

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

Saturday, January 27, 2024

Your Name

Michael Saan Kent

Your Address

UC Davis School of Veterinary Medicine, 1 Shields Ave
Davis, CA, 95616

Your Email Address

mskent@ucdavis.edu

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
Michael	Kent	Professor, DACVIM (O), DACVR (RO), ECVDI (RO)	mskent@ucdavis.edu	5307521393	26
Jessica	Lawrence	Associate Professor, DACVIM (O), DACVR (RO), ECVDI (RO)	jlawrence@ucdavis.edu	530-752-1393	26

*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.

Michael Kent

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

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): 26

Primary Site: University of California Davis

Hospital/University: UC Davis Veterinary Medical Teaching Hospital

Department: Veterinary Medical Teaching Hospital

Address UC Davis School of Veterinary Medicine, 1 Garrod Drive
Davis, CA, 95616

Advanced Degree and Research/Publication Requirement

Masters	No
PhD	No
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? 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

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 resident will take a class at the medical school which is offered to their radiation oncology residents and medical physics residents. More informal training is provided in discussions of cases in daily morning rounds.

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

Jian Jian Li, M.D., Ph.D. UC Davis Radiation Oncology
Jerry Bushberg, M.D., UC Davis Department of Rad Onc/Radiology

Matthew Coleman, Ph.D., UC Davis Radiation Oncology & LLNL
Ruben Fragoso, M.D., Ph.D., UC Davis Radiation Oncology
Artem Lada, Ph.D., UC Davis Microbiology and Molecular Genetics
Arta Monjaze, M.D, Ph.D. UC Davis Radiation Oncology
Shyam Rao, M.D., Ph.D. UC Davis Radiation Oncology
Jason Zhao, M.D. UC Davis 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.

This is done through weekly Monday morning board review rounds with our medical oncology and radiation oncology faculty as well as our faculty in Clinical Pharmacology and Immunology.

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

Michael Kent, DVM, DACVIM (O), DACVR (RO). Jessica Lawrence, DVM, DACVIM (O), DACVR (RO), Robert Rebhun, DVM, PhD, DACVIM (O), Luke Wittenburg, DVM, PhD, Ellen Sparger, DVM, PhD, DACVIM (IM), Katherine Skorupski, DVM, DACVIM (MO), Sami AL Nadaf, DVM, DACVIM (MO), Robert Trey Callahan, DVM, DACVIM (O)

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 attends the UC Davis Medical Physics class each of their three years of residency which is offered to their radiation oncology residents and medical physics residents. They also attend our short course - Radiation Oncology Physics Boot Camp each June. In addition we have on site physics support one day per week where the resident interacts with the medical physicist. They also are present for the yearly physics QA for the machine.

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

Sonja Dieterich, Ph.D., Julian Perks, Ph.D., Stan Benedict, Ph.D., Jason Matney, Ph.D., Peter Park, Ph.D., Tokihiro Yamamoto, Ph.D., Lonny Trestrail

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.

This is done through weekly interaction with our medical physics and also they spend a one week rotation either with our medical physics group at UC Davis or with our physics support group at their human hospitals they cover.

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

First Name	Last Name	Title/Credentials	Physicist on-site? Y/N
Lonny	Trestrail	MS, DABR	Yes

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:

Review of the oncology literature is done once weekly with the medical oncology residents. This is supplemented with daily case rounds with the residents where relevant literature is reviewed. In addition monthly radiation oncology journal club is held.

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:

The resident is required to present in grand rounds at the teaching hospital once yearly, on joint rounds with the other residents for a 50 minute presentation approximately four times per year. They are also

required to make a scientific presentation on a research topic at our the veterinary intern resident research symposium.

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

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

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?

We perform this as part of our clinical case load. We ensure that each resident is involved in multiple cases of this type each year of their training.

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?

We offer electron therapy and make sure each resident is involved in calculations and and setups for electron cases during each year of their residency.

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

We ensure the residents plan multiple clinical cases using 3D conformal techniques.

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

This has now become the majority of our practice and we ensure that the residents have experience with these types of cases in each year of their residency.

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?

We have the residents perform multiple treatments and become well experienced using our CBCT in each year of their residency.

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

While we often do not use these clinically as we use MV port films or KV CBCTs we set up patients with KV images with each resident to ensure adequate training in this area.

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

We do this with our manual planned clinical cases and ensure each resident does this multiple times during each year of residency.

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
Allison	Zwingenberger	Professor, DACVR, ECVDI	Yes
Eric	Johnson	Professor, DACVR	Yes
Kelsey	Brust	Assistant Professor DACVR	Yes
Erin	McClery	Assistant Professor, DACVR	Yes
Mathieu	Spriet	Professor, DACVR	Yes
Kathryn	Phillips	Professor, DACVR	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?

We have full coverage 52 weeks a year with ACVR diplomates in DI on site.

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:

The residents attend all of the CT simulations and review each case with the radiology resident and diplomate on duty. They also review most radiographs taken with the radiology resident and/or faculty. Residents also review all MRI studies with the radiology resident and faculty directly. In addition they formally rotate through the CT and MRI services where they act as a radiology resident including drafting reports and formal rounding on each case.

