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

Tuesday, January 25, 2022

Your Name

Margaret Colleen McEntee

Your Address

930 Campus Road, Department of Clinical Sciences, CVM, Cornell University
Ithaca, New York, 14853

Your Email Address

mcm43@cornell.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
Margaret	McEntee	Professor	mcm43@cornell.edu	607-253-3051	48

*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.

Margaret McEntee

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):

24 months

Primary Site: Cornell University College of Veterinary Medicine

Hospital/University: Cornell University Hospital for Animals/Cornell University

Department: Clinical Sciences

Address 930 Campus Road, Department of Clinical Sciences, CVM, Cornell University
Ithaca, New York, 14853

Cooperating Institution(s) (if applicable)

Cooperating Institution (if applicable)	Hospital / University	Department	Street Address	City	State /Province	Postal/Zip Code
Roswell Park Cancer Institute	Cayuga Medical Center	Radiation Medicine	101 Dates Drive	Ithaca	New York	14850-1383

Advanced Degree and Research/Publication Requirement

Masters	No
PhD	No
Research Project	Optional
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? No

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.	A medical physicist in the Department of Clinical Sciences at our institution and the board certified veterinary radiation oncologist at Cornell are involved in teaching a course in radiation biology. Radiation biology is also a topic discussed during the weekly journal club for the benefit of all of the oncology residents.
Please provide instructors' names and credentials for radiation biology formal and informal training:	Parminder Basran Associate Research Professor and Medical Physicist, PhD in medical physics Margaret McEntee Professor of Oncology, DVM, DACVIM, 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.	Training in cancer biology is accomplished through weekly journal club/topic rounds with the full complement of faculty in medical and radiation oncology and all of the house officers.
Please provide instructors' names and credentials for cancer biology formal and informal training:	Cheryl Balkman Full Clinical Professor, DVM, MS, DACVIM (internal medicine), DACVIM (medical oncology) Kelly Hume Associate Professor, DVM, DACVIM (medical oncology) Margaret McEntee Professor of Oncology, DVM, DACVIM, DACVR(RO)
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.	A medical physicist on faculty in the Department of Clinical Sciences provides a formal didactic course in medical physics which is provided for the radiation oncology

resident, with portions of the course also available to the diagnostic imaging residents.
The resident is also encouraged to attend/participate in the medical physics course that is provided at other institutions (e.g. UC Davis).

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

Parminder Basran Associate Research Professor & Medical Physicist, PhD in medical physics

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

There are two medical physicists that are available to the resident for training. One of the individuals (Basran) works with the resident on radiation treatment planning, as well as radiation based research projects. The other physicist (Raina) is involved in the ongoing QA for the treatment planning and linac and provides training in those areas including the annual QA that is performed. The second individual is here on site once a week on Friday afternoons.

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

First Name	Last Name	Title/Credentials	Physicist on-site? Y/N
Parminder	Basran	Associate Professor/Medical Physicist, PhD, FCCPM	Yes
Sanjay	Raina	Assistant Professor, PhD, 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:

A weekly journal club/topic review is held that includes the radiation and medical oncology faculty and the radiation and medical oncology residents.
Morbidity/mortality rounds/radiation case rounds - weekly.
Surgical oncology rounds - monthly.
Anatomic pathology rounds - approximately monthly.
Resident physiology review sessions/presentations - monthly.
Advanced anesthesia seminar series - approximately weekly.
There are many outstanding opportunities at the College of Veterinary Medicine for the resident to attend research seminars, work in progress presentations by graduate students involved in cancer research, Clinical Investigator's Day, the NYS Veterinary Conference (held annually at the College); and all of these opportunities are available to the resident to attend.

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 give two lectures as part of the DVM curriculum at Cornell University; one lecture on the basics of radiation therapy, and another lecture on a specific tumor type.
There are also other opportunities within the DVM curriculum as well as the expectation to present during rounds such as the surgical oncology rounds.

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:	Siemens Primus Linear Accelerator 6 MV photons, 5-14 MeV electrons, 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:	Philips Pinnacle3 3DRTP The radiation treatment planning system is capable of forward and inverse planning; the forward planning is used clinically to deliver treatments. We are in the process of selecting a new linear accelerator and will be upgrading our linac and treatment planning system.

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?	The resident will be involved in manual setups and manual treatment planning; progressively taking more responsibility.
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?	The resident will be involved in setting up patients for treatment with electrons. Electron plans are commonly CT based computer plans, but there will be opportunities to setup these treatments manually as well.
The residency program requires hands-on clinical experience with forward planning for 3D conformal radiotherapy (non-IMRT). How does the program fulfill this requirement?	The current radiation treatment planning system is used to do forward planning for 3D conformal radiotherapy.
The residency program requires hands-on clinical experience with inverse planning for IMRT. How does the program fulfill this requirement?	A new linear accelerator will be installed by the beginning of 2023 which will provide hands-on clinical experience with inverse planning for IMRT. The current treatment planning system allows for inverse planning for IMRT, but it cannot be delivered with the current linear accelerator. A new resident will not be started until after installation.
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?	A new linear accelerator will be installed by the beginning of 2023

which will have this capability.

