV.pdf

Resident Calendar



RO Residency Template.xlsx



Residency In Veterinary Rad... .docx

Letters of Agreement From Cooperating Institutions



MOU ISU UI Course_signed.pdf



Veterinary RO residency lette... .pdf

Letter of Agreement from Medical Physics Support for Clinical Training



Jaeger Physics LOS.pdf

Residency Evaluation Forms



House Officer Evaluation Form.pdf

Syllabi for Coursework



Fall 2022 RSTH 3110 Medical...pdf



Spring 2022 RSTH 3215 Medi...pdf