



OHSU has had a nephrology fellowship training program since 1972

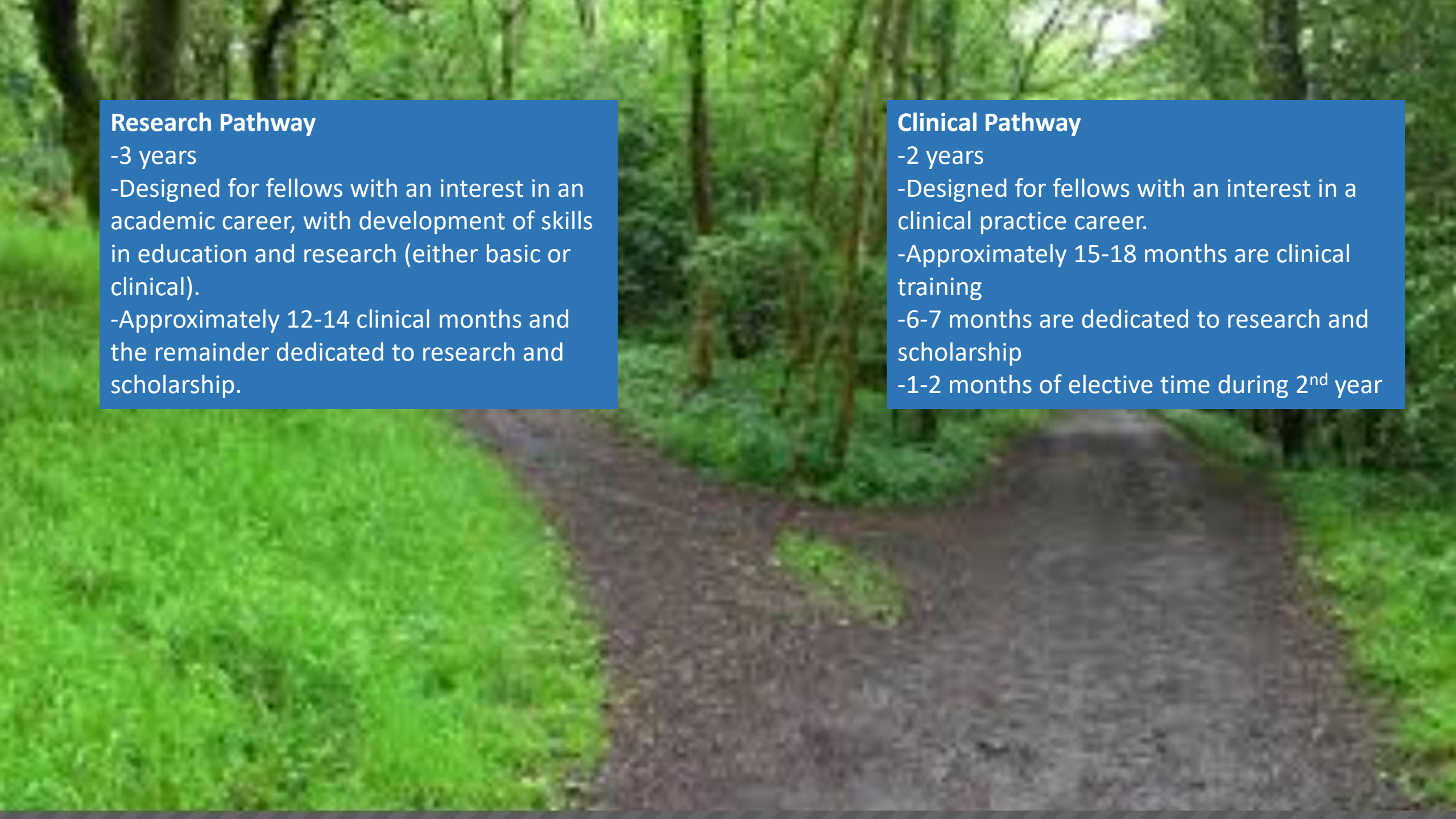


OHSU also has a nephrology transplant fellowship, in place since 1998



Fellowship training at OHSU takes place at the OHSU main hospital and at the Portland VA medical center. These two facilities are connected by a pedestrian skybridge





Research Pathway

-3 years

-Designed for fellows with an interest in an academic career, with development of skills in education and research (either basic or clinical).

-Approximately 12-14 clinical months and the remainder dedicated to research and scholarship.