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

A new linear accelerator will be installed by the beginning of 2023 which will have this capability.

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

The current setup allows for MV portal imaging that is cassette based digital imaging. A new linear accelerator will be installed by the beginning of 2023 which will have on-board imaging verification with MV portal imaging capability.

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
Peter	Scrivani	Associate Prof; ACVR	Yes
Philippa	Johnson	Assistant Prof; ECVDI	Yes
Ian	Porter	Assistant Clinical Prof: ACVR	Yes
Assaf	Lerer	Assistant Clinical Prof; ACVR	Yes
Christopher	Tollefson	Assistant Clinical Professor; 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 always at least one if not two board certified veterinary radiologists on-site and available during regular working hours.

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 four weeks on the diagnostic imaging service which will be under the direct supervision of a board certified veterinary radiologist. The resident will be responsible for generating draft imaging reports for cases imaged while they are on the service; these reports are reviewed by the radiologist on duty.
The radiologists are available for review of radiation oncology cases that have had diagnostic imaging performed and are routinely consulted.

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?

The Cornell University Hospital for Animals has digital radiography, ultrasound, CT (16 slice), MRI (1.5 T), fluoroscopy, and nuclear medicine.

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
Cheryl	Balkman	Clinical Professor; ACVIM (internal medicine and oncology)	Yes
Kelly	Hume	Associate Professor; ACVIM (oncology)	Yes

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

There is always a board certified medical oncologist/faculty member on clinical service during the normal work week, with backup provided on weekends and holidays as well.

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 oncology service functions as one service providing evaluation and care for both medical and radiation oncology patients. The daily morning board rounds to review the cases for the day, as well as afternoon more detailed discussion of cases includes everyone that is on the clinical service (students, house officers and faculty). There is also a weekly journal club, weekly morbidity/mortality case rounds (oncology case load from the week), surgical oncology rounds, and anatomic pathology rounds to discuss specific cases of interest with the pathologists and review the histopathology and special stains used to arrive at a diagnosis.
The resident will spend eight weeks under the supervision of a board certified veterinary medical oncologist seeing medical oncology cases (not those typically treated with radiation therapy). This will entail receiving new cases for consultation, diagnostics and treatment, and seeing rechecks of those patients. The resident will have the opportunity to prescribe chemotherapy drugs (double check system in place for this activity) as well as other systemic therapies, and will be responsible for managing side effects of those treatments.

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
Galina	Hayes	Associate Prof.; ACVS; ACVECC; PhD	Yes
Daniel	Lopez	Assistant Clinical Prof; ACVS	Yes
Ursula	Krotscheck	Professor; ACVS	Yes
Kei	Hayashi	Professor; ACVS; PhD	Yes

First Name	Last Name	Title/Credentials	Diplomate on-site? Y/N
Selena	Tinga	Assistant Professor; ACVS	Yes
Rory	Todhunter	Professor; ACVS; PhD	Yes
Nicole	Buote	Associate Prof; 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?

There is always a board certified surgeon on-site.

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
Julie	Webb	Assistant Clin. Prof.; DACVP; clinical pathology	Yes
Erica	Behling-Kelly	Assoc. Prof; DACVP; PhD; clinical pathology	Yes
Tracy	Stokol	Professor; DACVP; PhD; clinical pathology	Yes
Ashleigh	Newman	Assistant Clin. Prof.; DACVP; clinical pathology	Yes
Elizabeth	Buckles	Assoc. Clin. Prof.; DACVP; PhD; anatomic pathology	Yes
Gerald	Duhamel	Professor; DACVP; PhD; anatomic pathology	Yes
Sean	McDonough	Associate Prof.; DACVP; PhD; anatomic pathology	Yes
Andrew	Miller	Associate Prof.; DACVP; anatomic pathology	Yes
Jeanine	Peters-Kennedy	Assoc. Clin. Prof.; DACVP; DACVD; anatomic pathology	Yes
Alina	Demeter	Asst. Clin. Prof.; DACVP; PhD; anatomic pathology	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?

Board certified veterinary pathologists for both anatomic and clinical pathology are on-site and available.

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

The resident will rotate through with pathology for a total of two weeks. The days entail spending half of the day with the anatomic pathologists on surgical biopsies, and half of the day with the clinical pathologists for review of case material submitted for cytology.

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
Jordyn	Boesch	Assoc. Clin. Prof.; DACVAA; PhD	Yes
Luis	Campoy	Clinical Professor; DECVAA	Yes
Robin	Gleed	Professor; DACVAA	Yes
Manuel	Martin-Flores	Assoc. Prof.; DACVAA	Yes
Joaquin	Araos	Asst. Clin. Prof.; DACVAA, PhD	Yes
Cristina	de Miguel Garcia	Clinical Fellow; DECVAA	Yes

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

The resident will rotate through the anesthesiology service and be involved in the evaluation, induction/maintenance/recovery from anesthesia for patients in the companion animal hospital. This will be for two one week blocks of time, and will be under the direction of a board certified veterinary 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
Emma	Davies	Assoc. Clin. Prof.; DECVN	Yes
Jonathan	Wood	Asst. Clin. Prof.; ACVIM (neurology)	Yes
Peter	Early	Visiting Clin. Prof.; ACVIM (neurology)	Yes

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

The resident will rotate through the neurology service for a two week period which will be supervised by a board certified veterinary neurologist. They will be responsible for primarily seeing cases that require medical management; and will be involved in the daily case rounds and discussions.

