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

Monday, January 25, 2021

Your Name

Tracy Lyn Gieger

Your Address

1052 William Moore Drive , NC State College of Veterinary Medicine - Terry Center
Raleigh , NC , 27607

Your Email Address

tracy.gieger@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

FirstName	LastName	Title/Credentials	Email	Phone	Number of weeks per year Diplomate is available to supervise* the resident
Tracy	Gieger	Clinical Associate Professor/DACVR, DACVIM, DVM	tracy.gieger@gmail.com	9195136322	36
Hirotoo	Yoshikawa	Assistant Professor	hyoshik@ncsu.edu	919.513.6988	21
Michaae	Nolan	Associate Professor	mwnolan@ncsu.edu	9195136322	15

*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.

Tracy Gieger

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):	25
Primary Site:	North Carolina State University
Hospital/University:	Veterinary Teaching Hospital
Department:	Clinical Sciences
Address	1052 William Moore Dr Raleigh, NC, 27607

Advanced Degree and Research/Publication Requirement

Masters	No
PhD	No
Research Project	Yes
Publication	Optional

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.	Formal coursework: Radiation and Cancer Biology Lecture Series for Residents, a Web-Ex based course that is taught biannually Informal training experiences: One RO faculty member (Nolan) has a PhD in radiation biology, and we have frequent discussion in daily rounds and in journal club about rad bio topics Self-study: a minimum of 6 weeks of the year is off clinics

	time, and self-study (RABEX exams, reading Hall text) is encouraged during this time; part of the semi-annual evaluation assesses the resident's knowledge and ability to apply rad bio knowledge to clinics
Please provide instructors' names and credentials for radiation biology formal and informal training:	Formal: David G. Kirsch, M.D., Ph.D., Barbara Levine University Professor, Depts. of Radiation Oncology and Pharmacology & Cancer Biology, Duke University School of Medicine (E-MAIL: david.kirsch@duke.edu) Elaine M. Zeman, Ph.D., Associate Professor, Dept. of Radiation Oncology, University of North Carolina School of Medicine (E-MAIL: elaine_zeman@med.unc.edu) Informal: RO faculty
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.	Informal: 1. Duke University Radiation Oncology and Imaging Program Seminar Series- as webinar series that NCSU RO Faculty and HO attend, occurs 8 times per year; highlights contemporary RO topics delivered by world-renowned cancer researchers 2. One of the RO faculty (Yoshikawa) has a PhD in cancer biology, and discussions about cancer biology topics are common during weekly RO journal club 3. Self-study: a minimum of 6 weeks of the year is off clinics time, and self-study of cancer biology is encouraged (Tannock and Hill and the cancer biology chapter of the Withrow text are on the recommended reading list)
Please provide instructors' names and credentials for cancer biology formal and informal training:	NCSU RO faculty Duke University Radiation Oncology and Imaging Program Seminar Series- 2019-2021 speakers have included: 1. Dr. Marie-Catherine Vozenin from CHUV, Lausanne University Hospital. "FLASH-radiotherapy and FLASH effect: biological and clinical implications" 2. Prof. Kevin Harrington from The Institute of Cancer Research/Royal Marsden Hospital. "Novel combination immunotherapy regimens based on biological agents and DNA repair inhibition" 3. Arvind P. Pathak, PhD Associate Professor of Radiology, Oncology and Biomedical Engineering 4. Marka Crittenden, MD, PhD Director, Translational Radiation Research Earle A. Chiles Research Institute 5. Silvia C. Formenti, MD · Chairman of Radiation Oncology · Weill Cornell Medical College, Cornell University 6. Maximilian Diehn, MD, PhD Associate Professor, Department of Radiation Oncology Institute for Stem Cell Biology & Regenerative Medicine Stanford Cancer Institute 7. Kristy Brock, PhD Professor, Department of Imaging Physics, Division of Diagnostic Imaging, The University of Texas MD Anderson

