UW Neurological Surgery
Required Clerkship Student Handbook

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For more information:
https://sites.uw.edu/nsclerk/

Introduction

Welcome to the UW Department of Neurological Surgery! We are thrilled to have you on our service and hope that you will find your clerkship to be intellectually challenging and rewarding.

Your mission for these four weeks is to learn basics of clinical neuroscience (such as the neurological exam and localization and basic neuroimaging) as you learn about the more common and/or emergent neurological diseases, including basics of surgical and non-surgical management. Regardless of your chosen specialty, these skills and insights will be invaluable for the rest of your career.

In addition to regular didactics, you will have a rich assortment of clinical experiences to learn from, and we encourage you to immerse yourself this month, seeing as many patients as you can, on the wards, in the OR, and in clinic. Due to the busy nature of the service and the high acuity of the patients, you may not have as much autonomy as in other clerkships. Nevertheless, you should seek as many opportunities as you can to examine patients, review their imaging, consider a differential diagnosis and workup, and propose management. As with medicine in general, the more actively you are able to apply yourself, the better you will learn.

Our faculty provide neurosurgical coverage at 5 major hospitals throughout Seattle and Spokane, which are part of the University of Washington and WWAMI system: Harborview Medical Center (HMC), University of Washington Medical Center (UWMC), Seattle Children's Hospital (SCH); Seattle Veterans Administration Medical Center (VAMC) and Providence Sacred Heart Medical Center (in Spokane). The information in this handbook pertains mainly to the Seattle sites.

Clerkship Leadership & Administration

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Rotations Locations

During the Neurological Surgery clerkship, students will have the opportunity to rotate at the following locations:

Harborview Medical Center (HMC)
325 Ninth Avenue
Seattle, WA 98104

Seattle Children's Hospital (SCH)
4800 Sand Point Way NE
Seattle, WA 98105

University of Washington Medical Center - Montlake (UWMC-ML)
1959 NE Pacific Street
Seattle, WA 98195

Veteran Administration Medical Center (VA)
1660 S. Columbian Way
Seattle, WA 98108

Service Structure

There are many members of the department, who work to provide excellence in neurosurgical patient care at UW.

Attending Neurosurgeons:
The attendings are board certified (or eligible) neurosurgeons who are ultimately responsible for the care and decision-making for our patients. They have clinics, round daily on their patients and are present for all key portions of surgical procedures. They rely on the residents to gather and analyze information, construct plans and ultimately implement their care decisions.

Residents:
The residents are the heart and soul of our neurosurgery service. Given the demands of our specialty, they can be among the busiest in the hospital and are responsible for knowing the details of the healthcare of all the patients for whom they are responsible. They are heavily supported by mid-level provider (MLP) staff (i.e. PA's and ARNP's, see below) who help with orders, paperwork and other routine aspects of patient care, allowing them to focus on more educational aspects of workload. The junior residents are primarily responsible for managing patients on the neurosurgery floors as well as for seeing new patient consults throughout the hospital and in the Emergency Department. Junior residents will typically communicate with their supervising senior or chief resident, refine plans of care, and present this information to the attendings. The senior and chief residents run morning rounds and are primarily in the operating room during the day, as are the junior-level operating residents.

Mid-Level Providers (ARNPs, RNs, PAs):
Physician assistants and nurse practitioners work closely with the residents and comprise the rest of the Neurosurgery inpatient and outpatient teams. They work most closely with the junior residents and help with an enormous amount of work. They are an invaluable resource for both the residents and students on service.

Rotation Goals and Objectives

Neurological Surgery Clerkship Goals:
The goal of the clerkship is to familiarize students with common neurological diseases and apply the key components of the Neurological Surgery approach to health care during your clerkship. These are basic skills shared by competent physicians regardless of specialty.

Neurological Surgery Clerkship Learning Objectives:
At the end of the Neurological Surgery Clerkship, each student should be able to:

1. Obtain an appropriate medical history for a patient with a neurosurgical concern
2. Perform an appropriate neurological exam for a patient with a neurosurgical concern
3. Construct a differential diagnosis and support the most likely diagnosis for a range of common and/or emergent neurosurgical concerns
4. Manage a range of neurosurgical diseases by selecting diagnostic tests and treatments, including identifying indications for surgery
5. Present organized and accurate oral case presentations
6. Demonstrates an expanding medical knowledge to propose diagnostic and treatment plans
7. Communicates clearly with patients
8. Applies feedback provided during the clerkship

Didactic Teaching Sessions

Students are required to attend regular didactic teaching sessions**. These sessions are NOT optional and are an integral part of final exam content.**

Teaching sessions are typically held on Thursday or Friday afternoon but dates and times may vary in order accommodate faculty speaker's availability. The program coordinator will send students calendar invites for each session that also includes the Zoom link for the session.

Teaching sessions via Zoom include:

- Pain
- Pediatrics
- SAH
- Brain Tumors
- TBI
- Spine

Recordings of previous sessions may also be found here:
https://sites.uw.edu/nsclerk/didactic-teaching-sessions/

Students are also required to attend in-person Neurology didactic teaching sessions every Thursday afternoon at UW Medical Center – Montlake with Dr. Eric Kraus (UW Neurology Clerkship Director). Attending these sessions via Zoom is not an option as these sessions are taught in-person only. **These sessions are NOT optional and are an integral part of final exam content.**

*If you anticipate that you will miss a didactic teaching session you are required to notify the Clerkship Coordinator **at least 24-48 hours BEFORE the session.**

Expectations

Attendance:
Students are expected to attend every day (Monday-Friday) of scheduled clerkships. Students are expected to adhere to the policy guidelines developed by the UW School of Medicine related to attendance, the approval process for excused absences, and consequences of unexcused absences:
https://education.uwmedicine.org/md-program-policies-handbook/attendance-absentee-policy/

*****If you anticipate that you will miss time during the rotation you are required to notify the Clerkship Coordinator BEFORE the start of the rotation.**

Professionalism:
The practice of medicine requires a specialized body of knowledge and skills, and physicians have a responsibility to their profession and a duty to their patients. Professionalism encompasses attitudes and behaviors, which are a substantial and integral part of the feedback and evaluation process. Below is a list of qualities defining professionalism and guiding principles of how these qualities translate into our expectations for all our clerkship students:

- Honesty and integrity
- Self-regulation and accountability for self and colleagues
- Adherence to high moral and ethical standards
- Compassion and empathy
- Cultural sensitivity
- Respect
- Subordination of one's own interests
- Altruism
- Receiving and responding to criticism
- Show professional competence
- Teamwork
- Response to societal needs

Rounds:
It is expected all students are on time to rounds every day. Attire is expected to be professional, and you should only wear scrubs on days when you will be in the OR. It is expected and, when possible, it is appreciated for students to help facilitate rounds by helping to collect and communicate information and assisting with patient care in an effort to make rounds run smoothly; this also helps to familiarize students with the patients on service.

OR:
Residents may assign cases to clerkship students the evening before the cases. Students must be on time to the OR (7:30am for first start cases every day). Whenever possible, it is highly suggested students read and prepare for their case the evening before, including the patient's chart and subject material.

After arriving to the OR, clerkship students are expected to introduce themselves to the attendings, anesthesiologists, circulating nurses, etc, in order for the surgical team to know who is in the room. Doing this allows the circulating nurses to note in the OR records who was in the room during a case as well as know who was in the room in case something happens (such as a viral infection exposure) of which everyone who was in the room can be notified.

Clinics and Conferences:
When not in the OR, students are expected to take part in clinics, academic didactic teaching sessions, conferences and assist junior residents on the floor with seeing consults and procedures.

- **On days that include didactic teaching sessions and/or conferences, teaching sessions and conferences take precedence and STUDENT ATTENDANCE IS MANDATORY.**
- Dates and times of didactic teaching sessions vary by rotation and are dependent upon faculty availability

Neurocritical Care Rounds:
While at Harborview, you may have the opportunity to round with one of the two neurocritical care teams. These teams are each made up of an attending, fellow, residents from various training programs, nurse practitioners, physician assistants, pharmacists, nutritionists, respiratory therapists (also known as Respiratory Care Practitioners or RCP's). Often the most crucial member of the team is the bedside RN, who is an essential member of rounds.

