



## PACIFIC PITUITARY DISORDERS CENTER AT PACIFIC NEUROSCIENCE INSTITUTE

With one of the world's largest experiences in endonasal endoscopic surgery for pituitary adenomas, craniopharyngiomas, chordomas and meningiomas, and an extensive track record in pituitary hormonal evaluation and replacement, our specialists at the Pituitary Disorders Center provide comprehensive care to patients suffering from all types of pituitary disorders. Our multidisciplinary approach provides tailored diagnostic and treatment plans for each patient.

### ENDOSCOPIC ENDONASAL MINIMALLY INVASIVE SURGERY

The endonasal approach uses the nostrils as natural surgical corridors to remove pituitary adenomas, and many midline skull base and brain tumors. The endonasal route is the preferred surgical approach for almost all pituitary adenomas and Rathke's cleft cysts, as well as most craniopharyngiomas, clival chordomas and many midline meningiomas.

Utilizing high-definition endoscopy (surgical telescope), surgical navigation ("GPS for the brain") and Doppler ultrasound for carotid artery localization, the endonasal approach has evolved into a safe and effective procedure in experienced hands. Over the last decade, our world-class team of pituitary and endoscopic skull base surgeons have helped advance the field through multiple publications, courses and symposia, emphasizing maximal safe tumor removal, quality of life and complication avoidance.

### INTERNATIONAL PATIENTS

For patients living outside the United States, our physicians can provide a prompt review of imaging and other tests. We can suggest a recommendation about the optimal treatment options with no charge for such initial evaluations and preliminary reviews.

### DISORDERS WE TREAT

#### PITUITARY ADENOMAS

- Acromegaly
- Cushing's disease
- Endocrine-inactive adenoma
- Prolactinoma
- TSH-secreting adenoma
- Recurrent and residual adenoma
- Pituitary apoplexy

#### CRANIOPHARYNGIOMA

#### RATHKE'S CLEFT CYST

#### OTHER RELATED TUMORS & CYSTS

- Chordoma
- Meningioma
- Sellar arachnoid cyst
- Sinonasal carcinoma

#### PITUITARY FAILURE (HYPOPITUITARISM)

#### PITUITARY INFLAMMATION (HYPOPHYSITIS)

#### CEREBROSPINAL FLUID LEAKS



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### OUR EXPERT TEAM

Daniel F. Kelly, MD

Garni Barkhoudarian, MD

Chester Griffiths, MD & Kian Karimi, MD

Katherine Araque, MD, Pejman Cohan, MD,  
& Sarah Rettinger, MD

Howard Krauss, MD

Santosh Kesari, MD, PhD, Jose Carrillo, MD  
& Naveed Wagle

Robert Wollman, MD & Lisa Chaiken, MD

George Teitelbaum, MD

David Krasne, MD & Yuki Takasumi, MD

Amy Eisenberg, MSN, ARNP, CNRN

Neurosurgery, Director

Neurosurgery

Head & Neck Surgery (ENT)

Endocrinology

Neuro-ophthalmology

Neuro-oncology

Radiation Oncology

Interventional Neuro-radiology

Neuropathology

Program Nurse Practitioner

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Pacific Neuroscience Institute (PNI)



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### PATIENT SUPPORT GROUP

The Pacific Pituitary Disorders Center Patient Support Group is moderated by patient advocate, Sharmyn McGraw. The aim of the group is to provide education, support and empowerment for those dealing with neurological challenges due to pituitary disease. Through our speakers, volunteers and educational support, we strive to help patients and their families cope with and ultimately conquer their illnesses. Our support group is for patients, their family members, and friends.



#### DANIEL F. KELLY, MD

DIRECTOR, PACIFIC NEUROSCIENCE INSTITUTE

Dr. Kelly is an internationally recognized neurosurgeon with a focus in the field of endoscopic and keyhole brain surgery. He treats a wide range of tumors including pituitary adenomas, meningiomas, craniopharyngiomas, chordomas and metastatic brain tumors. Dr. Kelly is the recipient of the Patients' Choice Award and has been awarded the southern California SuperDoctor distinction 11 years in a row. [pacificneuro.org/kelly](http://pacificneuro.org/kelly)



#### GARNI BARKHOUDARIAN, MD

CO-DIRECTOR, PITUITARY DISORDERS CENTER

Dr. Barkhoudarian is a neurosurgeon specializing in skull base and minimally invasive endoscopic surgery, particularly pituitary and parasellar tumors, intra-ventricular brain tumors, trigeminal neuralgia, hemifacial spasm, other cranial nerve syndromes and hydrocephalus. He is director of the Pacific Hydrocephalus Center and Pacific Facial Pain Center and director of Providence Saint John's Skull Base and Endoscopic Microdissection Laboratory. [pacificneuro.org/barkhoudarian](http://pacificneuro.org/barkhoudarian)



#### CHESTER GRIFFITHS, MD

DIRECTOR, EYE, EAR & SKULL BASE CENTER

Dr. Griffiths has an extensive 25-year experience as a sino-nasal endoscopic surgeon. He is co-surgeon in endonasal endoscopic pituitary and skull base surgery, and provides post-operative sinus care. [pacificneuro.org/griffiths](http://pacificneuro.org/griffiths)



#### KATHERINE ARAQUE, MD

DIRECTOR, ENDOCRINOLOGY

Dr. Araque is an experienced endocrinologist specializing in pituitary disease including clinical and research projects for the diagnosis and treatment of pituitary hormone deficiency in adults, Cushing's disease, prolactinomas, acromegaly, sellar masses and other pituitary tumors. [pacificneuro.org/araque](http://pacificneuro.org/araque)

For an appointment or second opinion:

**310-582-7450 | [PacificPituitary.org](http://PacificPituitary.org)**

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