	Cancer Center, Houston, TX 7. Chris Bakkenist, PhD Associate Professor of Radiation Oncology Associate Professor of Pharmacology and Chemical Biology Julius Paul and Freeda Ggreenberger Chair in Radiation Oncology Research Vice Chair for Basic Science University of Pittsburgh
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.	Formal: UNC Medical Physics Course via WebEx, The Physics of radiation Oncology, taught annually Informal: Frequent discussions about physics topics in journal club and weekly physics rounds; frequent interactions with institutional medical physicist (Don Roback) Self-study: a minimum of 6 weeks of the year is off clinics time, and self-study of physics is encouraged (RAPHEX and Khan reading); incorporation of physics knowledge into clinical practice is part of the semi-annual resident evaluation
Please provide instructors' names and credentials for didactic (non-clinical) medical physics formal and informal training:	Eric Schreiber, UNC medical physics faculty member and course coordinator for formal coursework erics@med.unc.edu Don Roback, Rex Hospital Medical Physics, NCSU institutional medical physicist Justus Adamson, Duke University medical physicist, NCSU institutional associate medical physicist RO faculty
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.	The resident has 2 weeks scheduled for two different medical physics experiences. One week is spent with our institutional physicist, Don Roback, who is the head of medical physics at UNC Rex hospital in Raleigh. The other week is spent with Justus Adamson, a Duke University Hospital Medical physicist who also does some contract work with NC State. During these weeks, they shadow the medical physicist during their clinics hours with the goal of observing their daily activities including QA of machines and plans, chart checks, setting up patients, troubleshooting, etc. In addition, Don Roback provides informal medical physics training to our residents when he comes in to our hospital for the same activities as listed above (he comes in at least 1-2 times every week for chart checks and for machine QA, but this often occurs before working hours, so we only typically see him in person once a month or so). He is also readily available to us by phone, text, and email when we need help with plans/troubleshooting QA, etc.
Medical Physicist(s) in support of clinical training in the residency program	

First Name	Last Name	Title/Credentials	Physicist on-site? Y/N
Donald	Roback	PhD, DABR	No
Justus	Adamson	PhD/Associate Professor	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:

radiation oncology journal club- RO faculty and residents + visiting HO; occurs 43 weeks/year and lasts 1 hour; attendees take turns presenting articles (literature from the past 5 years); we use a specific ppt template to present the articles and each HO contributes a boards-level multiple choice question, which is presented at the end and is discussed by the group (to allow the residents to think and learn about the level/depth of questions that may be asked on the certifying exam)

medical oncology journal club also occurs weekly and is attended by the RO residents when they are rotating through medical oncology, but this is rarely attended by RO diplomates

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 part of the NCSU resident seminar series, each HO is required to present 2 seminars- a 30 minutes one in year 2 and a 60 minute one in year 3. These are typically seminars involving the topic of the HO's research project and/or timely topics about the HO's course of study.

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 Novalis TX

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, capable of forward and inverse planning and used to plan and deliver treatments

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

About 20% of our cases are manual photon setups. These are typically palliative-intent cases of various sites or

does the program fulfill this requirement?	
	definitive-intent cases in which computer-based treatment plans are unlikely to improve normal tissue sparing (i.e., scar on a distal limb). The resident and attending faculty discuss the setups in advance (need for imaging to plan the case, normal tissues that could or need to be avoided and how that might be achieved, what the planned treatment volume will be), and the resident sets up the case with direct faculty supervision. After the setup, the resident and the faculty independently do a hand calculation that is then verified by RadCalc, then the plan is approved in ARIA. Prior to delivery, the plan is moded up on with the therapist and RO faculty and resident present to do a final check on the plan and instructions for delivery (set up notes and patient photos are also uploaded into ARIA).
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?	About 1% of our cases are electron setups; process is similar to above. We occasionally use computer-based plans for electrons, but only to calculate the depth and create a printout for the field insert (calcs are done by hand after a cutout factor using the insert is determined).
The residency program requires hands-on clinical experience with forward planning for 3D conformal radiotherapy (non-IMRT). How does the program fulfill this requirement?	About 20% of our cases are 3D CRT plans. For computer-based plans, after an initial discussion with RO faculty about what imaging sets to use, goals of tx, and discussions about tissue sparing, the resident contours the normal and target tissues and creates a CTV and PTV (when applicable). These contours are checked by the faculty. After creating treatment plans and self-assessing their plans, the resident and faculty review the work to come up with a finalized plan. QA is done via rad Calc.
The residency program requires hands-on clinical experience with inverse planning for IMRT. How does the program fulfill this requirement?	The majority of our cases are planned using inverse planning (fractionated IMRT or hypofractionated SRT). The process and level of supervision is similar to what is described above, with faculty supervision at every level of planning. IMRT plans are QAed using the EPID device.
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?	Our linac is equipped with an onboard (OBI) kV CBCT and planar imaging. Almost all of our computer-based plans (IMRT, 3D CRT) undergo daily imaging prior to treatment. All SRT/hypofractionated cases have CBCT that is reviewed by at least the therapist and one faculty member and resident. In other cases (fractionated bladder cases, for example), daily CBCT is performed and is reviewed by the therapist and either a resident or faculty member (or both is there is a discrepancy in the match). For other cases (fractionated head/neck cases), kV/kV planar image matching is utilized daily with the same review process.
The residency program requires hands-on clinical experience in on-board imaging verification with kV digital radiographs. How does the program fulfill this requirement?	see above