The neurocritical care service (NCCS) rounds can be quite large, especially when the neurocritical care teams are joined by Neurology teams (which also can be quite large). Your mission is to see and learn as much as you can while doing what you can to keep things moving. After the team rounds on a patient, they will fill out a Plan of the Day and ICU checklist form. You should volunteer to fill out that form if you feel comfortable doing so.

Occasionally, students have been able to carry and present patients to the NCCS team. This is not expected, but it is a great opportunity to learn. Besides rounds, there are many didactics and conferences (some offering lunch).

Taking Call:
While taking overnight call is not mandatory, students interested in taking call are welcome to and can notify the junior resident to augment their schedules so as to adhere to ACGME and duty hour guidelines for medical students.

Grading Policies

A student's grade is determined by clinical performance and score on the final exam.

Clinical Grade

The clinical grade constitutes 50% of the Overall Grade. The clinical grade is determined as the average score on eight clinical items from students' evaluation(s) by faculty and (in Seattle) residents. When there are multiple evaluators, evaluations by faculty or residents that have worked with a student intensively are weighted twice as much as evaluations by those who only briefly or superficially worked with a student. Mid-clerkship feedback will count toward your final clinical grade unless the same person submits both mid clerkship and end of clerkship feedback; in that case, only the end of clerkship feedback will count toward the clinical grade.

The clinical grade is based upon the average score for each of the 8 assessed clinical items (scale = 1 to 4 points). Below is how the clinical grades are broken down, as well as what each individual score is noted as in eValue:

	Clinical Average	Individual Score in Evalue
Honors	95%-100%	"4"
High Pass	75%-94.9%	"3"
Pass	50%-74.9%	"2"
Fail	Less than 50%	"1"

Final Exam Grade

The final exam constitutes 50% of the Overall Grade. Must get 68% or higher to pass

Overall Grade

The overall grade is weighted 50% Clinical Grade and 50% Exam Score

EXAMPLE:

Clinical Scores	Student #1	Student #2	Student #3	Student #4
Clinical Average	3.96	3.27	2.99	3.88
Clinical Percentage	99.00	81.75	74.75	97.00
Clinical Grade (CG)	**H**	**HP**	**P**	**H**
Exam Score (EG)	77	67	89	91
FG=(0.50xEG)+(0.50xCG)	88.00	74.38	81.88	94.00
Final Grade	**H**	**P**	**HP**	**H**

Final Grade	Final Percent	Individual Score in Evalue
Honors	87.5%-100%	"4"
High	75%-87.49%	"3"
Pass	59%-74.99%	"2"
Fail	Less than 59%	"1"

A student who fails clinically will fail the clerkship regardless of final exam score. A student who fails the final exam may still pass the clerkship if they have a clinical score of High Pass or Honors. A student who passes the clerkship and fails the final exam will have to get a passing score on the exam prior to graduating, as per UWSOM policy.

Clerkship Exam Fail FAQ page here: https://education.uwmedicine.org/curriculum/exams/clerkship-exam-fail-faq/

Exam Postponement policy page here: https://education.uwmedicine.org/md-program-policies-handbook/exam-postponement/

***Note**: under circumstances mentioned above, we factor in mid-clerkship feedback evaluations and weigh some evaluations more than others. As a consequence, you may not be able to calculate your clinical grade or final grade based on the scores available to you in E-Value. If you have any questions about how your grade was calculated, please contact us**.*

Attendance:
Attendance is required, and if a student misses more than two days of the clerkship due to illness, travel, interviews, they will be expected to make up the additional time, such as through coming in on a weekend or holiday. Please let the clerkship administrator AND directors know at least 24 hours ahead of time if you anticipate needing to do this.

Materials
We recommend having at least a penlight and reflex hammer for neurological exams. Required and suggested readings are available on the course clerkship website.

Final Exam
Scheduled the last Friday of clerkship. This is not a shelf exam, so **students will be required to take their exams in-person**. Students will be required to bring exam compatible laptops to the exam, as the test will be completed online, with a proctor present.

The exam consists of 100 multiple choice questions (retired NMBE questions on Neuroscience content). A very large portion of the questions pertain to neurological disease, and so it is strongly recommended that students use the weekly study guides and associated videos to help as they prepare for the final exam.

NEUR S 655/665 – Clinical Grading Criteria:

We will ask the faculty (and in Seattle) residents with whom you work to evaluate your abilities in these 8 items. For each item, grading criteria are detailed below.

Clinical Item	Fail (<2)	Pass (2)	High Pass (3)	Honors (4)
Obtain an appropriate medical history for a patient with a neurosurgical concern	Often misses key information	Often gathers a complete and accurate medical history	Consistently gathers a complete and accurate history	Consistently gathers a complete, accurate, and appropriately focused history
Perform an appropriate neurological exam for a patient with a neurosurgical concern	Often misses important findings or uses faulty technique	Often discovers physical findings and shows appropriate physical examination technique	Consistently discovers relevant physical findings while examining patients with appropriate technique and thoroughness	Consistently discovers subtle physical findings while examining patients with appropriate technique and thoroughness
Construct a differential diagnosis and support the most likely diagnosis for a range of common and/or emergent neurosurgical conditions	Unable to contribute ideas to diagnostic plan	Able to contribute ideas to a diagnostic plan	Consistently develops a prioritized diagnostic plan that reflects appropriate clinical reasoning	Excels in developing a prioritized diagnostic plan that reflects highly sophisticated clinical reasoning
Manage a range of neurosurgical diseases by selecting diagnostic tests and treatments, including identifying indications for surgery	Contributes little to diagnostic and treatment plan	Often contributes to the diagnostic and treatment plans	Consistently contributes to the diagnostic and treatment plans	Consistently and independently generates appropriate diagnostic and treatment plans
Demonstrate an expanding medical knowledge to propose diagnostic and treatment plans	Proposed plans exhibit deficits in knowledge base	Proposed plans often exhibit relevant knowledge for commonly encountered disease processes	Proposed plans consistently exhibit relevant knowledge for commonly encountered disease processes	Proposed plans consistently exhibit relevant knowledge for complex clinical situations

Present organized and accurate oral case presentations	Oral presentations often disorganized and inaccurate	Oral presentations are often organized and accurate	Oral presentations are consistently organized and accurate	Oral presentations are consistently organized, accurate, and concise
Communicate clearly with patients	Misses patients' concerns or uses confusing language with patients	Often identifies most of patients' concerns and uses clear language with patients	Consistently identifies and addresses patients' concerns and uses clear language with patients	Consistently identifies and addresses patients' concerns and checks for patients' understanding
Apply feedback provided during the clerkship	Fails to identify gaps in knowledge, skills, and attitude	Able to identify gaps in knowledge, skills, and attitude	Identifies gaps in knowledge, skills, and attitude and addresses them with guidance	Identifies gaps in knowledge, skills, and attitudes, and can successfully address them independently

General Schedule

All students will spend 2 weeks at Harborview Medical Center as part of their clerkship rotation.

All students will also spend 2 weeks at either Seattle Children's Hospital or the University of Washington Medical Center or the VA. This is so that all students have the opportunity to experience what it's like rotate with the Neurological Surgery service at a Level 1 Trauma hospital, as well as have the opportunity to experience what it's like to rotate with the Neurological Surgery service at a more specific-care focused site.
***Where each student rotates will be at the discretion of the Clerkship Director.**

Included below are details about each rotation site students may rotate at and some of the clinical opportunities we offer students as well of some of the activities all students are expected to attend regardless of their site, in person or via Zoom. Activities that ALL Seattle students are required to attend are similarly coded in black text. Besides these required activities, students are expected to search out and engage in further clinical experiences from the partial list of activities mentioned below.

