Supplementary Table 1. Demographic information for subjects providing tissue samples.

| Case Number | Age (years) | Gender | Experimental Use | Clinical History                                      |
|-------------|-------------|--------|------------------|------------------------------------------------------|
| 1           | 41          | F      | IHC, scRNA-seq   | Pituitary adenoma                                    |
| 2           | 52          | M      | IHC, scRNA-seq   | Esthesioneuroblastoma (contralateral, intracranial)  |
| 3           | 44          | F      | IHC, scRNA-seq   | Pituitary adenoma                                    |
| 4           | 50          | F      | scRNA-seq        | Pituitary adenoma                                    |
| 5           | 39          | F      | IHC              | Pituitary adenoma                                    |
| 6           | 47          | M      | IHC              | Pituitary adenoma                                    |
| 7           | 23          | F      | IHC              | Pituitary adenoma                                    |
Supplementary Table 11. Antibodies used for immunohistochemistry.

| REAGENT                  | SOURCE                  | IDENTIFIER                  | LOT#         | DILUTION |
|--------------------------|-------------------------|-----------------------------|--------------|----------|
| Mouse anti-TUJ1          | BioLegend               | Cat# 801201; AB_2313773     | B264428      | 1:500    |
| Rat anti-SOX2            | eBioscience             | Cat# 14-9811-82; AB_11219471 | 2023691      | 1:50     |
| Rabbit anti-SOX2         | Cell Signaling Technology | Cat# 3579; AB_2195767      | 01/2014 Lot:5 | 1:50     |
| Rabbit anti-KRT5         | Abcam                   | Cat# ab52635; AB_869890     | GR3198825-2  | 1:1000   |
| Rabbit anti-LHX2         | Millipore               | Cat# ABE1402; AB_2722523    | 3030529      | 1:500    |
| Rabbit anti-GNG13        | Sigma                   | Cat# HPA046272; AB_10960062 | R42082       | 1:150    |
| Rabbit anti-Ki67         | Abcam                   | Cat# ab15580; AB_443209     | GR3293897-3  | 1:250    |
| Rabbit anti-Doublecortin | Cell Signaling Technology | Cat# 4604; AB_561007      | 08/2018 Lot:5 | 1:200    |
| Mouse anti-OMP           | Santa Cruz Biotechnology | Cat# sc-365818; AB_10842164 | E1117       | 1:500    |
| Goat anti-OLIG2          | R&D Systems             | Cat# AF2418; AB_2157554     | UPA0717121   | 1:500    |
| Mouse anti-TP63          | Santa Cruz Biotechnology | Cat# sc-5301; AB_628093     | D2519        | 1:100    |
| AlexaFluor 594 Goat anti-Mouse | Jackson ImmunoResearch   | Cat# 115-585-146; AB_2338881   | 109495       | 1:100    |
| AlexaFluor 488 Donkey anti-Mouse | Jackson ImmunoResearch | Cat# 715-545-150; AB_2340846     | 113699       | 1:100    |
| AlexaFluor 594 Goat anti-Rabbit | Jackson ImmunoResearch | Cat# 111-585-144; AB_2307325     | 106684       | 1:100    |
| AlexaFluor 488 Donkey anti-Rat | Jackson ImmunoResearch | Cat# 712-545-150; AB_2340683     | 113383       | 1:100    |
| AlexFluor 488 Donkey anti-Goat | Jackson ImmunoResearch | Cat# 705-545-147; AB_2336933     | 115940       | 1:100    |