Clinical Pathway

-2 years

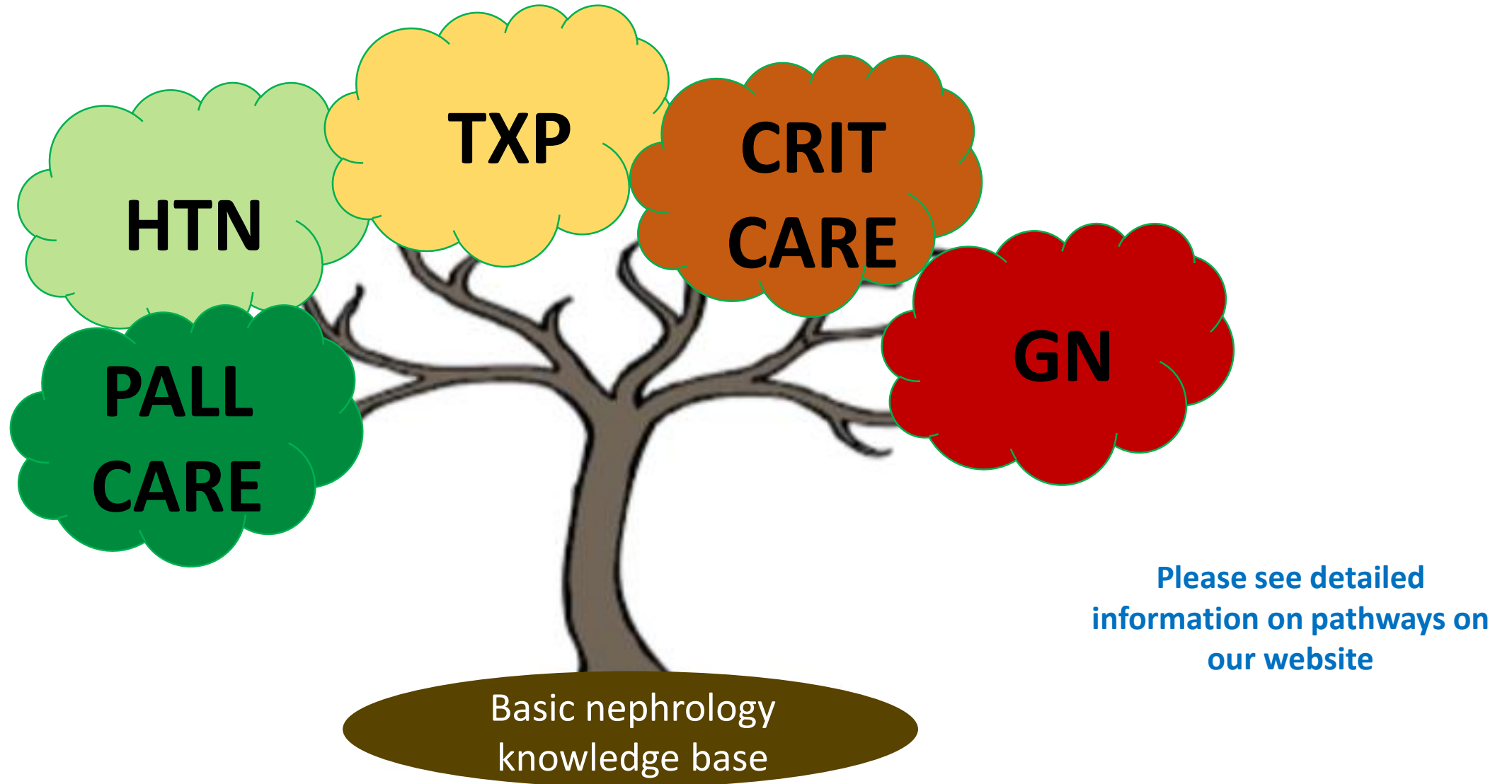
-Designed for fellows with an interest in a clinical practice career.

-Approximately 15-18 months are clinical training

-6-7 months are dedicated to research and scholarship

-1-2 months of elective time during 2nd year

OHSU nephrology fellowship also has 5 optional sub-pathways for areas of emphasis and interest.



These pathways are NOT required, and do not result in additional certification. These are intended to allow fellows to further explore sub-areas in nephrology that may be of particular interest to them. Fellows may choose to do all of one pathway or can incorporate parts of each pathway during their elective time.