There is bound to be some waiting and down time during while students are in the hospitals. We suggest students take this time to work on the study guides and other assignments, reading, and prepping for cases.

When students can, we also suggest they try to prepare for cases and clinic by looking through the relevant chapters of one of the reference texts. Read up on the anatomy, disease process, surgical details, differential diagnosis, potential complications relevant to the case, etc. Students will get more out of the experience if they do.

Current schedule of required activities:

** conferences occurring via Zoom, you will be given link either by the clerkship coordinator or by the rotation site educator(s)

SCHEDULE OF REQUIRED ACTIVITIES

WEEKLY (ALL STUDENTS):
Wednesday
7:00-8:00am – Grand Rounds via Zoom (Zoom info will be sent via calendar invite)
8:00-9:00am – Resident Education Hour via Zoom (Zoom info will be sent via calendar invite)
9:30-11:00am - UWMC Tumor Board conference (OPTIONAL)
1:00-2:30pm– SCH Tumor Board via Zoom (via Zoom) (OPTIONAL for students not rotating at SCH)

Thursday (*weeks 1-3 only)
7:00am-12:30pm - Observe tumor surgeries at UWMC (OPTIONAL)
1:00-4:00pm - Neurology teaching sessions with Dr. Eric Kraus (Neurology Clerkship Director). Location: UWMC (*in-person only) (Dr. Kraus will email teaching session location info to students)

Thursday (*week 4 only)
7:00am-5:00pm – Observe tumor surgeries at UWMC (OPTIONAL)

FIRST DAY OF CLERKSHIP:
7:00-7:15am – General orientation with Clerkship Coordinator via Zoom (Zoom info will be sent via calendar invite)
7:15-8:00am – Clinical orientation with Clerkship Director(s) via Zoom (Zoom info will be sent via calendar invite)

LAST DAY OF CLERKSHIP:
8:30am – Final exam (IN-PERSON)

ROTATION SCHEDULE BY SITE:

Harborview Medical Center:

Students will need to contact the appropriate intern/junior resident(s) of each site prior to starting your weekly rotation. Students will be provided contact information by the Clerkship Coordinator 1 week prior to starting at HMC. The intern/junior resident(s) will help you coordinate a person of contact for you to meet up with each morning, as well be able to go over your daily schedule and fill you in on what to expect each day.

Monday
6:00-7:30am – Rounds (Neuroradiology Reading Room: 1 West Hospital Sky Bridge) (*not including first day of clerkship)
7:30-8:00am – Huddle (2WH81: Neurocritical Care conference room) (*not including first day of clerkship)
8:00am-4:00pm – OR (check EPIC for scheduled procedures)
1:00-2:00pm - Neurocritical Care didactics (2WH81)
2:00-5:00pm – Clinic (NJB, 5th floor)

Tuesday
6:00-7:30am – Rounds (Neuroradiology Reading Room: 1 West Hospital Sky Bridge)
7:30-8:00am – Huddle (2WH81: Neurocritical Care conference room)
8:00am-4:00pm – OR (check EPIC for scheduled procedures)
1:00-2:00pm – Neurocritical Care didactics (2WH81)

Wednesday
9:00am-4:00pm - Residents Clinic (with Dr. Steege/Dr. Wiseman) (NJB, 5th floor)
4:15-5:00pm - Weekly pre-op case conference via Zoom (Zoom info will be sent via calendar invite)

Thursday
6:00-7:30am – Rounds (Neuroradiology Reading Room: 1 West Hospital Sky Bridge)
7:30-8:00am – Huddle (2WH81: Neurocritical Care conference room)
8:00am-4:00pm - OR

Friday (excluding last Friday of clerkship)
6:00-7:30am – Rounds (Neuroradiology Reading Room: 1 West Hospital Sky Bridge)
7:30-8:00am – Huddle (2WH81: Neurocritical Care conference room)
8:00am-4:00pm - Dr. Bonow Clinic (Neurocritical Care, Neurotrauma) (NJB, 5th floor: clinic workroom at the north end of the building)
1:00-2:00pm – Neurocritical Care didactics (2WH81)

Seattle Children's Hospital:

Students who are assigned to spend time at SCH will need to complete their in-person onboarding and badging prior to being able to start their rotation at SCH. The SCH credentialing office will reach to students ahead of time to schedule a time for each student to complete their in-person onboarding and badging.

The SCH site preceptor, Dr. Hannah Goldstein, will reach out to the students prior to when they are to start at SCH with information of where and who to connect with once they have completed in-person onboarding and badging. The site preceptor will also provide a brief rundown of what each student should expect while rotating at SCH.

Monday
6:30-7:45am – Rounds (except for first day of clerkship) (meet in resident office)
7:45-8:00am – Weekly case conference via Zoom (Zoom info will be provided by the site preceptor or current SCH resident)
8:00am-5:00pm – OR
12:00-1:00pm – Epilepsy conference via Zoom (Zoom info will be provided by the site preceptor or current SCH resident)

Tuesday
6:30-7:30am – Rounds (meet in resident office)
7:30am-5:00pm – OR

Wednesday
6:30-7:00am – Rounds (if no Grand Rounds) (meet in resident office)
8:30-1:00pm (after REH) - OR
1:00-2:30pm– Tumor Board via Zoom (Zoom info will be provided by the site preceptor or current SCH resident)

Thursday
6:30-7:30am – Rounds (meet in resident office)
7:30am-12:00pm – OR (except last week of clerkship: OR to 5pm during last week)

Friday (excluding last Friday of clerkship)
6:30-7:30am – Rounds (meet in resident office)
7:30am-5:00pm – OR

University of Washington Medical Center - Montlake:

Students who are assigned to spend time at UWMC should meet the R1 on the first day of the rotation to get oriented to the team and workflow (the Clerkship Coordinator will provide the R1's contact information to the student(s) 1 week prior to when the student(s) is to rotate at UWMC).

Students should then ask the two senior residents for which cases they should observe (ideally, students will get assigned an attending/OR the day prior, and they can read up on the cases).

Students should aim to go to clinic at least 1-2 times a week to practice the cranial and spinal exams.

Students should try to get a wide exposure to the field by observing each attending at least once over the 2 weeks.

Students should observe each of the following faculty at least 1x during their time at UWMC:
Dr. Ferreira, Dr. Ruzevick, Emerson - skull base
Dr. Ko, Dr. Grannan - functional, cranial, peripheral nerve
Dr. Amin, Dr. Karandikar - spine

Monday
6:00am Rounds, then OR (Karandikar, Ferreira) / clinic (Ruzevick, Ko)

Tuesday
6:00am Rounds, then OR (Amin) / clinic (Ferreira)
7:00am UWMC Spine teaching conference (via Zoom)
4:00-5:00pm UWMC Resident teaching conference (via Zoom)
5:00pm UWMC Pituitary and Skull Base conference (1st and 3rd Tuesday of the month)

Wednesday
6:00am UWMC Rounds, then OR (Ko/Grannan, Ruzevick) / clinic (Amin/Emerson)

Thursday
6:00am UWMC Rounds, then OR (Ferreira, Ko, Emerson) / clinic (Karandikar)

Friday (excluding last Friday of clerkship)
6:00am UWMC Rounds, then OR (Emerson, Ruzevick) / clinic

Veteran's Administration Medical Center:

Students who are assigned to spend time at the VA will need to connect with Dr. Ali Ravanpay prior to starting at the VA. The Clerkship Coordinator will provide students with the site preceptor's, Dr. Ravanpay, contact information at least 1 week prior to starting at the VA. Students who get assigned to rotate at the VA will have a VA-specific orientation with Dr. Ravanpay on the 1st day of the clerkship, during the Zoom orientation.

