Tuesday, March 2, 2021

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
- 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, February 25, 2021

Your Name

Jeannie Marie Plantenga

Your Address

Purdue University College of Veterinary Medicine, Lynn Hall,
625 Harrison Street
West Lafayette, IN, 47907

Your Email Address

jmp@purdue.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

First Name	Last Name	Title/Credentials	Email	Phone	Number of weeks per year Diplomate is available to supervise* the resident
Isabelle	Vanhaezebrouck	MRCVS, DVM, DACVR(RO), ECVDI-RO, MSc	ifvan@purdue.edu	765-494-11 07	48
Jeannie	Plantenga	DVM, PhD, DACVR(RO)	jmp@purdue.edu	765-494-11 07	24

*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.

Dr. Isabelle Vanhaezebrouck

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. Isabelle Vanhaezebrouck is a full time Purdue faculty member.
Dr. Jeannie Plantenga has transitioned to 50% voluntary partial retirement on the Purdue faculty.

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): 24

Primary Site: Purdue University College of Veterinary Medicine

Hospital/University: Purdue University Veterinary Hospital

Department: Veterinary Clinical Sciences

Address Purdue University, Lynn Hall, 625 Harrison Street
West Lafayette, IN, 47907

Cooperating Institution(s) (if applicable)

Cooperating Institution (if applicable)	Hospital / University	Department	Street Address	City	State/ Province	Postal/ Zip Code
University of Illinois	College of Veterinary Medicine	Veterinary Clinical Medicine	3505 VM Basic Sciences Building	Urbana	IL	61802

Advanced Degree and Research/Publication Requirement

Masters	Yes
PhD	Optional
Research Project	Yes
Publication	Yes

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
Comments:	Manual, 3D and IMRT planning and treatment (MV EBT) are all used clinically at our institution, providing the trainee with experience with all of these types. The residents formulate treatment plans, either clinical (manual), 3D or IMRT. For every treatment plan, the resident assesses the tumor and normal tissue doses, and predicts the potential normal tissue side effects for the organs at risk. Every treatment plan is reviewed and evaluated in weekly chart rounds with the ACVR-RO diplomate, residents and therapist. Residents evaluate the tumor and normal tissue responses throughout the treatment course and afterward, via recheck examinations and followup report elicited from the clients and RDVMs. The residents administer treatments, first supervised by the ACVR-RO diplomate and radiation therapist. Once they have sufficient experience, they administer treatments independently and as backup for the radiation therapist.

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
Comments:	The Purdue Radiation Oncology Service receives oncology cases directly from referring primary veterinarians, as well as referrals from specialists. The radiation oncology residents receive new radiation oncology patients and consult directly with the clients. The radiation oncology residents have primary and radiation oncology clinical management responsibilities for the radiation oncology patients. The residents work with the ACVR-RO diplomate together daily on the clinic floor. The residents evaluate cancer patients referred to PUVH, formulate diagnostic and staging plans and treatment options and discuss these options directly with the clients and referring veterinarians. The residents have primary case responsibility for patients at follow up appointments, including management of radiation side effects and assessment of tumor stage. The resident is responsible for medical record keeping, client, and referring veterinarian communications for all of these phases of patient care.
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:	Under the supervision of the radiation therapist (RTT) and ACVR(RO) diplomate, the resident will learn daily linear accelerator quality assurance and warm up soon after their residency begins. They will work with the RTT and diplomate to learn patient positioning for treatment planning CT and therapy, and portal imaging. Once they have sufficient experience and have demonstrated competency, the resident will administer treatments independently and as backup for the RTT. The resident will