Clinical Training

- Clinical skills/procedures
 - Acute and chronic dialysis modalities
 - IHD
 - CVVHDF
 - Peritoneal dialysis
 - Renal transplantation
 - Renal biopsies
 - Dialysis catheter placement
 - Interpretation of renal imaging studies
- Diagnostic skills
 - Acute renal disease
 - CKD
 - Fluid and electrolyte disorders
 - Acid-base management
 - (among many others...)
- Extensive skills in evaluation and management of these problems

Research Training

Areas of research within the division

- Progressive diabetic nephropathy
- Bartter's and Gitelman's syndromes and hereditary salt wasting
- Pathogenesis of edematous disorders
- Osmotic control of kidney cell function
- Hypertension research including renal denervation and clinical support tools for HTN management
- Developmental regulation of angiotensin receptors
- Prevention and treatment of kidney transplant rejection
- New and novel therapies for glomerulonephritis
- Molecular basis of hypertension (familial Hyperkalemic Hypertension)
- Assessment of CMV status and outcomes in transplant
- Hypertension management in older adults and in older adults with kidney disease
- Risk prediction in older adults with kidney disease

The human investigations program is a clinical and translational research training program within OHSU's Oregon Clinical and Translational Research Institute (founded by our NIH Clinical Translational Science Award). Our division will sponsor research fellows to participate in the certificate course within this program during their 2nd and 3rd years of fellowship training.

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School of Medicine
Human Investigations Program

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Human Investigations Program (HIP)

Educating the next generation of clinical and translational researchers
[Learn more about curriculum](#)

Program Overview

The Human Investigations Program, a program of the [Oregon Clinical and Translational Research Institute \(OCTRI\)](#), offers an integrated clinical and translational research education curriculum.

- Enhance your career in clinical and translational research.
- Gain practical skills in conducting successful research studies.

Upcoming Events

No Events

[View all events](#)

Student Resources

Certificate class courses

Mandatory →

- Intro to clinical research
- Clinical Research Design (I, II, III)
- Proposal development
- Molecular and cellular approaches to disease
- Protection of human subjects
- Scientific writing and data presentation
- Evidence-based medicine seminar

Electives →

- Fundamentals of RCTs
- Leadership skills development
- Understanding and managing academic organizations
- Comparative effectiveness and patient-centered outcomes research
- Community based research
- Biostatistics and applied biostatistics
- Medical informatics
- Computerized data management
- Systematic reviews
- Project management

<https://www.ohsu.edu/school-of-medicine/human-investigations-program>

Inpatient rotations



Broad Overview

- Fellow rotations are in HALF MONTH blocks. This provides:
 - Greater variety through the year
 - Better spread of ambulatory months, when fellows don't have week night call and use vacation time

		July 21	Aug 21	Sept 21	Oct 21	Nov 21	Dec 21	Jan 22	Feb 22	Mar 22	Apr 22	May 22	June 22
Fellow 1	1st - 15th	Training	OHSU Consults	Ambulatory	OHSU Consults	VA Consults	Transplant	OHSU Consults	Ambulatory	VA Consults	OHSU Consults	VA Consults	Transplant
	16th - 31st	OHSU Consults	VA Consults	Transplant	Ambulatory	OHSU Consults	VA Consults	OHSU Consults	Transplant	OHSU Consults	Ambulatory	OHSU Consults	VA Consults
Fellow 2	1st - 15th	Training	OHSU Consults	Transplant	Ambulatory	OHSU Consults	OHSU Consults	Ambulatory	Transplant	Ambulatory	VA Consults	OHSU Consults	OHSU Consults
	16th - 31st	VA Consults	OHSU Consults	VA Consults	Transplant	VA Consults	OHSU Consults	OHSU Consults	OHSU Consults	Ambulatory	Transplant	VA Consults	OHSU Consults
Fellow 3	1st - 15th	Training	VA Consults	OHSU Consults	Transplant	Ambulatory	VA Consults	OHSU Consults	VA Consults	OHSU Consults	Transplant	Ambulatory	VA Consults
	16th - 31st	OHSU Consults	OHSU Consults	Ambulatory	VA Consults	OHSU Consults	Transplant	Ambulatory	OHSU Consults	OHSU Consults	VA Consults	OHSU Consults	Transplant

Broad Overview

- Division inpatient team structure:
 - OHSU consult team
 - OHSU ESRD team
 - VA nephrology team
 - Transplant



Inpatient rotations

OHSU Consult team

- Structure
 - One attending
 - Two fellows
 - Sometimes 1 resident
 - Sometimes medical students or PA students
- Census
 - Typically 20-30 (generally 12-15 or per fellow)



A primary tenet for our inpatient rotations is for fellows to see enough patients for broad learning across nephrology, but also an appropriate volume to allow them to get to know their patients and learn at the point of care.