*Clinic is located on the 4th floor by the D elevators

Monday
8:00am – Consults

Tuesday
Add-on cases
8:00am-4:00pm – Dr. Ravanpay clinic (Building 100, 4th floor)

Wednesday
10:00-11:00am - Neuroradiology/case conference (Neuroradiology reading room)
11:00am-12:00pm - Journal club (NSGY coffee room; bldg. 1, 5th floor)

Thursday
8:00am-4:00pm – OR
8:00am-12:00pm – Dr. Gelfenbeyn clinic (when no OR cases) (Building 100, 4th floor)

Friday (excluding last Friday of clerkship)
8:00am – Cases PRN
8:00am-4:00pm – Dr. Gelfenbeyn clinic (Building 100, 4th floor)

HMC Faculty Clinic and OR Schedules

Clinic (NJB 5th Floor)	Operating Room (Since faculty's OR schedules regularly change – ie. faculty swap cases, faculty are away, cases get cancelled, etc - please check OR whiteboards for which Neurosurgery faculty have cases on a given day)
Monday: • Dr. Richard Ellenbogen (General, Trauma, Congenital, Brain and Spinal Cord Tumors (1st and 3rd Monday of each month) • Dr. Fangyi Zhang (Spine & Spinal Cord Surgery)	Monday: • Dr. Robert Bonow (Neurocritical Care, Neurotrauma) (every other week) • Dr. Stephanie Chen (Brain Tumors, Cerebrovascular Neurosurgery, Endoscopic Brain Surgery, Skull Base Tumor Surgery, Stroke) (2nd & 4th Monday of the month) • Dr. Randall Chesnut (Neurosurgery, Spine & Spinal Cord Surgery) (CURRENTLY ON LEAVE) • Dr. Christoph Hofstetter (Spine & Spinal Cord Surgery) • Dr. Imad Khan (General Neurosurgery; Spine & Spinal Cord Surgery) • Dr. Michael Levitt (Cerebrovascular; Endovascular Surgery) (1st, 3rd & 5th Monday of the month) • Dr. Laligam Sekhar (Cerebrovascular Microsurgery and Endovascular Surgery, Skull Base; Tumor Surgery)
Tuesday: • Dr. Stephanie Chen (Brain Tumors, Cerebrovascular Neurosurgery, Endoscopic Brain Surgery, Skull Base Tumor Surgery, Stroke) • Dr. Christoph Hofstetter (Spine & Spinal Cord Surgery)	Tuesday: • Dr. Louis Kim (Cerebrovascular and Neuroendovascular Surgery; Skull Base Surgery) • Dr. Laligam Sekhar (Cerebrovascular Microsurgery and Endovascular Surgery; Skull Base; Tumor Surgery) • Dr. Fangyi Zhang (Spine & Spinal Cord Surgery)
Wednesday: • Dr. Robert Buckley (Neurotrauma) • Dr. Michael Levitt (Cerebrovascular; Endovascular Surgery) • Dr. Laligam Sekhar (Cerebrovascular Microsurgery and Endovascular Surgery; Skull Base; Tumor Surgery) • Dr. Fangyi Zhang (Spine & Spinal Cord Surgery) (*sometimes ½ days on Wednesdays)	Wednesday: • Dr. Robert Bonow (Neurocritical Care, Neurotrauma) (2x a month) • Dr. Louis Kim (Cerebrovascular and Neuroendovascular Surgery; Skull Base Surgery)
Thursday: • Dr. Louis Kim (Cerebrovascular and Neuroendovascular Surgery; Skull Base Surgery)	Thursday: • Dr. Robert Bonow (Neurocritical Care, Neurotrauma) (2x a month) • Dr. Randall Chesnut (Neurosurgery, Spine & Spinal Cord Surgery) (CURRENTLY ON LEAVE) • Dr. Richard Ellenbogen (General, Trauma, Congenital, Brain and Spinal Cord Tumors) • Dr. Christoph Hofstetter (Spine & Spinal Cord Surgery) • Dr. Michael Levitt (Cerebrovascular; Endovascular Surgery) • Dr. Laligam Sekhar (Cerebrovascular Microsurgery and Endovascular Surgery; Skull Base; Tumor Surgery) • Dr. Fangyi Zhang (Spine & Spinal Cord Surgery)

Friday: • Dr. Robert Bonow (Neurocritical Care, Neurotrauma) • Dr. Randall Chesnut (Neurosurgery, Spine & Spinal Cord Surgery) (CURRENTLY ON LEAVE) • Dr. Imad Khan (General Neurosurgery; Spine & Spinal Cord Surgery)	Friday: • Dr. Stephanie Chen (Brain Tumors, Cerebrovascular Neurosurgery, Endoscopic Brain Surgery, Skull Base Tumor Surgery, Stroke) • Dr. Christoph Hofstetter (Spine & Spinal Cord Surgery) (*sometimes) • Dr. Laligam Sekhar (Cerebrovascular Microsurgery and Endovascular Surgery; Skull Base; Tumor Surgery) • Dr. Fangyi Zhang (Spine & Spinal Cord Surgery)

SCH Faculty Clinic and OR Schedules

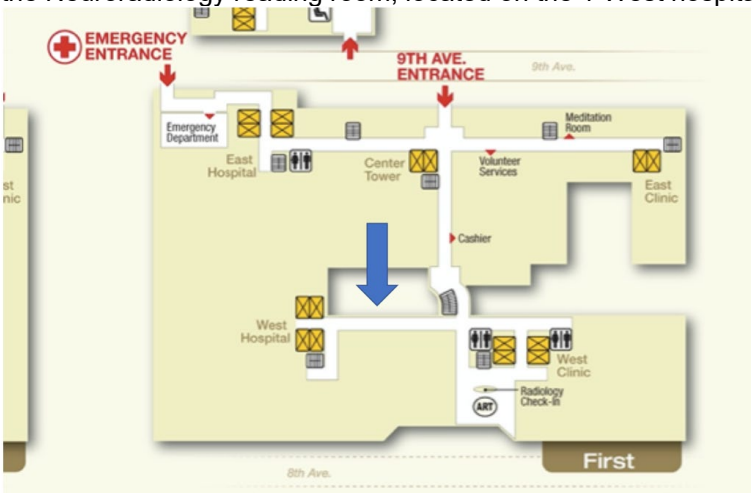
Clinic	Operating Room (Since faculty's OR schedules regularly change – ie. faculty swap cases, faculty are away, cases get cancelled, etc - please check OR whiteboards for which Neurosurgery faculty have cases on a given day)
Monday: • Dr. Richard Ellenbogen (AM; 2nd & 4th week of month) (Brain Tumors, Concussion, Neurosurgery, Pediatric Neurosurgery, Skull Base Tumor Surgery)	Monday: • Dr. Samuel Browd • Dr. Hannah Goldstein (alternating 2nd block) • Dr. Jason Hauptman (Epilepsy Surgery) (alternating 2nd block)
Tuesday: • Dr. Hannah Goldstein (AM) • Dr. Amy Lee (PM)	Tuesday: • Dr. Richard Ellenbogen (Brain Tumors, Concussion, Neurosurgery, Pediatric Neurosurgery, Skull Base Tumor Surgery)
Wednesday: • Dr. Jason Hauptman (AM) (Epilepsy Surgery) • Current SCH fellow (PM)	Wednesday: • Dr. Hannah Goldstein (2x a month) • Dr. Jeff Ojemann (Epilepsy Surgery, Neurosurgery, Pediatric Neurosurgery, Brain/Computer Interfaces, Epilepsy Research) (AM only)
Thursday: • Dr. Samuel Browd • Dr. Jason Hauptman (Epilepsy Surgery)	Thursday: • Dr. Hannah Goldstein (2x a month) • Dr. Amy Lee (AM only)
Friday: • Dr. Hannah Goldstein • Dr. Jeff Ojemann (AM) (Epilepsy Surgery, Neurosurgery, Pediatric Neurosurgery, Brain/Computer Interfaces, Epilepsy Research) (2x a month)	Friday: • Dr. Jason Hauptman (Epilepsy Surgery) • Dr. Amy Lee (sometimes in 2nd block)

