

# Disease of the pineal gland

Diseases of the pineal gland include cysts, calcifications and tumors.

## Cysts

Cysts of the pineal gland are mostly asymptomatic. However, larger cysts can compress surrounding structures. They occur most often in young women.

## Calcification

Calcified formations - the so-called brain sand (*corpora arenacea*) commonly occur with increasing age. These are protein formations in which calcium salts are stored.

## Tumors

Pineal tumors (pinealomas) are rare. Most (50-70%) originate from isolated embryonic germ cells. Tumors that are from cells of the parenchyma of the pineal gland - pinealocytes, are called pineocytoma and pineoblastoma. **Pineocytoma** (pinealocytoma) is a slow-growing benign tumor. **Pineoblastoma** is a fast-growing high-grade tumor.

### Germ cell tumors

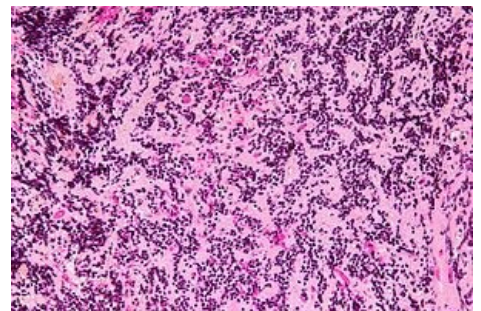
They most often take the form of a germinoma, resembling a testicular seminoma or an ovarian dysgerminoma. Other types according to germ cell differentiation are embryonal carcinoma, choriocarcinoma and, rarely, teratomas.

### Tumors of the pineal parenchyma

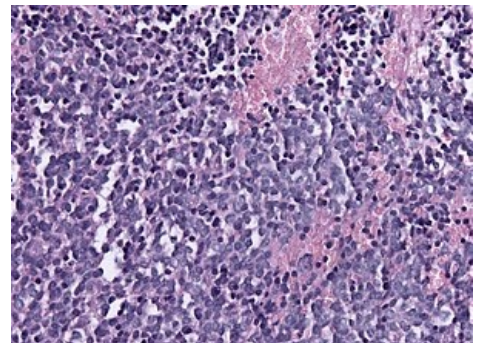
These lesions originate from specialized cells of the pineal gland (pinealocytes) that have features of neuronal differentiation.

**Pineocytomas** are highly differentiated lesions with areas of neuropil, cells with a small round nucleus and no evidence of mitosis or necrosis.

**Pineoblastoma** is a high-grade variant with little sign of neuronal differentiation, densely packed small cells with necrosis and a number of mitoses. High-grade tumors of the pineal gland occur in children, while low-grade lesions more often affect adults. Highly aggressive pineoblastoma often spreads through the cerebrospinal fluid.



Pineocytoma



Pineoblastoma

## Links

### Related Articles

- Pineal gland
- Germline tumors
- Calcification (pathology)

### References [ [edit](#) | [edit source](#) ]

- KUMAR, [edited by] Vinay, Vinay KUMAR and Jon C. Aster ; with illustrations by James A. Perkins. *Robbins and Cotran pathological basis of disease : [object Object]*. 9th edition. Philadelphia : Elsevier Saunders, c2015. ISBN 9781455726134 .
- WHITEHEAD, MT, C OH and A RAJU, et al. Physiologic pineal region, choroid plexus, and dural calcifications in the first decade of life. *AJNR Am J Neuroradiol* [online] . 2015, vol. 36, no. 3, pp. 575-80, also available from < <https://www.ncbi.nlm.nih.gov/pubmed/25355815> >. ISSN 0195-6108 (print), 1936-959X.