Inpatient rotations

- OHSU ESRD

- Staffed by PA or by attending
- May sometimes have Tuality residents and/or PA students
- Patients in ICU or PD patients will go to OHSU Consult team
- Fellows have the option to do an elective rotation on this service



Inpatient rotations

VA renal service

- Structure
 - 1 attending, 1 fellow
 - Often a resident
 - Often a student
 - Follows both consult and ESRD patients at the VA



Inpatient rotations

Transplant

- Structure
 - 1 attending, 1 fellow
 - Additional team members typically include a transplant pharmacist and a coordinating transplant surgery resident/intern
- Census – varies



Typical Schedule

Clinical Track

Year 1:

- 9-10 half-months OHSU consult service
- 5-6 half-months VA service
- 4 half-months Transplant service
- 4 half-months ambulatory (outpatient clinics/dialysis)

Year 2:

- 7-8 half-months of OHSU consult service
- 2-3 half-months of VA service
- 5-6 months research

Research Track

Year 1:

- 9-10 half-months OHSU consult service
- 5-6 half-months VA service
- 4 half-months Transplant service
- 4 half-months ambulatory (outpatient clinics/dialysis)

Year 2:

- 2 half-months OHSU consult service
- 1-2 half-month VA service
- 10-12 months research

Year 3:

- 12 months research

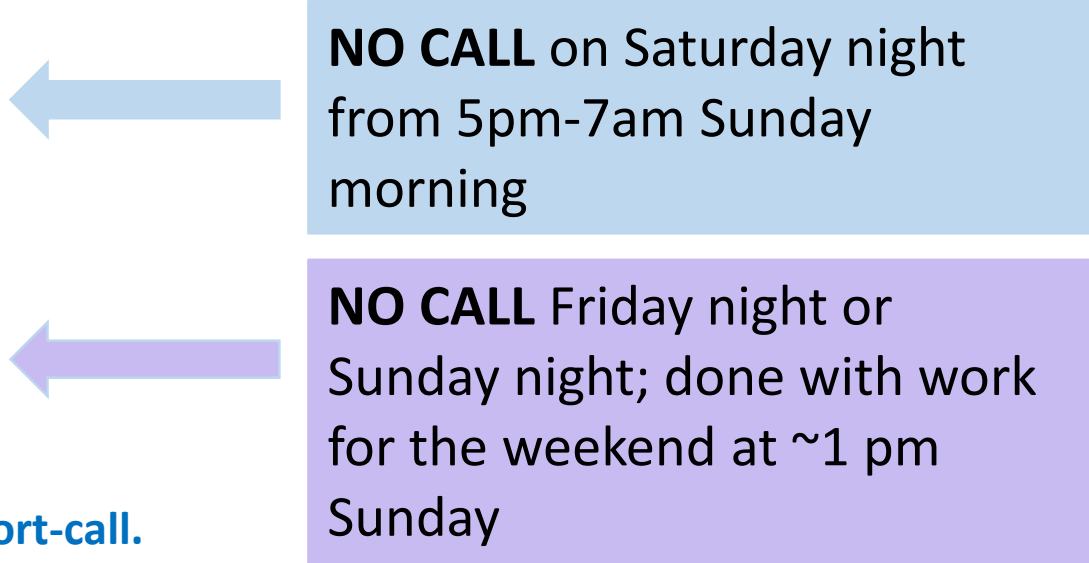
Call

- Fellows who are on inpatient service take week-night (Mon-Thurs) call.
- Call covers gen neph and transplant
- Weekend call is covered by fellows on call for the weekend (Fri-Sun) and covers gen neph (all day) and transplant (at night)



Call

Weekend Call

- 1 attending for general nephrology, 1 attending for transplant
 - 2 Fellows (includes 1st and 2nd year fellows and Transplant fellow)
 - Sometimes a medicine resident
 - Long Call:
 - Friday and Sunday night
 - Rounding full-day Saturday and Sunday
 - Short Call:
 - Saturday night
 - Rounding 7am-1pm Saturday and Sunday
- 
- The diagram illustrates the call schedule for fellows. It features two callout boxes on the right side. The top box, with a light blue background, points via a blue arrow to the 'Rounding full-day Saturday and Sunday' item under 'Long Call'. It states: 'NO CALL on Saturday night from 5pm-7am Sunday morning'. The bottom box, with a light purple background, points via a purple arrow to the 'Rounding 7am-1pm Saturday and Sunday' item under 'Short Call'. It states: 'NO CALL Friday night or Sunday night; done with work for the weekend at ~1 pm Sunday'.

Fellows work 16-17 weekends a year, split between long-call and short-call.
This leaves ~2/3 of weekends as being non-call weekends.

Call

- Summary
 - No more than 2 calls per week
 - No consecutive call
 - About 16 weekends per year (around 1 in 3)



We take work hours seriously....