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
Bruce Kornreich	ACVIM	cardiology	
Romain Pariaut	ACVIM	cardiology	
Nadine Fiani	AVDC		
Santiago Peralta	AVDC		
Daniel Fletcher	ACVECC		
Robert Goggs	ACVECC; ECVECC		
Jethro Forbes	ACVECC		
Timothy Hackett	ACVECC		
Nathan Peterson	ACVECC		
Sarah Robbins	ACVECC		
Gretchen Schoeffler	ACVECC		
Mitzi Clark	ACVD		
Julia Miller	ACVD		
Eric Ledbetter	ACVO		
Kelly Knickelbein	ACVO		
Nita Irby	ACVO		
John Loftus	ACVIM	internal medicine	
Meredith Miller	ACVIM	internal medicine	
Kenneth Simpson	ACVIM	internal medicine	
Jennifer Prieto	ACVIM	internal medicine	

Name	Certifying College/Board	Subspecialty (if applicable)	Explain Relationship if offsite
Alyssa Chandler	ACVIM	internal medicine	
Joseph Wakshlag	ACVN, ACVSMR		
Christopher Frye	ACVSMR		

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?

Input is requested from other faculty members on the oncology service. A resident evaluation form is filled out and shared with the resident during an in person meeting to discuss their performance and progress towards goals of the residency.

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.

N/A
1 resident currently in training who will be finishing the program and taking the 2022 certification examination.

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

We have the funding and will be moving forward with selection and installation of a new linear accelerator with state of the art capabilities. This is currently in progress. We have substantive support in terms of medical physics with support from a local medical physicist who is employed by Roswell Park Cancer Institute and is responsible for the support of the local human radiation facility; and we have a medical physicist on faculty at Cornell University in the Department of Clinical Sciences who provides support of both teaching of residents (didactic and clinical) as well as guidance for radiation research projects.

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. The resident and radiation oncology faculty member are present on site.
2. The caseload has been fairly consistent.
3. The radiation oncology faculty member is on site and involved in the treatment planning and oversight.
4. Rounds/journal club have continued. Some are held via zoom.
5. The non-radiotherapy clinical rotations are all on site and have been happening.
6. External rotation for IMRT training and onboard imaging has been delayed due to COVID concerns and travel.

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

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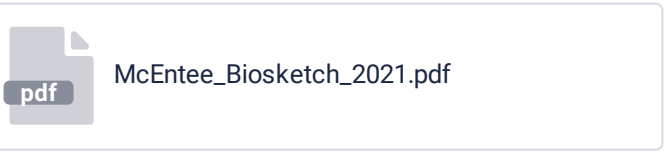
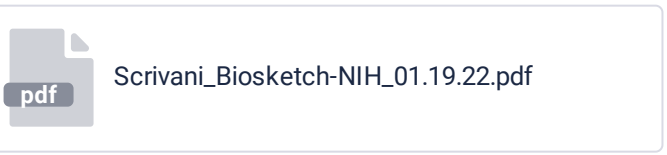
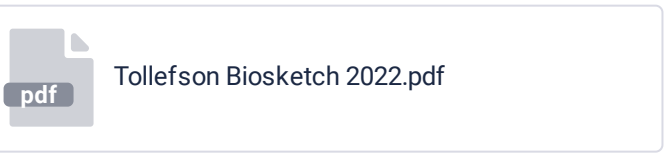
docx Johnson Biosketch 2 page .docx

docx Kelly Hume Biosketch 2022.docx

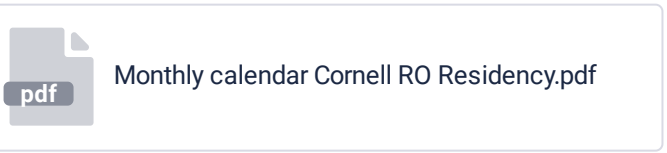
pdf LERER.RESUME2022_Short.pdf



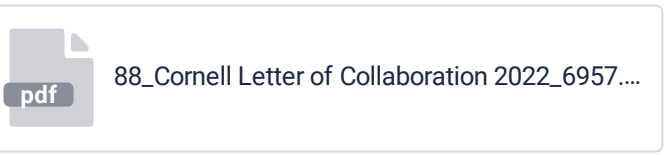




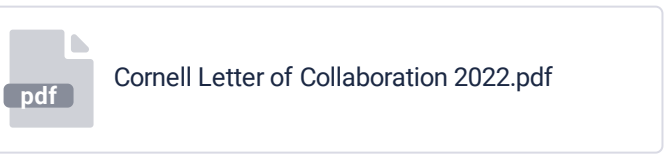
Resident Calendar



Letters of Agreement From Cooperating Institutions



Letter of Agreement from Medical Physics Support for Clinical Training



Residency Evaluation Forms

Syllabi for Coursework