	spend at least one week per year as the radiation therapist with all of the responsibilities that job entails.
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 are required to take HSCI 540 Radiation Biology, a 3 credit hour didactic course in radiation biology that is offered each spring semester and is generally taken during the first year of residency. The course syllabus is structured around the text Radiobiology for the Radiologist (8th Ed. Hall and Giaccia). Supplemental discussions will be held using the text Basic Clinical Radiobiology (5th Ed. Joiner and van der Kogel, Eds.). Radiobiological aspects of clinical cases will be discussed regularly. The current radiobiology literature will be included in the materials covered in regular Radiation Oncology and Oncology journal club discussions.
Please provide instructors' names and credentials for radiation biology formal and informal training:	HSCI 540 Radiation Biology Course Instructor: Carlos J. Pérez-Torres, PhD, Assistant Professor, Purdue University School of Health Sciences Dr. Isabelle Vanhaezebrouck, MRCVS, DVM, DACVR(RO), ECVDI-RO, MSc Dr. Jeannie Plantenga, DVM, PhD (Radiobiology), DACVR(RO)
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.	Cancer biology is frequently addressed in regularly scheduled conferences, seminars and rounds. The resident will attend conferences and guest lectures on cancer biology sponsored by the Purdue University Center for Cancer Research. The resident will participate in formal review sessions using the current Tannock and Hill text (Basic Science of Oncology) and the Weinberg text (The Biology of Cancer) which are presently led by the medical oncology and radiation oncology faculty. The resident will have the opportunity to take BIOL 51600 Molecular Biology of Cancer, a 3 credit hour formal lecture course in the Purdue Biological Sciences Dept., when it is offered, typically each spring.
Please provide instructors' names and credentials for cancer biology formal and informal training:	BIOL 51600 Molecular Biology of Cancer Course Instructors: Brittany Allen-Petersen, PhD, Assistant Professor of Biological Sciences, Purdue University Interdisciplinary Life Sciences Program Dr. Isabelle Vanhaezebrouck, MRCVS, DVM, DACVR(RO), ECVDI-RO, MSc Dr. Jeannie Plantenga, DVM, PhD (Radiobiology), DACVR(RO) Dr. Michael Childress, DVM, MS, DACVIM(Oncology) Dr. Christopher Fulkerson, DVM, MS, DACVIM(Oncology) Dr. Deborah Knapp, DVM, MS, 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.	Residents are required to take HSCI 572 Radiation Oncology Physics, a 3 credit hour course offered at Purdue. Purdue University has a Medical Physics Program in the School of Health Sciences. The Radiation Oncology Program works closely with the Medical Physics Program to afford interaction between the clinical service and the medical physics faculty and students. The resident will attend seminars and conferences on medical physics topics

related to clinical radiation oncology at Purdue University. Periodically there may be opportunities to attend programs on clinical medical physics at Indiana University in Indianapolis. Radiation physics and treatment planning will be taught and reviewed daily in the course of managing clinical patients while the resident is on radiation oncology rotations. We have a contract with a commercial radiation/medical physics company (InPhysics) for our physics support including monthly and annual QA services. Residents will be responsible for the daily QA procedure when they are acting as the radiation therapist. They complete the monthly QA process under the supervision of the physicist at least once during their residency. They have the opportunity to observe and participate in the annual QA process. The resident will have a minimum of 40 hours of clinical contact time with a board certified medical physicist during the course of their residency.

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

HSCI 572 Radiation Oncology Physics
Course Instructor: Keith M. Stantz, PhD, Associate Professor, Purdue University School of Health Sciences
Dr. Isabelle Vanhaezebrouck, MRCVS, DVM, DACVR(RO), ECVDI-RO, MSc
Dr. Jeannie Plantenga, DVM, PhD (Radiobiology), DACVR(RO)

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.

We have a contract with InPhysics (https://inphysics.net/) to provide medical physics support for our service. Paul Mason and Robert Gregory are board-certified medical physicists and they complete the monthly and annual QA services for our facility. We have recently expanded our contract with them to include one afternoon per week of on-site support for chart rounds, in-house consultation and resident training. The resident will participate in chart rounds with the diplomates and medical physicists. The resident will have hands on experience completing a monthly QA with the medical physicists. During the course of chart rounds, treatment planning interactions, and participation in QA procedures the clinical physics objectives will be covered, supported by our contracted medical physicists.