We have a set jeopardy system and schedule to allow fellows to leave by 1 pm post-call if they had a challenging call night. Fellows can leave early post call if they are called in to the hospital overnight, or if they were kept up all night at home with clinic care calls, etc.

Outpatient Clinic

- Year 1

- HTN clinic (every other week) Total of 12 months

- VA CKD clinic (every other week) Total of 24 months

- Year 2

- VA CKD clinic (every other week)

- OHSU CKD clinic (every other week) Total of 12 months

- Peritoneal dialysis clinic (monthly clinic) Total of 8-10 months

- VA outpatient hemodialysis shift Total of 12 months

Fellows have ½ day of clinic once a week during the 1st and 2nd year of training. The clinic alternates between the two clinic types noted (Hypertension clinic and VA ckd clinic in first year, OHSU ckd clinic and VA ckd clinic in 2nd year) to maximize exposure to different clinics. All of our clinics are continuity clinics – fellows follow their own patients.

VA Hemodialysis continuity experience (2nd year)



Second year fellows are each assigned to 10 patients on a VA outpatient hemodialysis shift. The VA hemodialysis unit is located in the Portland VA medical center – meaning, on the same campus at the main hospital and inpatient work.

Second year fellows will see these patients once each month, write monthly dialysis notes, and lead care plans for these patients, in conjunction with a linked VA staff nephrologist.

This is an invaluable training experience for fellows in learning about caring for outpatient hemodialysis patients.

30	31	1 AM VA IR Observation PM VA Clinic	2 VACATION	3 VACATION
6 LABOR DAY	7 VACATION	8 VACATION	9 VACATION	10 AM OHSU Amyloid Clinic (Dr. Avasare) PM Research Time/Meeting (Dr. Raphael)
13 AM VA Dialysis Tech School PM Peds Neph Clinic (Dr. Al Uzri and Dr. Jenkins)	14 AM VA Transplant Clinic PM OHSU GN Clinic (Dr. Avasare)	15 AM OHSU Transplant PM VA Clinic	16 Transplant	17 Transplant

Ambulatory

Mon	Tue	Wed	Thu	Fri
Consults	Consults	Consults	16 AM VA Dialysis Tech School CONSULTS COVERAGE PM (2 nd years SIM lab)	17 AM VA IR Observation Reading time
20 AM VA Dialysis Tech School PM HTN Clinic	21 Vacation	22 Vacation	23 Vacation	24 Vacation
27 Vacation	28 AM VA Transplant Clinic PM CKD Clinic Virtual Dr. Wusirika	29 AM OHSU Transplant Clinic PM VA Clinic	30 AM VA IR Observation PM Clinic Dr. Rueda Virtual	1 Transplant

Division Conferences

	Mon	Tues	Wed	Thurs	Fri
AM		Medicine Grand Rounds (optional)		Transplant conference	Case conference/research conference
Noon	Journal club	Didactic		1 st Thurs each month, fellow path conference	Once a month biopsy conference
PM					

Journal club: this is an equal-opportunity conference. All faculty present once a year. First year fellows present once a year. Second year fellows present twice a year – we recommend they do one new article and one “classic” nephrology article.

Case conference: two fellows present per conference, ~30 min each. They present a case from their current clinical service, 15 min focused case and different and 10-15 min review of a primary research paper that relates to their case.

Fellow path conference: fellows meet with our dedicated renal pathologists to review core concepts in renal path

Biopsy conference: faculty and fellows meet with our renal pathologists to review biopsy results from the preceding month.

Didactics

These are just a sample of some of our didactics.

Early in the year, July-Sept, we have more than one didactic each week to help provide important information on key nephrology topics.

FELLOW DIDACTIC LIST			
<i>*Tuesdays at noon. Additional didactics will also be held on Thursdays and Fridays, see schedule</i>			
Last Given	1 or 2 years	Topic	Current Faculty
07/06/18	Every year	Basics of hemodialysis	Dirkx
07/09/18	Every year	CRRT (1.5 hrs)	Rope
07/10/18	Every year	Transplant Overview – initial work-up	Lockridge
07/17/18	Every year	Acute Kidney Injury (1.5 hrs)	Rope
07/10/18	Every year	How to give a talk	Weiss
07/13/18	Every year	Basics of peritoneal dialysis	Chopra
07/26/18	Every year	Chronic Kidney Disease	Anderson
07/20/18	Every year	Procedures in Nephrology	Wusirika
07/12/18	Every year	CPRS Encounters	Dirkx
08/21/18	Every year	Basic Complications of HD	Chopra
08/23/18	Every year	Central Line Placement Simulation Lab	Pak/Wusirika
10/23/18	Every year	ICD-10 Coding	Chopra
09/20/18	Every year	Estimation of renal function	Weiss
08/30/18	Every year	Secondary Causes of Hypertension	Rueda
08/31/17	Every year	Secondary Causes of Hypertension - Part II	Rueda
08/16/18	Every year	Hepatorenal Syndrome	Cohen
08/07/18	Every year	Cardiorenal syndrome	Rope
07/19/18	Every year	Metabolic Alkalosis	Gustafson
08/09/18	Every year	Metabolic Acidosis	Gustafson
07/31/18	Every year	Renal acidification	Rueda
07/27/18	Every year	Library Resources	Zeigen
08/31/18	Every year	How to deal with the angry patient	Raqib
09/11/18	Every year	Renal Sodium Handling	Ellison
09/13/18	Every year	Renal Potassium Handling	Dirkx
10/11/18	Every year	Renal acidification - Part II	Rueda