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

MV portal images are done for all manual photon setups; these are done once for distal limb setups and prior to every treatment for other locations; images are reviewed by faculty and residents; in some cases, we utilize a manual blocking tray to shield critical adjacent structures after evaluation of the initial MV port film.

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
Gabriela	Seiler	ACVR, ECVDI	Yes
Erin	Keenihan	ACVR	Yes
Nicholas	Petrovich	ACVR	Yes
Eli	Cohen	ACVR	Yes
Ian	Robertson	ACVR	Yes
Kip	Berry	ACVR	Yes
Nathan	Nelson	ACVR	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?

There is an on-site radiologist available every day (Mon-Fri and on call on weekends and holidays; DI residents are on-site daily with faculty backup available at all times). During COVID, the majority of interactions are remote, but at least one faculty and resident are available on site daily.

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 resident will spend a minimum of 4 weeks with the diagnostic imaging service. This includes attending their daily rounds and weekly KCC (challenging case) conference. They write reports for planar and volumetric imaging studies (not ultrasounds, though), which are reviewed by at least one radiologist before they are finalized. In addition to these weeks, the resident does have daily access to radiologists to ask for help when needed for target or normal tissue delineation. Finally, the RO residents do have the option of spending extra weeks in their 3rd year on the DI service or even on MRI for a full week (one radiologist reads all the MRIs for each week so the resident can spend the week with them).

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?

Planar and volumetric imaging are available, including 2 CT scanners, a 3T MRI, numerous planar radiograph machines, ultrasound, fluoroscopy, gamma camera. There are multiple image storage platforms including film, e-Unity, and PACS that are used to import, export, and manipulate images.

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

First Name	Last Name	Title/Credentials	Diplomate on-site? Y/N
Joanne	Intile	DACVIM	Yes
Paul	Hess	DACVIM	Yes
Steve	Suter	DACVIM	Yes
Michael	Mastromauro	DACVIM	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?

A faculty medical oncologist is on-site every day (M-F), and medical oncology residents and backup faculty are available at all times. During COVID, the majority of interactions are done remotely.

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:

Formal- the resident will spend a minimum of 10 weeks (with additional elective time if they choose) on the medical oncology service. During that time, they will be involved with primary receiving of new and ongoing (chemo) medical oncology cases. They will also attend daily service rounds and weekly medical oncology journal club.

informal- Dr. Gieger is also a medical oncologist and frequent discussions about medical oncology-related topics are frequent during daily rounds.

Additionally, each week for 1 hour, there are surg/onc rounds where faculty and HO from med onc, soft tissue surgery, and rad onc meet to discuss ongoing/challenging cases.

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
Marine	Traverson	ACVS	Yes
Valerie	Scharf	ACVS	Yes
Sarah	Townsend	ACVS	Yes
Kyle	Matthews	ACVS	Yes
Simon	Roe	ACVS	Yes
Daniel	Duffy	ACVS	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?

AN ACVS surgeon is on site Mon-Fri, and a surgery resident with faculty backup is available 24/7.

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
Luke	Borst	ACVP (anatomic)	Yes
Erica	Gruber	ACVP (clinical pathology)	Yes
Devorah	Marks Stowe	ACVP (clinical pathology)	Yes
Daniele	Meritet	ACVP (anatomic)	Yes
Jennifer	Neel	ACVP (clinical pathology)	Yes
Tatiane	Wantable	ACVP (anatomic)	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?

Our school has ACVP anatomic and clinical pathology faculty that are on site during routine working hours every day. Necropsy services are available on-site 24/7. After-hours clinical pathology services are also available for emergent cases.

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?

Each resident is scheduled to spend one week with the clinical pathology team (ACVP faculty and residents). During this week, they attend rounds and review/read cytology slides along with the faculty member on duty. Clinical pathology residents and faculty are also available year-round for case consultations and STAT cytologies.