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

First Name	Last Name	Title/Credentials	Physicist on-site? Y/N
Robert	Gregory	MS, DABR	No
Paul	Mason	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:

Oncology Journal Club/Discussion Group Friday 12:00-1:00PM Mandatory
Radiation Physics/Biology Problem Solving Group Friday 1:00-2:00PM Mandatory
Oncology Resident/Clinician Training Rounds Thursday 8:30-9:30 AM Mandatory
Oncology Histopathology Rounds (including Medical and Radiation Oncology) monthly Mandatory.
Oncology Cancer Biology Review/Discussion Series Friday

	9:00-10:00 AM Mandatory Radiation Oncology Chart Rounds (Physics Rounds) Tuesday 9:00-10:00 AM Mandatory Radiation Oncology Journal/Book Club Monday 8:00-9:00 AM Mandatory Diagnostic Imaging Journal Club Every third Monday 8:30-9:30 AM Mandatory while on DXI rotation, optional otherwise Neurology Journal Club Weekly Mandatory while on Neurology rotation, optional otherwise Veterinary Clinical Sciences Medicine/Surgery Seminar Friday 8:00-9:00 AM Mandatory Health Sciences Seminar (Medical Physics topics) Tuesday 4:30-5:30 Optional Purdue University Center for Cancer Research Seminar Thursday 11:30 AM-12:30 PM Optional Cancer Imaging Rounds – two to three times per semester Mandatory Pathology Grand Rounds – Every three weeks Wednesday 8:00-9:20 AM Mandatory
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:	VCS 620 Seminar in Clinical Medicine and Surgery 1 credit hour, graduate level, fall and spring semesters. Attendance to all seminars is mandatory, and the residents give three seminars during their residency. The audience is the PU CVM faculty, staff, PVM fourth year students and veterinary technology students. The resident is required to give one to two formal presentations at a national conference (see below). The resident is required to give a poster or oral presentation during the annual Purdue CVM Research Day at least one time during their residency.

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 600 EX Clinical Linear Accelerator (6MV X) 120 leaf MLC
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 Treatment Planning System, v. 11. Capable of both forward and inverse treatment planning. Used clinically for both forward and inverse treatment plans to deliver all computer-based treatments for patients at our facility.

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?	Manual setups and manual treatment planning are commonly used at our facility for simple sites not requiring computerized treatment planning. The resident will have ample experience in this through the day to day operations at Purdue.
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?	At this time we do not have electron therapy available at our Purdue Veterinary Hospital. As part of Dr. Vanhaezebrouck's faculty appointment the Purdue administration has committed to upgrading the linear accelerator to a system that include electrons within the next 2 to 3 years. Until we have electron therapy onsite at Purdue, Dr. Kim Selting at the University of Illinois has agreed to supervise our residents in her facility for a minimum of two-weeks of hands on clinical experience in manual electron setups and manual treatment planning with 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?	Forward planning for 3D conformal radiotherapy is commonly used at our facility and the resident will have ample experience in 3D treatment planning through the day to day operations at Purdue.
The residency program requires hands-on clinical experience with inverse planning for IMRT. How does the program fulfill this requirement?	Inverse planning for IMRT radiotherapy is commonly used at our facility and the resident will have ample experience in IMRT treatment planning through the day to day operations at Purdue.
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?	At this time we do not have on-board CT or kV imaging available at our Purdue Veterinary Hospital. As part of Dr. Vanhaezebrouck's faculty appointment the Purdue administration has committed to upgrading the linear accelerator to a system that include OBI and CBCT within the next 2 to 3 years. Until we have OBI and CBCT onsite at Purdue, Dr. Kim Selting at the University of Illinois has agreed to supervise our residents in her facility for a minimum of two-weeks of hands on experience with this equipment.
The residency program requires hands-on clinical experience in on-board imaging verification with kV digital radiographs. How does the program fulfill this requirement?	At this time we do not have on-board CT or kV imaging available at our Purdue Veterinary Hospital. As part of Dr. Vanhaezebrouck's faculty appointment the Purdue administration has committed to upgrading the linear accelerator to a system that include OBI and CBCT within the next 2 to 3 years. Until we have OBI and CBCT onsite at Purdue, Dr. Kim Selting at the University of Illinois has agreed to supervise our residents in her facility for a minimum of two-weeks of hands on experience with this equipment.

