



## PACIFIC BRAIN TUMOR CENTER AT PACIFIC NEUROSCIENCE INSTITUTE

We provide comprehensive care and minimally invasive surgery for patients with brain, skull base and pituitary tumors, as well as related problems such as spinal cord tumors and cranial nerve disorders.

**PATIENT-CENTERED FOCUS:** A multidisciplinary team approach providing tailored diagnostic and treatment plans.

**EXPERIENCE, INNOVATION & RESEARCH:** One of the largest series of keyhole and endoscopic surgeries world-wide; extensive academic publications; ongoing clinical trials and brain tumor genomics research.

**TECHNOLOGY:** State-of-the-art operating suite dedicated to endoscopic and keyhole neurosurgery.

**CONSISTENT QUALITY CARE:** Our physicians practice at Providence Saint John's Health Center, the only hospital in California to receive Healthgrades® America's 50 Best Award™ 9 years in a row.

**PHYSICIAN EDUCATION:** Regular symposia in brain tumor management and minimally invasive surgical techniques.

### MINIMALLY INVASIVE "KEYHOLE" NEUROSURGERY

We incorporate state-of-the-art technology with proven surgical experience to make tumor removal safer, less invasive and more effective. Most brain, pituitary and skull base tumors can now be removed by a "keyhole" approach. These include the endonasal endoscopic approach (via the nose), the supraorbital "eyebrow" craniotomy, the retromastoid craniotomy (behind the ear) as well as other minimally invasive routes.

For an appointment or second opinion:

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

### DISORDERS WE TREAT

#### BRAIN & SKULL BASE TUMORS

- Chordoma
- Colloid cyst
- Craniopharyngioma
- Epidermoid cyst
- Gliomas (astrocytoma, ependymoma, glioblastoma, oligodendroglioma)
- Hemangioblastoma
- Intraventricular tumors
- Meningioma
- Metastatic brain tumors
- Olfactory neuroblastoma & other sinonasal cancers
- Schwannoma (trigeminal & acoustic)

#### SPINAL CORD TUMORS

### 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.



**PACIFIC  
NEUROSCIENCE  
INSTITUTE** SM

**Saint John's  
Health Center**  
+ PROVIDENCE Health & Services



**PROVIDENCE**  
Little Company of Mary  
Medical Center  
Torrance



# PACIFIC BRAIN TUMOR CENTER AT PACIFIC NEUROSCIENCE INSTITUTE

## NEURO-ONCOLOGICAL TREATMENT OF BRAIN TUMORS & CLINICAL TRIALS AVAILABILITY

We are committed to improving the lives of patients with primary and metastatic brain cancers with our personalized approach to patient care. Both neuro-oncological treatment options and neurosurgical clinical protocols are evaluated and performed at the Pacific Brain Tumor Center in an individualized manner to achieve the best clinical and quality of life outcomes. In addition, our center conducts several advanced new and ongoing clinical trials for patients with high grade gliomas, glioblastomas and other brain cancers. Depending upon the specifics of a patient's tumor type, and prior treatments, the use of standard therapies, clinical trials or a combined approach of standard therapies followed by clinical trial enrollment may offer the best treatment option.

## GENOMIC PROFILING

When the unique molecular characteristics of each patient's tumor are determined, we can select the most appropriate targeted treatment based on these molecular and genetic abnormalities. This tailoring of treatment to each person gives us the greatest chance of achieving tumor remission and hopefully a cure. In some instances, what we learn from sequencing a tumor will lead to an established treatment and in others it will lead to clinical trial options.



**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 (2006-20017).



**GARNI BARKHOUDARIAN, MD**  
CO-DIRECTOR, PACIFIC 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.



**SANTOSH KESARI, MD, PhD**  
DIRECTOR, NEURO-ONCOLOGY

Dr. Kesari is a world-renowned neuro-oncologist with extensive experience treating all types of malignant brain tumors with particular emphasis on Glioblastoma multiforme (GBM). A physician scientist and recipient of Castle Connolly's TopDoctor Award, he and his team conduct leading-edge research and clinical trials in immunotherapy and biomarker-based therapies.



**ACHAL SINGH ACHROL, MD**  
CHIEF, GLIOMA SURGERY PROGRAM

Dr. Achrol specializes in computer-assisted minimally invasive keyhole and microvascular neurosurgery, using advanced neuroimaging and stereotactic navigation techniques. As a neurosurgeon and physician scientist, he treats patients suffering from brain tumors, stroke, intracranial aneurysms and vascular malformations.

For an appointment or second opinion:

**310-582-7450 | PacificBrainTumor.org**

 PacificNeuroscienceInstitute

 Pacific Neuroscience Institute (PNI)

 Pac\_Neuro\_Inst

 PacificNeuroscienceInstitute



**PACIFIC  
NEUROSCIENCE  
INSTITUTE<sup>SM</sup>**