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 all of the above.

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
Robert	Rebhun	Professor, DACVIM (Onc)	Yes
Amandine	LeJeune	Associate Professor, DACVIM (Onc)	Yes

First Name	Last Name	Title/Credentials	Diplomate on-site? Y/N
Katherine	Skorupski	Professor, DACVIM (Onc)	Yes
Sami	Al Nadaf	Assistnat Professor, DACVIM (Onc)	Yes
Robert Trey	Callahan	Staff Veterinarian, DACVIM (Onc)	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?

We have 52 weeks a year of on site coverage in medical oncology.

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:

The residents spend a total of 8 weeks rotating on Medical Oncology where they have primary receiving responsibility while on Medical Oncology. We also regularly share cases and consult on a daily basis with the medical oncology faculty and residents in the clinical management of cancer patients.

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
William	Culp	Professor, DACVS	Yes
Phil	Mayhew	Professor, DACVS	Yes
Michelle	Steffey	Professor, 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?

We have 52 weeks a year of on site coverage by board certified surgeons (ACVS).

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

First Name	Last Name	Title/Credentials	Diplomate on-site? Y/N
William	Vernau	Professor, DACVP	Yes
Amir	Kohl	Associate Professor, DACVP	Yes
Melanie	Ammersbach	Staff Veterinarian, DACVP	Yes

First Name	Last Name	Title/Credentials	Diplomate on-site? Y/N
Austin	Viall	Associate Professor, DACVP	Yes
Kevin	Woolard	Associate Professor, DACVP	Yes
Verena	Affolter	Professor, DACVP	Yes
Brian	Murphy	Professor, DACVP	Yes
Patricia	Pesavento	Professor, DACVP	Yes
April	Choi	Associate Professor, DACVP	Yes
Kevin	Keel	Professor, DACVP	Yes
Stephan	Keller	Associate Professor, DECVP	Yes
Natalia	Vapniarsky Arzi	Associate Professor, DACVP	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?

We have 52 weeks a year of on site coverage by board certified anatomic and clinical pathologists.

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?

We allow at least one week of a clinical rotation in clinical pathology. Residents can choose to do additional weeks of rotation in their elective weeks if they so choose.

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
Bruno	Pipendop	Professor, DACVAA	Yes
Joao	Soares	Associate Professor, DACVAA	Yes
Linda	Barter	Professor, DACVAA	Yes

First Name	Last Name	Title/Credentials	Diplomate on-site? Y/N
Robert	Brosnan	Professor, DACVAA	Yes
Alessia	Cenani	Assistant Professor, DACVAA	Yes
Amandeep	Chohan	Associate Professor, DACVAA	Yes
Harriet	Flynn	Assistant Professor, DACVAA	Yes
Marcela	Machado	Assistant Professor, DACVAA	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.

We have our residents rotate through our anesthesia service for two weeks during their first year of residency. During this time they attend rounds and work up and anesthetize cases under the supervision of an anesthesiologist.

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
Marguerite	Knipe	Professor, DACVIM (Neuro)	Yes
Peter	Dickinson	Professor, DACVIM (Neuro)	Yes
Vishal	Murthy	Assistant Professor, DACVIM (Neuro)	Yes
Christine	Toedebusch	Assistant Professor, DACVIM (Neuro)	Yes
Karen	Vernau	Professor, DACVIM (Neuro)	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.

Our residents rotate through our neurology and neurosurgery service for two weeks during their first year of training. They function as a receiving clinician on the service under direct supervision of one of the neurologists.

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?

Formal oral and written evaluations of the residents are done every six months. The residents fill out a self evaluation form as well.

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.

2022 Daniel DeLillo, DACVR (RO)
2022 Sarah Saad, DACVR (RO)
2021 Larissa Castro, DACVR (RO)
2020 Imke Shoepper, DACVR (RO)
2019 Heather Ashcraft, DACVR (RO)

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



McLartyBiosketch 2-2-24.pdf



Skorupski Public CV2024 2docx



28JAN24.Rebhun Biosketch....docx



ALLISON ZWINGENBERGER....docx



Brust 1 pg CV.pdf



EJ CURRICULUM VITAE 1 p... .docx



Kent_Biosketch_1 Page.docx



Lawrence Biosketch_ACVR_....docx



Short CV for ACVR Spriet 2... .docx



Trey Callahan Curriculum Vitae.pdf



biosketch-onco LEJEUNE 20... .pdf



biosketchAl-Nadaf 2 page.pdf



kp 1 pg CV.pdf

Resident Calendar



3 year residency schedule.pdf

Letter of Agreement from Medical Physics Support for Clinical Training



PCMP-UCD VMTH Letter of S... .pdf

Residency Evaluation Forms



UC Davis RO Resident Evalua... .pdf

Syllabi for Coursework



2023-24 Physics Long Cours... .pdf



2023-24 Radiobiology course... .pdf