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 have a Kodak CR (computed radiography) portal imaging system at Purdue that is used for MV portal imaging. MV portal imaging plates are processed on the Kodak CR system and the resulting digital images are then imported to Varian Eclipse and registered with the Eclipse DRRs for computer-based treatment plan verification. For manual setups MV portal images are used verify and document position and to add MLC blocks, if indicated. At prescribed intervals, MV portal images are made at subsequent fractions and compared with the setup portal images for manual setups and DRRs for computer based plans for quality assurance.

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
Caroline	Fulkerson	DVM, MS, DACVR(DXI)	Yes
Hock Gan	Heng	CVM, MVS, MS, DACVR(DXI), DECVDI(DXI)	Yes
Chee Kin	Lim	DVM, BVSc, MMedVet, DECVDI(DXI)	Yes
Masahiro	Murakami	BVSc, PhD, MS, DACVR(DXI)	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?

At least one boarded Diagnostic Imaging/Radiology Diplomate is on-site and available to the resident 52 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:

As directed by ACVR (RO) the residents in this program will spend no less than 4 weeks rotating on the diagnostic imaging service, reading plain films (CR, DR), CT, MRI, ultrasound and nuclear medicine studies. While on the diagnostic imaging rotation the resident will be responsible for generating imaging reports under the supervision of ACVR(R) diplomates and will attend the weekly radiology case conference. Throughout the residency, the resident will be will be expected to review all imaging studies for cases considered for or undergoing radiation therapy in consultation with the radiation oncologist and the diagnostic radiologists. The resident will have the opportunity to take HCSI 570 Introduction to Medical Diagnostic Imaging.

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, Purdue has on-site modern digital radiography, CT, ultrasound and MR equipment.

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
Michael	Childress	DVM, MS, DACVIM(Oncology)	Yes
Christopher	Fulkerson	DVM, MS, DACVIM(Oncology)	Yes
Deborah	Knapp	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?

At least one boarded ACVIM-Oncology Diplomate is on site and available to the resident 52 weeks per 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:

As directed by ACVR (RO) the residents in this program will spend no less than 8 weeks rotating on the oncology service under the direction of Dr. Deborah Knapp, Dr. Michael Childress and Dr. Christopher Fulkerson. While on the medical oncology rotation the resident will be the primary clinician for medical oncology cases and be responsible for receiving, evaluating, staging, managing and treating medical oncology cases. The radiation oncology service works closely with the oncology service to facilitate communication and coordinate management of clinical oncology patients, and training in medical oncology will be ongoing throughout the residency via the constant interaction between the two services. In addition to the close clinical interaction with the oncology group, the radiation oncology resident will regularly interact with the medical oncology faculty and the oncology residents for consultations, and weekly joint MO/RO clinician rounds, grand rounds, oncology journal club, and frequent seminars. The oncology residents and radiation oncology residents will participate together in regularly scheduled, directed reviews of medical and general oncology using current texts and current and historical literature as a basis for discussion.

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
Marije	Risselada	DVM, PhD, DEVCS, DACVS-SA	Yes
Jessica	Ogden	DVM, DACVS-SA	Yes

First Name	Last Name	Title/Credentials	Diplomate on-site? Y/N
Sun Young	Kim	DVM, MS, DA	Yes
Mark	Rochat	DVM, MS, DACVS-SA	Yes
Sarah	Malek	DVM, PhD, DACVS-SA	

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?