UWMC-ML Faculty Clinic and OR Schedules

Clinic (NJB 5th Floor)	Operating Room (Since faculty's OR schedules regularly change – ie. faculty swap cases, faculty are away, cases get cancelled, etc - please check OR whiteboards for which Neurosurgery faculty have cases on a given day)
Monday: • Dr. Richard Ellenbogen (General, Trauma, Congenital, Brain and Spinal Cord Tumors (2nd and 4th Monday of each month) • Dr. Ben Grannan (Brain Tumor Surgery, Deep Brain Stimulation, Epilepsy Surgery, General Neurosurgery, Movement Disorders Surgery, Peripheral Nerve Surgery, Surgical Pain Treatment) (1st & 3rd Monday of the month) • Dr. Andrew Ko (Brain Tumors, Epilepsy Surgery, Movement Disorders / Spasticity, Neurosurgery) • Dr. Jacob Ruzevick (Endoscopic and minimally invasive brain tumor surgery, Endoscopic pituitary surgery, Pediatric skull base surgery, Skull base surgery; Surgical Neuro-oncology)	Monday: • Dr. Sam Emerson (Brain Tumor Surgery, Neurosurgery, Skull Base Tumor Surgery) (2nd and 4th Monday of the month) • Dr. Manuel Ferreira (Brain Tumors, Neurosurgery, Skull Base Tumor Surgery) (Every other Monday) • Dr. Mahesh Karandikar (Spine & Spinal Cord Surgery)
Tuesday: • Dr. Manuel Ferreira (Brain Tumors, Neurosurgery, Skull Base Tumor Surgery) • Dr. Mahesh Karandikar (Spine & Spinal Cord Surgery)	Tuesday: • Dr. Anubhav Amin (Neurosurgery, Spine & Spinal Cord Surgery)
Wednesday: • Dr. Anubhav Amin (Neurosurgery, Spine & Spinal Cord Surgery) • Dr. Sam Emerson (Brain Tumor Surgery, Neurosurgery, Skull Base Tumor Surgery)	Wednesday: • Dr. Ben Grannan (Brain Tumor Surgery, Deep Brain Stimulation, Epilepsy Surgery, General Neurosurgery, Movement Disorders Surgery, Peripheral Nerve Surgery, Surgical Pain Treatment) • Dr. Andrew Ko (Brain Tumors, Epilepsy Surgery, Movement Disorders / Spasticity, Neurosurgery) • Dr. Jacob Ruzevick (Endoscopic and minimally invasive brain tumor surgery, Endoscopic pituitary surgery, Pediatric skull base surgery, Skull base surgery; Surgical Neuro-oncology)
Thursday: • Dr. Mahesh Karandikar (Spine & Spinal Cord Surgery)	Thursday: • Dr. Sam Emerson (Brain Tumor Surgery, Neurosurgery, Skull Base Tumor Surgery) (1st and 3rd Thursday of the month) • Dr. Manuel Ferreira (Brain Tumors, Neurosurgery, Skull Base Tumor Surgery) • Dr. Ben Grannan (Brain Tumor Surgery, Deep Brain Stimulation, Epilepsy Surgery, General Neurosurgery, Movement Disorders Surgery, Peripheral Nerve Surgery, Surgical Pain Treatment) • Dr. Andrew Ko (Brain Tumors, Epilepsy Surgery, Movement Disorders / Spasticity, Neurosurgery)
Friday: • Dr. Ben Grannan (Brain Tumor Surgery, Deep Brain Stimulation, Epilepsy Surgery, General Neurosurgery, Movement Disorders Surgery, Peripheral Nerve Surgery, Surgical Pain Treatment) (Every 1st and 3rd Friday of the month) • Dr. Andrew Ko (Brain Tumors, Epilepsy Surgery, Movement Disorders / Spasticity, Neurosurgery)	Friday: • Dr. Sam Emerson (Brain Tumor Surgery, Neurosurgery, Skull Base Tumor Surgery) • Dr. Jacob Ruzevick (Endoscopic and minimally invasive brain tumor surgery, Endoscopic pituitary surgery, Pediatric skull base surgery, Skull base surgery; Surgical Neuro-oncology)

When students are at HMC:

- Check in with the residents the morning of Day 1.
- 6am rounds occur in the Neuroradiology reading room, located on the 1 West hospital sky bridge.



- Students should introduce themselves to Dr. Wiseman or Dr. Steege at the 7:30 am huddle (in 2 West Hospital room 81, aka the Neurocritical Care conference room) to see when students may round with them. Students need to make sure Dr. Steege or Dr. Wiseman know they are interested in observing any family conferences and brain death exams that come up.
- The neurocritical care teams are represented at the 7:30 am huddle (again, located in 2W-81). If you are interested in rounding with the neurocritical care team, please ask either then or the day prior if you may round with them. Rounds begin at 8:05 in the team room just adjacent to the conference room. Typically, the team has joint rounds with Neurology at that time.
- Besides the clinics and cases below, students may also have the opportunity to observe in the Angio suite, gamma knife, Neurocritical care, and stroke codes
- To observe Stroke Codes when at HMC: Call the paging operator (206 744-0147) to request your cell phone be alerted when there is a Code (call them at end of the day to cancel the alerts). Usually, these take place in the ER. Go down to the location of the Code. Try to observe while staying out of the way. Whenever possible, students should introduce themselves to the Neurology resident or fellow. If the patient goes to the Angio Suite for mechanical thrombectomy, students may be able to accompany them.

Conferences & Rounds

Students are expected to attend the following conferences while they are scheduled at the specific location(s):

All students:

Wednesday
7:00-8:00am – Grand Rounds via Zoom (Zoom info will be sent via calendar invite)
8:00-9:00am – Resident Education Hour via Zoom (Zoom info will be sent via calendar invite)
9:30-11:00am – UWMC Tumor Board conference (OPTIONAL)
1:00-2:30pm– SCH Tumor Board via Zoom (via Zoom) (OPTIONAL for students not rotating at SCH)

Thursday (*weeks 1-3 only)
7:00am-12:30pm – Observe tumor surgeries at UWMC (OPTIONAL)
1:00-4:00pm – Neurology teaching sessions with Dr. Eric Kraus (Neurology Clerkship Director). Location: UWMC (*in-person only) (Dr. Kraus will email teaching session location info to students)

Thursday (*week 4 only)
7:00am-5:00pm – Observe tumor surgeries at UWMC (OPTIONAL)

HMC-based:
Monday- Friday at 6am – Rounds: 1 West Neuroradiology Reading Room
Monday, Tuesday, Thursday, Friday at 7:30am – Huddle: 2 West Neurocritical Care conference room (room #2W81)
Wednesday at 4:15pm – Case Conference: 1 East Radiology Library (Nelson Library/Zoom)

Wednesday at 9am – Residents' Clinic: NJB, 5th Floor
Monday, Tuesday, Thursday, Friday at 1pm – Neurocritical Care Didactics: 2 West Neurocritical Care conference room (room #2W81)

SCH-based:
Monday-Friday at 6:30am – Rounds (resident office)
Mondays at 7:45-8:45am – Weekly case conference (via Zoom)
Mondays at 12:00pm – Epilepsy conference (via Zoom)
Wednesdays at 1-2:30pm – Tumor Board (via Zoom)

UWMC-based:
Tuesdays at 7:00am – Spine Conference (via Zoom) presented by Dr. Christoph Hofstetter
Tuesdays at 4:00pm – Resident Teaching Conference (via Zoom)
1st & 3rd Tuesday of the month at 5:00pm – Pituitary and Skull Base Conference (via Zoom) (presented by Dr. Thomas McDaniel)

VAMC-based:
2nd & 4th Mondays of the month at 10:00am – Spinal Cord Injury Unit joint meeting (via Zoom)
Wednesdays at 10:00am – Neuroradiology Conference (Neuroradiology reading room/Zoom)
Wednesdays at 11:00am – Resident conference/Journal Club (NSGY coffee room; building 1, 5th floor)

Required Clinical Encounters & Assignments

Required Clinical Encounters:
Students are required to log clinical encounters into E-Value at the end of each week. Students are required to participate in the care of one of more patients with the diagnoses below.