11/27/18	Every year	Vascular access: the basics	Wusirika	Summer
04/17/18	Every year	Anemia in CKD	Gustafson	Summer
08/28/18	Every year	Basic Renal Research	McCormick	Summer/Fall
10/02/18	Every year	Glomerulonephritis I (GN)	Avasare	Fall
10/09/18	Every year	Glomerulonephritis II (Nephrotic)	Avasare	Fall
10/31/18	Every year	Diuretic therapies	Ellison	Fall
11/13/18	Every year	Divalent cation transport	Ellison	Fall
09/19/17	Every year	Overview of acid-base disorder	Weiss	Fall
04/24/18	Every year	Diabetic nephropathy	Chopra	
01/11/18	Every year	Systemic calcium/Phos/Vit D handling	Dirkx	
11/06/18	Every year	Acute Intoxications	Rueda	
09/25/18	Every year	Clinical Potassium disorders	Rope	
12/04/18	Every year	Mechanisms of proteinuria	Gurley	
12/05/17	Every year	Vascular Access-Advanced	Wusirika	
12/13/16	Two years	Monoclonal Gammopathies, LC/HcDD *	Avasare	
03/13/18	Every year	Immunosuppression	Lockridge	
07/12/18	Every year	Renal pathology	Andeen	
06/05/18	Two years	SLE Nephritis	Avasare	
05/22/18	Two years	Hypo and Hypermagnesemia	Rueda	
02/15/18	Every year	Nutrition in CKD	Mooney	
03/06/18	Every year	Living Kidney Donors	Wusirika	
12/12/17	Two years	The Aging Kidney	Weiss	
02/28/17	Every year	Basic Science session	McCormick	
05/24/18	Every year	Infectious Complications of PD	Weiss	

And more...

Wellness

We acknowledge and respect the importance of self-care and wellness skills as a critical component not only in training but in achieving long-term career happiness and well-being.

OHSU has a wellness center, which is confidential, free, and available to all trainees.

This year we are instituting a new wellness “consult” 1-2 times annually with a team of experts from the institution to review wellness practices and well-being of trainees.

New educational sub-curricula: Advanced topics in dialysis

- **Advanced dialysis topics**: This curriculum was designed by and is presented by our director of dialysis, Dr. Pavan Chopra. This lecture series is designed to give fellows a better understanding of some of the more nuanced (and less often taught) arenas within dialysis care, including:
 - -Dialysis unit medical directorships
 - -End of life care and dialysis
 - -Ending the therapeutic relationship with patients
 - -Health insurance and dialysis
 - -Public policy and dialysis
- Each topic will be covered by a 1-2 hour lecture once a month during the second year of fellowship (required for senior fellows, although junior fellows are welcome to attend).