At least one boarded ACVS Diplomate is on site and available to the resident 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/Credentials	Diplomate on-site? Y/N
Joanne	Messick	DVM, PhD, DACVP	Yes
Abigail	Cox	DVM, PhD, DACVP	Yes
Tiffany	Lyle	DVM, PhD, DACVP	Yes
Craig	Thompson	DVM, PhD, DACVP	Yes
Margaret (Peg)	Miller	DVM, PhD, DACVP	Yes
Mario F.	Sola	DVM, DACVP	Yes
Nobuko	Wakamatsu-Utsuki	DVM, PhD, 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?

At least one boarded ACVP anatomic pathology and and one boarded ACVP clinical pathology Diplomate is on site and available to the resident 52 weeks per 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?

The resident will spend one week in a clinical rotation with a clinical pathologist at Purdue. In addition, residents are required to attend monthly pathology Grand Rounds, which include both clinical and anatomic pathology features of selected cases (academic year). Attendance of monthly Oncology Pathology Rounds to discuss clinical oncology cases seen at Purdue is also required (academic year).

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

First Name	Last Name	Title/Credentials	Diplomate on-site? Y/N

First Name	Last Name	Title/Credentials	Diplomate on-site? Y/N
Ann	Weil	MS, DVM, DACVA	Yes
Jeff	Ko	DVM, MS, DACVA	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 work with the board certified anesthesiologist to develop an appropriate anesthesia protocol for each radiation oncology patient for which they have primary clinical management responsibility. If there are special anesthesia concerns or considerations for a patient the resident will devise an appropriate plan, under the supervision of the anesthesiologist. The resident will rotate through the anesthesia service for 2 weeks to gain hands on experience under the supervision of a board certified 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
R. Timothy	Bentley	BVSc, MRCVS, DACVIM-Neurology and Neurosurgery	Yes
Melissa	Lewis	VMD, PhD, DACVIM-Neurology and Neurosurgery	Yes
Stephanie	Thomovsky	DVM, MS, DACVIM-Neurology	

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.

As directed by ACVR (RO) the residents in this program will spend no less than 2 weeks rotating on the neurology service under the direction of Dr. Tim Bentley, Dr. Melissa Lewis and Dr. Stephanie Thomovsky. While on the neurology rotation the resident will be the primary clinician for neurology cases, especially neuro-oncology cases, and be responsible for receiving, evaluating, staging, managing and treating neurology cases. The radiation oncology service works closely with the neurology service to facilitate communication and coordinate management of clinical neuro-oncology patients, and training in neurology will be ongoing throughout the residency via the constant interaction between the two services. In addition to the close clinical interaction with the neurology group, the radiation oncology resident will regularly interact with the neurology faculty and the neurology residents for consultations. The resident will attend Neurology Journal Club when the selections pertain to neurologic 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

Name	Certifying College/Board	Subspecialty (if applicable)	Explain Relationship if offsite
Larry G. Adams	ACVIM		
Aimee Brooks	ACVECC		
Lynn Guptil	ACVIM		
Dan Hogan	ACVIM	Cardiology	
Paula Johnson	ACVECC		
Niwako Ogata	ACVB		
Shin Ae Park	ACVO		
Nolie Parnell	ACVIM		
Sarah Steinbach	ACVIM		
Liz Thomovsky	ACVECC		
Wendy Townsend	ACVO		
Andrew Wookcock	ACVIM		

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?

Trainees are formally evaluated every 6 months during the program.

1. A formal residency performance review with a written report by the program director is submitted to the department chair and residency program director every 6 months. The formal evaluation is reviewed with the trainee at semi-annual graduate committee meetings. Course selection and performance are also discussed at this semi-annual meeting (Evaluation of Academic Progress for Graduate Students).

2. A radiation oncology specific evaluation is also completed every 6 months and reviewed with the resident at the same evaluation meeting. Progress in research and publications is also evaluated and discussed.