1. Traumatic Brain Injury
2. Spinal cord injury or spinal disease
3. Vascular abnormality such as cerebral aneurysm, arteriovenous malformation, cavernous malformation
4. Brain tumor
5. Raised intracranial pressure
6. Hydrocephalus

Participation consists of: obtaining history and physical examination and/or rounding on the patient with and discussing the patient's exam, imaging, or care with other team members.

If a student is unable to have that level of involvement for a patient with one or more of the following diagnoses, the Clerkship Director will provide an alternative assignment to fulfill this requirement.

Assignments:

1. Mid-clerkship evaluation form filled out by a physician with whom you've been working. This is due by beginning of third week, and if you are having trouble getting this completed, please let us know as soon as possible.
2. Consult courtesy exercise
3. Delivery of bad or serious news exercise
4. CDC Concussion Online Training Module
5. Verbal presentation on a relevant neuroscience topic. In Seattle this will be completed during your time at either the VA, SCH, UWMC or HMC and details will be provided by the Clerkship Director. In Spokane, Dr. Carlson will provide details and expectations. Site preceptors may assign presentation topics to students.
6. Mini CEX – perform cranial nerve or motor portion of neurological exam under observation of an attending or resident
7. Four weekly study guides are provided for you to work through over the course of the month to help as you prepare for your final exam. These do not cover everything that is included in your final, but they go over many diseases and concepts that will be helpful to study as you prepare for the final. A pre-recorded video for each of the four study guides will further explain some of the material. You do not need to turn in the study guides nor submit answers about the videos.

Submitting assignments:
Students are to submit assignments directly to the Clerkship Coordinator at **nsclerk@uw.edu**

General Need to Know & Answers to Common Questions

Where do I get an ID badge?

HMC:

- The Clerkship Coordinator will arrange for ID badges for students rotating at HMC.
- Students scheduled to rotate at HMC who do **NOT** have an HMC badge will be required to obtain an ID badge prior to rotating at HMC (see below for Badging Office location and hours to pick up your badge).
- Students who already have HMC ID badges: HMC Access Control will add space specific information onto your badge. You will not need to obtain a new HMC ID badge.
- Students are required to have their ID badges showing at all times while they are at HMC

UWMC:

- The Clerkship Coordinator will arrange for ID badges for students rotating at UWMC.
- Students scheduled to rotate at UWMC will have designated space access added to their Husky Cards

SCH:

- Sara Fear will contact students scheduled to rotate at SCH for training at Seattle Children's Hospital and will provide instructions regarding parking and getting badges on their first day. Please look for these instructions. This will take place on your first day of the week students rotate at SCH before the introductory orientation.

VA:

- The VA credentialing coordinator will contact students scheduled to rotate at the VA and will work with each student to complete required credentialing documentation, online training, orientation and badging requirements.
- For badging entry issues students can go to security office at main entrance (office past the Starbucks with large reflection mirror walls)

Harborview Medical Center:
Badging Office: 1CT-153 (nearest entrance: 9th Avenue)
Monday-Friday: 7:00am-3:30pm
* Closed every day: 12:00pm-1:00pm
* Closed on weekends
(206) 744-3386
***** If you have access issues with your badge, please call HMC Access Control:
Monday-Friday: 7:00am-2:30pm
(206) 744-6825

UW Medical Center:
UWMC Public Safety Office
1959 NE Pacific Street: Room BB120
(206) 598-4909
* If you have access issues with badge access, please call the UWMC Public Safety Office

Where can I park?

Harborview Medical Center:

- P1 / View Park Garage located on the west side of Harborview between Alder and Jefferson streets. To enter the garage, turn right at the corner of Ninth and Alder and proceed to the parking garage, which is located behind the medical center.
- P2 / Ninth and Jefferson Building Garage entrance is located on Terry Avenue between James and Jefferson Streets.
- **Driving directions**

Seattle Children' Hospital:

- On the day of orientation (or the day you sign-in) only, you may park on the SCH Campus in Lot 1 or 2. After the day you sign-in, you will park off-site. Medical students park for free at the **Magnuson Parking Lot** and use the **SCH shuttle** for transportation between the parking lot and the hospital. The SCH shuttle runs from Magnuson every 4-5 minutes.

- **Driving directions:** From Sand Point Way, NE, turn into Magnuson Park at the NE 65th St entrance. Park in the lot located across from the Western Fisheries Research Center. Here's a map.
- If your schedule requires you to be at the hospital before 5:22AM or on a weekend day, you may park on campus in Lot 3 or Lot 4. You will need your badge to get in and out of these lots. The first shuttle leaves Magnuson at 5:14AM on weekdays.
- If your schedule requires you to be at the hospital after 9:05PM, you may park on campus in Lot 3 or Lot 4 after 1:30PM. You will need to move your car from Magnuson to SCH Lot 3 or Lot 4.
- **DO NOT** park in the neighborhoods around SCH. Failure to comply with the parking rules will get you ticketed or towed.
- NOTICE: You are required to turn in your SCH badge at the end of your rotation but will still be allowed to ride the shuttle to get to your car. Let the driver know that you finished your rotation and returned your badge to the GME office as required.

UW Medical Center:

- Triangle Parking Garage: The Triangle Parking Garage is located on N.E. Pacific Place, across the street from UW Medical Center. From Montlake Blvd., turn left onto N.E. Pacific Street and right onto N.E. Pacific Place. There is direct access to the third floor (main UWMC entrance) via a pedestrian tunnel.
- Surgery Pavilion Parking Garage: The Surgery Pavilion Parking Garage is accessed off of N.E. Pacific Street next to the Emergency Room entrance. Take elevator and follow signs to the 3rd floor (main UWMC entrance).
- S1 Parking Garage: Proceed west on N.E. Pacific St. with hospital to your left. Turn left on 15th Ave NE and proceed to parking gate where you will get a permit for the S1 garage parking and further directions from the attendant.
- **Driving directions**
- **UWMC parking office:** 206-598-5275 or uwmcpark@uw.edu. They are open 6am-1am.

Veterans Administration Hospital:

- **Campus map (**includes parking**)**
- **Driving directions**

I don't have a vehicle: what are my transit options?

Seattle public transit: King County Metro **Trip Planner**

SHUTTLE OPTIONS:

HMC & UWMC:

The **Health Sciences Express (HSE)** provides free transportation Monday-Friday, excluding University holidays, between UWMC and HMC, with stops at Roosevelt Clinic and UW Tower. Shuttles are equipped with wheelchair lifts and two-position bike racks.

- The shuttle stop at HMC is on 9th Avenue in front of the Research & Training building.
- The shuttle stop at UWMC is in front of the main hospital entrance on NE Pacific Street.
- Shuttles currently run every 30 minutes (please see here for schedule times)
- Shuttles are currently limiting the number of passengers to a maximum of **8** passengers at a time, so please allow time to arrive early to the shuttle stop, allow passengers who arrived before you to get on the shuttle first, and be patient if the shuttle fills to maximum and you need to wait for the next shuttle.
- Masks **MUST** be worn at all times while on waiting at the shuttle stops as well as while on the shuttles
- *Since this shuttle also provides service to medical center patients and their families, please allow them to get on the bus before you, whenever possible, so they can get to their appointments on time.*

SCH:

- SCH has shuttles that run from the University District (Purple Line) and the UW Light Rail Station (Gold Line). Here is a link to those SCH shuttle schedules.
- Medical students can ride these shuttles free of charge after they have been issued an SCH badge by the Medical Student Office.
- Other shuttle options include the UW Health Sciences Express Shuttle, Seattle Cancer Care Alliance (SCCA) Shuttle and the UW/Fred Hutch South Lake Union Shuttle. You can find all of those shuttle schedules and information here.
- Finally, the hospital is served directly by five King Country Metro bus routes: #25, #31, #32, #65, and #75 (schedules can be found on the King County Metro Trip Planner above).

VA:

- There are no shuttles that travel to/from the VA from HMC, UWMC nor SCH.

- Students scheduled to rotate at the VA will need to either drive or take **King County Metro** (see Trip Planner link above)

How can I find out what surgeries are scheduled each day?