Bootcamp in July

Nephrology Fellowship Boot Camp 2019

	July 8, 2019	July 9, 2019	July 10, 2019	July 11, 2019	July 12, 2019
Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:00-8:30					
8:30-9:00	Pre-Rounds	Dragon Training	Pre-Rounds	Pre-Rounds	Pre-Rounds
9:00-9:30	with Fellows	<i>SJH 1340</i>	with Fellows	with Fellows	with Fellows
9:30-10:00	<i>UHS 4B</i>		<i>UHS 4B</i>	<i>UHS 4B</i>	<i>UHS 4B</i>
10:00-10:30		Break			
10:30-11:00	Morning Rounds	Morning Rounds	Morning Rounds	Morning Rounds	Morning Rounds
11:00-11:30	<i>VA100-335</i>	<i>VA100-335</i>	<i>VA100-335</i>	<i>VA100-335</i>	<i>VA100-335</i>
11:30-12:00		Lunch Break		Lunch Break	
12:00-12:30	Lunch Break	Transplant - Dr. Lockridge	Lunch Break	Path Lab Didactic	Basics of PD - Dr. Chopra
12:30-1:00		<i>VA100-7C109</i>		<i>RJH Path Lab</i>	<i>SJH 7315</i>
1:00-1:30	Basics of HD - Dr. Dirkx		AKI - Dr. Rope	Presentations - Dr. Weiss	Lunch Break
1:30-2:00	<i>VA100-7C109</i>	CRRT & Case Studies	<i>KPV 14D</i>	<i>MacHall 2136</i>	
2:00-2:30	CKD - Dr. Anderson	Dr. Rope	<i>Troubleshooting EMRs</i>	Hypertension	Outpt Calls - Dr. Weiss
2:30-3:00	<i>VA100-7C109</i>	<i>MacHall 2136</i>	<i>Onboarding Wrap-Up</i>	Drs. Rope & Weiss	<i>KPV 13B</i>
3:00-3:30	Break		Reading, etc.	<i>MacHall 2136</i>	Break
3:30-4:00	Afternoon Rounds	Afternoon Rounds	Afternoon Rounds	Afternoon Rounds	Afternoon Rounds
4:00-4:30	<i>UHS 4B</i>	<i>UHS 4B</i>	<i>UHS 4B</i>	<i>UHS 4B</i>	<i>UHS 4B</i>
4:30-5:00					

We provide a fellowship “bootcamp” during the first two weeks of July. The first week is primarily computer training for OHSU and the VA, and an overall orientation. During week two, new fellows each shadow a senior fellow, with core didactics in the early afternoon between rounds. New fellows are not on call until the 3rd week.

National Conferences

- Each fellow gets \$750/year in CME money from OHSU
- Each senior fellow gets between \$750-1000 from the Bennett Endowment fund to use during their 2nd year of training
- The division encourages fellows to attend other conferences including Nephrology business leadership university, home dialysis university, CRRT conferences, and more.



New Union Contract

- **Some important features include:**
 - housing stipend (\$2,205 for next year)
 - relocation money, up to \$1000
 - \$750 education money
 - equivalent of 3% of salary into 457b retirement plan
 - Medical license sponsorship

More information available at: <https://www.ohsuhou.org/>



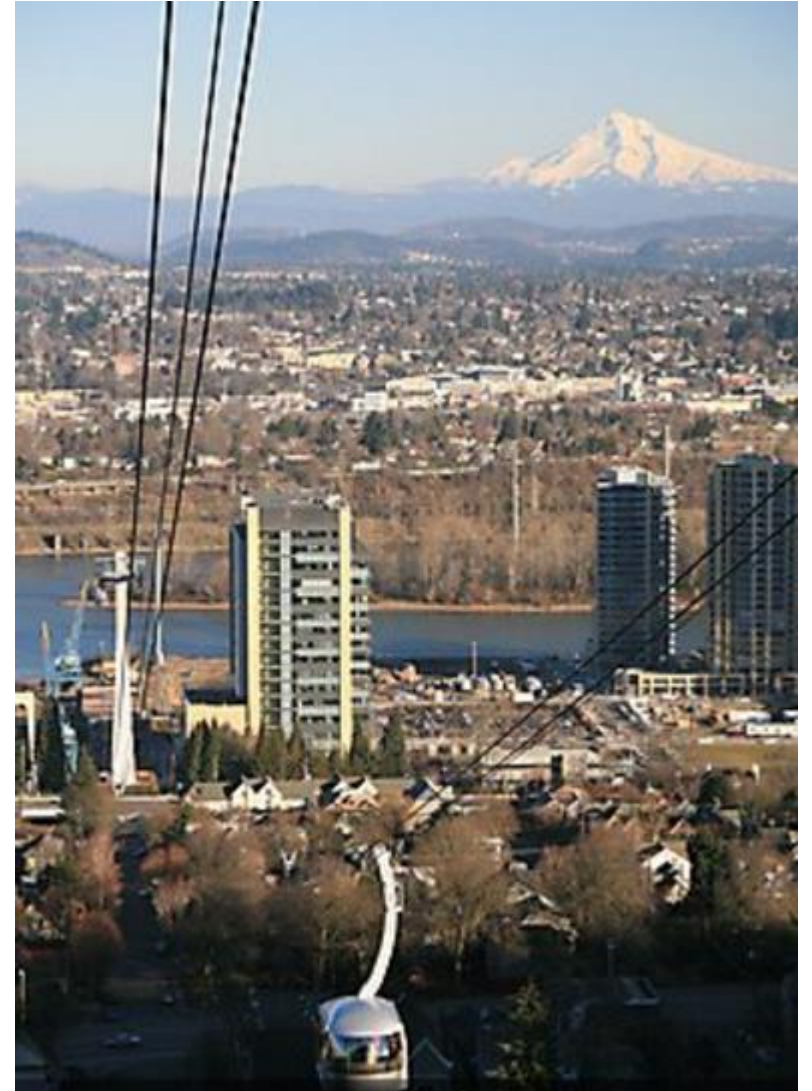
A bit more about OHSU:

OHSU is the tertiary care center for Oregon and one of only two level-1 trauma centers in the state.