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

2020 - Dr. Dah-Renn Fu. DACVR(RO) certified 2020. Present position: Clinical Assistant Professor of Radiation Oncology, The Ohio State University Veterinary Medical

individual with respect to the board certification process.	Center 2019 - Dr. Ilektra Athanasiadi. Sitting for DACVR(RO) certification in 2021. Present position: Assistant Professor of Radiation Oncology, Dept. of Small Animal Clinical Sciences, Virginia-Maryland College of Veterinary Medicine, Virginia Tech, Blacksburg, VA 2017 - Dr. Keiko Murakami. DACVR(RO) certified 2018. DACVIM-Oncology certified 2020. Present position: Assistant Professor of Medical Oncology, Dept. of Small Animal Clinical Sciences, Virginia-Maryland College of Veterinary Medicine, Virginia Tech, Blacksburg, VA 2016 - Dr. Magdalena Parys. DACVR(RO) certified 2017. Present position: Radiation Oncologist, Lecturer in Oncology, Royal (Dick) School of Veterinary Studies, The University of Edinburgh, UK
Please list any additional information of interest in support of this residency application.	Here is more information about additional equipment and facilities we have on-site at Purdue: MapCheck 2 (SunNuclear) multi-detector array for dose verification and QA RadCalc independent dosimetric validation calculation system (Lifeline Software Inc.) CT: GE VCT 64 slice spiral CT system MRI: GE Signa 1.5T LxI system

How is the resident training experience presently impacted by the COVID-19 pandemic? Please comment on the following:

1. On-site presence of residents and radiation oncology faculty
2. Caseload
3. Faculty oversight of radiation treatment planning and patient management
4. Rounds/seminars/journal club and other didactic courses
5. Non-radiotherapy clinical rotations
6. External rotations

COVID Related Changes: Radiation Oncology and Medical Oncology faculty are on-site in the Purdue Veterinary Hospital. Presently, patients are dropped off and then client communications are done by telephone. Daily medical oncology case rounds, journal club, and monthly histopathology rounds are presently conducted via Zoom online. We have in-person meetings for radiation oncology rounds and with our medical physicists. Caseload is re-building now that Dr. Vanhaezebrouck has joined the program as a full time faculty member on-site and new staff (one RTT and two RVT nurses) have been hired. Based on the ongoing number of referrals we expect the caseload to be around 5 to 10 cases per day (including new consultations and ongoing radiation therapy patients) before July 2021 when we hope that the first resident would start. Didactic Radiation Oncology Physics and Radiobiology are at this time conducted in person on campus at Purdue University.

Non-radiotherapy clinical services are operating in person in the hospital at this time. External rotation to the University of Illinois is allowed at this time upon completion of a COVID test with negative results upon arrival on campus.

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

Biosketch Heng July 2020.pdf

Childress biosketch 2 page_Feb 2020.pdf

FulkersonCarrie_CV 2 page.pdf

Fulkerson_CM 2 page.pdf

Knapp NIH Biosketch 2021 2 page.pdf

LimCheeKin_CV_Jan2021 2 page.pdf

Masahiro Murakami Biosketch.pdf

2021 Plantenga Biosketch.pdf

VANHAEZEBROUCK CV .pdf

Resident Calendar

1 APPENDIX_PURDUE.Calendar.2021.pdf

Letters of Agreement From Cooperating Institutions

U of IL Collaboration Letter 2021.pdf

Letter of Agreement from Medical Physics Support for Clinical Training

2021 Physics Purdue Resident Support.pdf

Residency Evaluation Forms

Evaluation of Academic Progress Final 6-30_...

PurdueResidencyCommEval form.pdf

RO Resident Evaluation Purdue.pdf

Syllabi for Coursework

Biology 51600 syllabus 2021.pdf

HSCI 540 Course Syllabus 2021.pdf

HSCI572_Rad_Onc_Physics_2021_SYLLABU...

VCS62000_Syllabus_SeminarInClinicalMedic...