- **HMC:** Students wanting general access to the OR whiteboards will need to email UW Medicine IT (mcsos@uw.edu) to request access to the HMC whiteboard.
- **SCH**: There is an electronic OR whiteboard down in the OR that students should be able to view.
- **UWMC:** Students wanting general access to the OR whiteboards will need to email UW Medicine IT (mcsos@uw.edu) to request access to the UWMC whiteboard.
- **VA:** The VA does not have online whiteboard yet. Cases are discussed in advance.

Where can I get a face shield and/or N95 mask?

As you are aware, UW Medicine facilities have begun requiring eye protection when doing patient facing work. We have a small stash of shields but no good way to get them to students at this time. (Goggles are fine too, if you have them). If a student doesn't already have an N95 mask, they can request one through one of these links:

1. Halyard N95 Request – for those who have been fitted on the Halyard models - we will send you 5 N95s per each 4-week clerkship
2. Halyard N95 Fit Testing Request – for those who have not yet been fitted on the Halyards - we will send you 2 sizes for fit testing
3. 3M and other Non-Halyard N95 Request – for those who were fitted on 3M models - we will send you 5 N95s per each 4-week clerkship
4. 3M and other Non-Halyard Fit test Request – for those who failed on the Halyards - we will send you a variety of 3M models for fit testing

Where do I get scrubs?

- **HMC:** Scrubs can be found in the locker rooms
- **SCH:** Scrubs can be found right outside of the locker rooms
- **UWMC:** Scrubs cab be found in the locker rooms
- **VA:** Scrubs can be found in the OR and accessed via the scrubs machine. Students will be provided ScrubEx USER #'s and PIN #'s prior to the start of each rotation

Where are the OR locker rooms?

- **HMC:** The locker rooms are in the Ground East Hospital (Ground/basement level of the hospital) located on the Right side of the hallway after the OR Lounge.
    - The women's locker room is room # GEH08.
    - The men's locker room is room #GEH06.
    - Students will need badge access to get into the main doors to the lounge and then separately to the respective locker rooms.
- **SCH:** Locker rooms are in the Mountain part of the building, Level 6.
    - Women's OR locker room: MB.6.620
    - Men's OR locker room: MB.6.619
    - Badge access is required to get into the locker rooms
- **UWMC:** The women's locker room is located in the Main OR EC236; the men's locker room is located in Pav OR SP1110

- **VA:** Locker rooms can be found on 3rd floor
    - Locker rooms are attached to the ORs
    - OR and locker rooms are by the "D elevators in addition to it being located on the 3rd floor

- Lockers may not be available. There is a spacious resident room that students should coordinate with resident in terms of its usage
- Access to OR will arranged through the VA

OR orientations

- **HMC & UWMC:** Students will not have a formal OR orientation. However, Kacie Allen (HMC OR Educator) has provided brief recorded videos of OR training/procedures that students are to review prior to rotating at HMC.
  - https://youtu.be/OVKTG0GkqMo
  - https://youtu.be/Or4wUvx604I
  - https://youtu.be/NfUj8dSa_2M
  - https://youtu.be/kCp6zskFM3M
- **VA:** The VA credentialing coordinator will contact students scheduled to rotate at the VA and will work with each student to complete required credentialing documentation, online training, orientation and badging requirements.

Clerkship Orientations

Administrative Orientation:
On the first Monday of the clerkship, students will have a short administrative orientation (via ZOOM) with the Clerkship Coordinator and Administrator of Education at 7:00am. Afterwards students will connect with the residents at the locations they are scheduled to rotate at for the first week. Students will be sent a calendar invite (with the ZOOM info) for the orientation that will include the Zoom information the week prior to the start of the clerkship rotation.

VA Specific Clinical Orientation:
On the first Monday of the clerkship students will have a short clinical orientation specific to the VA portion of the rotation with Dr. Ravanpay.

General Clinical Clerkship Orientation:
During the first week of the clerkship students will have a short clinical orientation about the clerkship with the Clerkship Director(s)

Feedback Session
On the last Friday of the rotation students will participate in a rotation feedback session with the Clerkship Coordinator after students have finished the exam. This is a way for us to find out what students liked about the clerkship, what they disliked about the clerkship, what they think should be changed, what they think should be kept, suggestions for additional stuff/experiences, etc, so that we are able to improve the clerkship for future students and that future students will benefit from their feedback.

The feedback session typically doesn't take more than 30 minutes. Student feedback gets added to the feedback of previous groups (as future groups will be added as well). All feedback is/will be kept anonymous. Clerkship Director will NOT be part of the feedback session nor will any feedback affect student grades in any way, so students can speak freely.

*In lieu of a live feedback session the Clerkship Coordinator may send students an email requesting feedback, to be returned within 1 week of the end of rotation.

I have concerns about how I've been treated and/or about behavior I have observed during the clerkship. Who should I contact?
Should a student ever feel uncomfortable, unfairly treated or harassed while on our service by anyone they encounter, please report any such events to the Clerkship Director, the Clerkship Coordinator, the Associate Director of Education and/or the University of Washington School of Medicine Office of Student Affairs immediately. Should a student ever feel threatened, please contact hospital security, the University of Washington Police Department, Seattle Police or Spokane Police immediately. Students' welfare and safety are top priority to us.

The site below on the Learning Environment includes additional information on mistreatment and how to report it to the School of Medicine if you have any concerns: https://blogs.uw.edu/esom/learning-environment/

Student Health Related Information

The UWSOM supports students' access to healthcare and strongly encourages them to obtain and maintain health insurance while enrolled at the UWSOM. The consolidated content on the links below has been created by collaboration between students and the UWSOM student affairs to ease of referencing for student related health information. All three sources will be updated centrally by student affairs and the Student Committee on Healthcare Access (SCoHA). If you have questions regarding the content, please reach out to adminsa@uw.edu.

Student Health Insurance
Healthcare Access for Medical Students
SOM-Telehealth Program for Medical Students

Closing Remarks

While on the UW Neurological Surgery clerkship, please remain cognizant that we see and care for some of the sickest patients in the hospital. People who are sick often have difficulty coping with their illness; those who have neurological impairments often have trouble even understanding their situations and it can be that much more challenging. Same can be true for their loved ones and even for the neurosurgeons caring for them. Please understand that people can handle difficult situations differently, but that every resident and attending in our Department respects our patients and knows his or her responsibility towards them. We expect the same from our students. No one is immune to the demands of the Neurological Surgery service and please know we are here to support medical students as much as we are here to support each other through difficult times. Please contact the Clerkship Director, Clerkship Coordinator or Administrator of Education if you experience any issues with coping or need support or feel someone else might benefit.

We sincerely look forward to working with you and to your productive and successful career in our discipline. Once again, welcome and have fun!

Best Regards,

UW Department of Neurological Surgery clerkship team

Appendix I: Faculty and Subspecialty Listing

Richard G. Ellenbogen, M.D., F.A.C.S.
Professor, Theodore S. Roberts Endowed Chair

General, Trauma, Congenital,
Brain and Spinal Cord Tumors

Locations: HMC, SCH, UWMC-Montlake

Anubhav G. Amin, MD
Assistant Professor

Neurosurgery, Spine & Spinal Cord Surgery

Locations: UWMC-Montlake

Robert Bonow, MD
Assistant Professor

Neurotrauma, Neurocritical Care

Locations: HMC

Samuel R. Browd, MD, PhD
Professor
Director, Seattle Children's Hydrocephalus Program
Medical Director, Seattle Children's Sports Concussion Program
Director, Sports Institute at UW Medicine

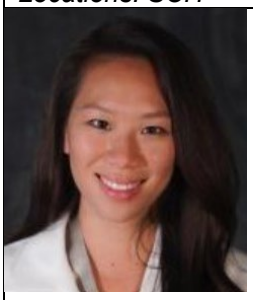
Pediatric Neurosurgery

Locations: SCH

Robert T. Buckley, MD
Assistant Professor

Neurotrauma

Locations: HMC



Stephanie H. Chen, MD
Assistant Professor

Brain Tumors, Cerebrovascular Neurosurgery, Endoscopic Brain Surgery, Skull Base Tumor Surgery, Stroke