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
Julie	Balko	ACVAA	Yes
Lydia	Love	ACVAA	Yes
Kate	Bailey	ACVAA	Yes
Ami	Gilkey	VTS-anesthesia	Yes
Juan	Pavez	ACVAA	Yes
Lynelle	Graham	ACVAA	Yes
Kristen	Messenger	ACVAA	Yes
Jon	Congdon	ACVAA	Yes
Ludovica	Chiavaccini	ACVAA	Yes

First Name	Last Name	Title/Credentials	Diplomate on-site? Y/N
Cheryl	Kata	VTS-anesthesia	Yes
Emmett	Mark	VTS-anesthesia	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 spend 2 weeks on the anesthesia service under the direct supervision of the anesthesia and VTS-anesthesia faculty. Their rotation parallels that of the vet students so that they will get the full cycle of anesthesia rounds. During their rotation, they are assigned to all types of small animal cases. In addition, they spend 1 week with the RO service anesthesia nurse (>20 years of anesthesia experience).

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
Peter	Early	ACVIM	Yes
Chris	Mariani	ACVIM	Yes
Natasha	Olby	ACVIM	Yes
Karen	Munana	ACVIM	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 spend 2 weeks on the neurology service which will parallel that of the veterinary students so they will go through the whole cycle of rounds. They will receive medical neurology cases along with the neurology HO and faculty and will attend all journal clubs and service rounds during that time.

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?

It is a requirement of both ACVR and NCSU that HO be formally reviewed twice a year. This typically occurs in Dec-Jan and April-May. Prior to their formal review, each resident is asked to complete a self-evaluation. This is incorporated into their formal evaluation. A team consisting of the RO faculty and an 'external' mentor (any faculty member outside of RO) meets with the resident to review their progress, discuss challenges, and plan for the upcoming months and beyond. The faculty and residents sign the document and the resident gets a copy; in addition, the HR team at NCSU retains a copy for the resident's "permanent record".

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.

Krista Kelsey-completed 2017-board certified
Leanne Magestro-completed 2018-board certified
Katherine Sweet-completed 2020-board certified
James Elliott-

completed 2020-
board certified

Please list any additional information of interest in support of this residency application.	In addition to the specialists listed above, there are numerous other specialists in the areas of cardiology, internal medicine, ophthalmology, critical care, dermatology, nutrition, and dentistry that indirectly support the program. These were not specifically listed since they are numerous and indirectly support the program.

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

1. RO faculty- 2 faculty on site Mon/Tue and one for the rest of the week- unchanged from pre-pandemic with the exception that one faculty works in their office when 2 are on site, and case rounds are done via zoom and not in person
2. RO residents- 1 or 2 on site daily, one works in the vault office and another works in an exam room
3. faculty oversight- unchanged (patient physical exams are the only thing that is done as a 'group' in person when resident and faculty both need to examine the patient)
4. no change in rounds or didactic courses except that all are done via zoom
5. non-RT clinical rotations- diagnostic imaging rotation is 100% online now; medical oncology rotation is similar to RO clinics (patient exams in person, resident uses exam room as office, all case rounds are done via zoom); no other rotations are scheduled for either resident in the near future
6. external rotations- off-site rotations are coming up later this spring for one of our residents (physics week at local human hospital) and may need to be postponed, but since none of our residents are finishing this year, postponement should not prevent these from happening at a later date

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 October 2020.doc

Biosketch_Mastromauro_updated general.do...

Biosketch_Nolan_ACVR2020.docx

CV 2021 2 page.doc

CV NIH format 1-2021 Yoshikawa 2pg.doc

ECVDI-CV 2-24-19.pdf

Erin Keenihan 2 page 2021.docx

Gabriela S Seiler 2 page.docx

Gieger_biosketch-Nov 2020.docx

HessPR_BIOSKETCHForRadOnc01.25.21.docx

docx IDR CV 2 page Jan 2021.docx

docx NPP CV 2021 short.docx

docx TG abbv Suter NIH Biosketch 2020.docx

docx biosketch-CRB 2021.docx

doc nate nelson 2020 cv.doc

Resident Calendar

docx Rad onc residency calendar for ACVR.docx

Letter of Agreement from Medical Physics Support for Clinical Training

pdf Letter for Residents-signed.pdf

Residency Evaluation Forms

docx Rad onc resident review forms.docx

Syllabi for Coursework

pdf 2020-2021 UNC-Duke Course Syllabus & Sch...

pdf The Physics of Radiation Oncology - Course ...