



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)

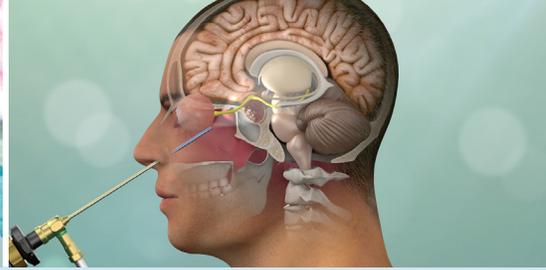
PITUITARY INFLAMMATION (HYPOPHYSITIS)

CEREBROSPINAL FLUID LEAKS

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 **Providence**

PacificPituitary.org | PacificNeuro.org



PATIENT SUPPORT GROUP

The Pacific Pituitary Disorders Center Patient Support Group is moderated by patient advocate, Sharmyn McGraw. It is the longest running pituitary support group in the nation.

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.

UNIQUE CARE

- Experienced surgical teams with over 2000 endoscopic endonasal surgeries.
- Highly effective collaborative team approach under one roof.
- Long academic track record with groundbreaking peer-reviewed publications on pituitary disorders including pituitary tumors and related skull base tumors, pituitary gland hormonal function.



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. His is a multiple recipient of the Patients' Choice, and Southern California Super Doctor awards. 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 leads the radiosurgery program and of the Neuroanatomical Skills Microdissection Laboratory. pacificneuro.org/barkhoudarian



CHESTER F. GRIFFITHS, MD
 DIRECTOR, EYE, EAR & SKULL BASE CENTER
 Dr. Griffiths is an otolaryngology (ENT) Head & Neck and Facial Plastic and Reconstructive surgeon with an extensive 30-year experience in endoscopic endonasal sinus surgery for skull base tumors and pituitary tumors, and sinonasal cancers. pacificneuro.org/griffiths



WALAVAN SIVAKUMAR, MD
 DIRECTOR, NEUROSURGERY, PNI-SOUTH BAY
 Dr. Sivakumar specializes in treating brain, skull base, and pituitary tumors, utilizing advanced neuroimaging and microsurgical techniques to minimize collateral damage to the brain and other neurological structures. He primarily sees patients at Providence Little Company of Mary Torrance. pacificneuro.org/sivakumar



HOWARD KRAUSS, MD
 DIRECTOR, EYE, EAR & SKULL BASE CENTER
 Dr. Krauss is a surgical neuro-ophthalmologist specializing in diagnostic neuro-ophthalmology, including visual field analysis and optical coherence tomography, as well as strabismus, orbital and anterior skull base surgery. His philosophy is to deliver the best eye and vision care with consideration to his patients' preferences. pacificneuro.org/krauss



SARAH RETTINGER, MD
 ENDOCRINOLOGIST
 Dr. Rettinger is an experienced endocrinologist specializing in pituitary disease (including hyper- and hypothyroidism), diabetes and metabolism disorders. She provides individualized treatment plans for the management and treatment of hormonal imbalances caused by these conditions to help restore quality of life to her patients.

For more information:

Santa Monica: 2125 Arizona Ave, Santa Monica, CA 90404 | 310-582-7450

Torrance: 5215 Torrance Blvd, #300, Torrance, CA 90503 | 424-212-5361

Burbank: 501 S Buena Vista St, Burbank, CA 91505 | 818-847-6049

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