

Prolactin-Secreting Pituitary Adenomas

Diagnosis, dopamine agonist therapy, surgery, and pregnancy/fertility considerations for prolactinoma.

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International Consensus Statement
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GRADE

Strong Rec.
Weak Rec.

1 Diagnosis & Biochemical Evaluation

Strong New menstrual irregularity/amenorrhea, loss of libido/infertility, or erectile dysfunction should **trigger hyperprolactinemia workup**.

Strong If prolactin $< 5 \times$ ULN, repeat testing (cannulated sampling if stress suspected). Rule out **drug causes**, primary hypothyroidism, renal/liver failure, and **pregnancy** as causes of mild elevation.

Strong **Dilute** samples above the assay's upper detection limit; evaluate for macroprolactinemia if < 200 ng/mL with discordant findings; **re-measure at 1:100 dilution** in giant adenomas with normal/mildly elevated prolactin to exclude the **hook effect**.

Strong **Screen for other pituitary hormone deficiencies** at diagnosis; retest ~6–12 weeks after surgery, or after effective dopamine agonist therapy depending on baseline deficits and mass response.

2 Dopamine Agonist Therapy

Strong **Cabergoline** is preferred (long half-life, high efficacy, good tolerability) and first-line for most patients — highly effective at lowering prolactin, improving symptoms, and shrinking the adenoma. For Knosp 0–1 tumors, discuss surgery alongside dopamine agonist therapy given high cure potential.

Strong Counsel on frequent, mild **GI symptoms, dizziness, and fatigue**; start low and escalate slowly, take with food/at bedtime to improve tolerability. Screen for **neuropsychiatric effects** (compulsive behaviors, especially in men) — stop or adjust dose if present. Rare **cardiac valve risk** with long-term/high-dose therapy — baseline + follow-up echo suggested.

Strong ~1 in 5 remain in remission after cabergoline withdrawal — consider a withdrawal trial at regular intervals if favorable predictors are present (low maintenance dose, > 2 y treatment, substantial size reduction). Lifelong annual prolactin monitoring after successful withdrawal; **rechallenge** with dopamine agonist if recurrence.

3 Surgery

Strong **Transsphenoidal surgery** by an experienced neurosurgeon offers high cure rates in microprolactinomas and **Knosp 0–1 macroprolactinomas** — discuss as a first-line option alongside dopamine agonist therapy in this subgroup. **Medical therapy preferred first-line** if low surgical remission chance (Knosp ≥ 2).

Weak Consider surgery over dopamine agonist therapy for **rapidly progressive vision loss** (mass effect/apoplexy), DA intolerance/resistance, young women wishing to avoid decades of DA therapy, or **debulking before planned pregnancy** in large macroprolactinomas.

4 Pregnancy & Fertility

Strong Inform patients of **both medical and surgical options** when planning pregnancy; use **mechanical contraception** (not hormonal) to confirm treatment efficacy pre-pregnancy.

Strong **Discontinue dopamine agonist** as soon as pregnancy is confirmed for most patients; **maintaining** therapy during pregnancy is an option for large macroprolactinomas at risk of symptomatic growth.