The university of Oregon chartered a medical school in Portland in 1887

1917: The present 116-acre Marquam Hill campus gets its start with a 20-acre tract donated by the Oregon-Washington Railroad and Navigation Company, and an 88-acre tract donated by the family of C.S. Jackson, former publisher of the Oregon Journal.

2004: The Schnitzer Investment Corporation donates nearly 20 acres of riverfront property in South Waterfront to OHSU. (The tram travels from Marquam hill to the waterfront.)



A bit more about Portland...



**Portland has all 4
seasons – although
snow is really rare...**



Diverse music scene – from large to small venues



2



LOTS of hiking and outdoor activities!

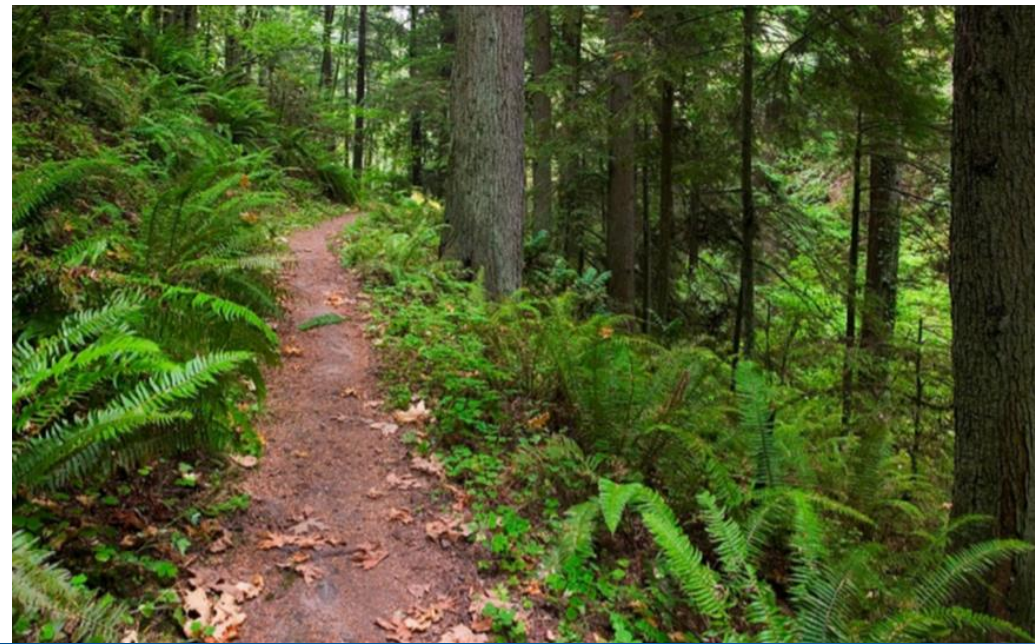
Portland is:

-45 minutes from the Columbia River Gorge (upper left)

-~1 hr and 15 minutes from the ocean (bottom left)

-~1 hr and 15 minutes from Mt. Hood (bottom right)

-Forest Park (upper right) is the largest inner city park and is just off down-town Portland (about 10 min from OHSU)





There are 3 ski resorts at Mt. Hood, all just a bit over an hour from Portland.

Portland is known for its many farmer's markets. Most neighborhoods have one, and we even have one on the OHSU campus in the summer (shown here)



There is no place in the country better known as a bastion of good living, leisure and happy inebriation than [Oregon](#)'s largest little city, the low-lying mini-metropolis of [Portland](#). Bisected by a river and surrounded by peaks, Portland is nothing if not a very pretty and almost preternaturally pleasant town. But much of its appeal comes from being, for better or worse, one of our national capitals of cool. The city's sensibility — its stylized aesthetic, its thoroughly hyped food culture, its taste for irony — is celebrated, imitated and satirized. Portland is at its best, though, when you step back from its overwrought reputation and appreciate its appetite for simple pleasures: beer and bike riding, day trips to the Columbia River or Sauvie Island's farm stands, movies in vintage theaters and cocktails in ornate lounges.

today is
your
DAY!