Locations: HMC

Randall M. Chesnut, MD
Professor
Director, Cranial and Spine Trauma Program

Complex Spine Surgery, Spine and Cranial Trauma Surgery

Locations: HMC

Samuel Emerson, MD, PhD
Assistant Professor

Brain Tumor Surgery, Neurosurgery, Skull Base Tumor Surgery

Locations: UWMC-Montlake

Manuel Ferreira, MD, PhD
Vice Chairman and Professor
Chap and Eve Alvord and Elias Alvord Chair in Neuro-oncology
Chief of Neurological Surgery UWMC-Montlake, UWMC-Northwest
Director, Skull Base and Minimally Invasive Neurosurgery
Director, Multi-Disciplinary Pituitary Program
Co-Director, The Alvord Brain Tumor Center
Co-Director, Skull Base and Vascular Neurosurgery Fellowship

Brain Tumors, Neurosurgery, Skull Base Tumor Surgery

Locations: UWMC-Montlake

Mikhail S. Gelfenbeyn, MD, PhD
Associate Professor
Service Chief, Seattle VAMC

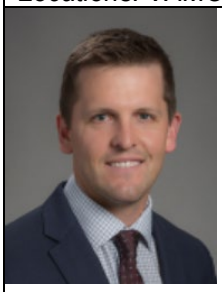
Neurosurgery, Peripheral Nerves and Spine

Locations: VAMC

Hannah E. Goldstein, MD
Assistant Professor

Pediatric Neurosurgery

Locations: SCH



Benjamin L. Grannan, MD
Assistant Professor

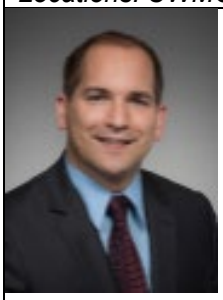
Brain Tumor Surgery, Deep Brain Stimulation, Epilepsy Surgery, General Neurosurgery, Movement Disorders Surgery, Peripheral Nerve Surgery, Surgical Pain Treatment

Locations: UWMC-Montlake

Jason Scott Hauptman, MD, PhD
Associate Professor

Epilepsy Surgery, Pediatric Neurosurgery

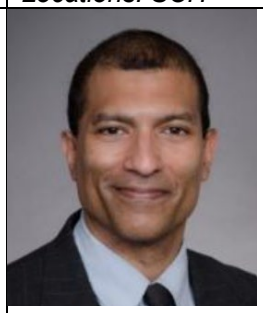
Locations: SCH



Christoph P. Hofstetter, MD, PhD
Associate Professor
Director, UWMC Spine Surgery

Spine & Spinal Cord Surgery

Locations: HMC, UWMC-Montlake



Mahesh Karandikar, MD, PhD
Clinical Assistant Professor

Spine & Spinal Cord Surgery

Locations: UWMC-Montlake

Imad S Khan, MD
Assistant Professor

General Neurosurgery, Spine & Spinal Cord Surgery

Locations: HMC

Louis J. Kim, MD
Vice Chair, Professor,
Service Chief, HMC

Cerebrovascular and Neuroendovascular Surgery, Skull Base Surgery

Locations: HMC

Andrew Ko, MD
Associate Professor

Movement Disorders, Epilepsy, Pain, Neuro-Oncology

Locations: HMC, UWMC-Montlake

Amy Lee, MD
Associate Professor
Chief of Neurological Surgery Service, Seattle Children's
Associate Residency, Program Director
Director, Pediatric Neurosurgery Fellowship

Pediatric Neurosurgery

Locations: SCH

Michael Levitt, MD
Associate Professor
Associate Residency Program Director

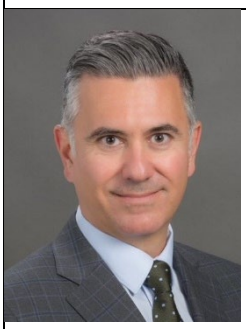
Cerebrovascular, Endovascular Surgery

Locations: HMC

Jeffrey Ojemann, MD
Professor & Vice Chair
Richard G. Ellenbogen Endowed Chair in Pediatric Neurosurgery
SVP and Interim Chief Medical Officer, Seattle Children's Hospital
Adjunct Professor, Radiology

Epilepsy Surgery, Neurosurgery, Pediatric Neurosurgery, Brain/Computer Interfaces, Epilepsy Research

Locations: HMC, SCH



Ali C. Ravanpay, MD, PhD
Associate Professor
Associate Residency Program Director
Adjunct Assistant Professor, Healthcare Simulation Science Division, Surgery Dept.

Neurosurgery

Locations: VAMC

Jacob J. Ruzevick, MD
Assistant Professor

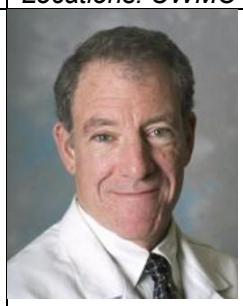
Endoscopic and minimally invasive brain tumor surgery, Endoscopic pituitary surgery, Pediatric skull base surgery, Skull base surgery, Surgical Neuro-oncology

Locations: UWMC-Montlake

Laligam N. Sekhar, MD, FACS, FAANS
Vice Chair, Professor
Director, Cerebrovascular Surgery
Director, Skull-Base Surgery
Director, TCD Lab

Cerebrovascular Microsurgery and Endovascular Surgery, Skull Base Tumor Surgery

Locations: HMC



Daniel L. Silbergeld, MD
Arthur A. Ward Jr. Professor of Neurological Surgery
Adjunct Professor of Pathology

Brain Tumors, Gamma Knife, Neurosurgery, Neuro-Oncology Research

Locations: UWMC-Montlake

Timothy Steege, MD
Clinical Professor
Neuro-Hospitalist

Neurosurgery, Pediatric Neurosurgery, Spine & Spinal Cord Surgery

Locations: HMC

Melanie Walker, MD
Clinical Professor

Locations: HMC

Diana B. Wiseman MD, MBA
Clinical Assistant Professor
Neuro-Hospitalist

Locations: HMC

Fangyi Zhang, MD
Professor

Complex Spine Surgery, Minimally Invasive Spine Surgery, Spinal Tumor and Deformities, Cranial Trauma

Locations: HMC

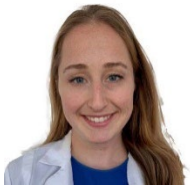
Appendix II: Resident Listing and Contact Information

 **Guil Barros, MD** Resident – R07	 **Maddie Greil, MD** Resident – R07	 **Rajeev Sen, MD** Resident – R07	 **Sanan Sivakanthan, MD** Resident – R07

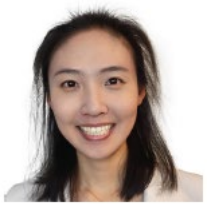
 **Kate Carroll, MD** Resident – R06	 **Jessica Eaton, MD** Resident – R06	 **James Pan, MD** Resident – R06

 **Scott Boop, MD, MPH** Resident – R05	 **Maggie McGrath, MD** Resident – R05	 **Evgeniya Tyrtova, MD** Resident – R05

 **Zach Abecassis, MD** Resident – R04	 **Malia McAvoy, MD** Resident – R04	 **Dominic Nistal, MD** Resident – R04

 **Eliza Baird-Daniel, MD** Resident – R03	 **Julian Clarke, MD** Resident – R03	 **Katherine Kelly, MD** Resident – R03

 **Adriel Barrios-Anderson, MD** Resident – R02	 **Juan (Pancho) Ruiz Rodriguez, MD** Resident – R02	 **Zirun (Tina) Zhao, MD** Resident – R02

 **Fatima El-Ghali, MD** Resident – R01	 **Nicholas (Nick) Hug, MD** Resident – R01	 **Christine Park, MD, MEng** Resident – R01