# Cushing syndrome due to adrenal carcinoma

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A 42-year-old woman presented with 3 months of hair thinning, weight gain, acne, and new facial hair growth. She also reported mood changes, insomnia, and vague abdominal discomfort with bloating. Physical exam revealed moon-shaped facies, significant hairline thinning (Fig. 1), facial hirsutism with acne, truncal obesity, red-purple abdominal striae, and thin extremities. Laboratory studies revealed random cortisol level of 465 mcg/dL, dehydroepiandrosterone sulfate (DHEA-S) of 11.1 μg/mL (normal range = 0.6–3.3 μg/mL), urine free cortisol of 1432 μg/24 h (normal < 50 μg), testosterone of 41 ng/dL (normal < 86 ng/dL), and undetectable ACTH. Abdominal computed tomography (CT) revealed a > 9-cm diameter adrenal tumor (Fig. 2). The tumor was resected and surgical pathology confirmed an adrenal carcinoma. Prior to surgery, pheochromocytoma was ruled out based on low suspicion and low 24-h urinary fractionated catecholamines and metanephrines. This is necessary as an undiagnosed pheochromocytoma can cause fatal intraoperative hypertensive crises and arrhythmias. Despite surgical resection and chemotherapy, the patient died 2 months after surgery. Functional (cortisol-secreting) adrenal carcinomas often present with marked Cushingoid features and signs of androgen excess, as seen in this patient. It is hypothesized that the immunosuppressive effects of the excess cortisol allows for easier tumor propagation and more aggressive tumor growth.[1]

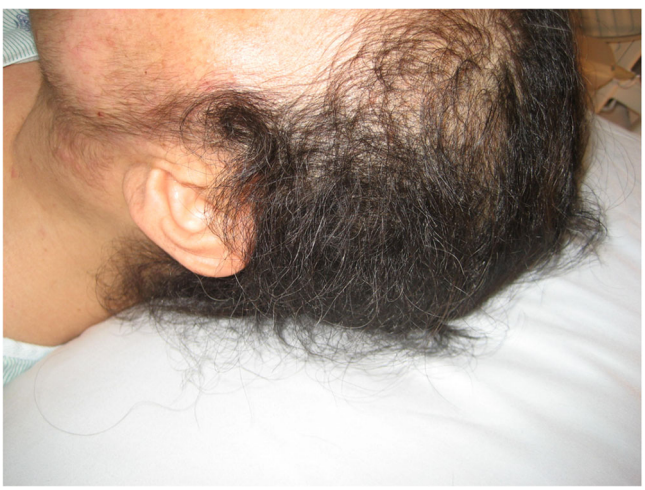

**Fig. 1 Significant hairline thinning.**

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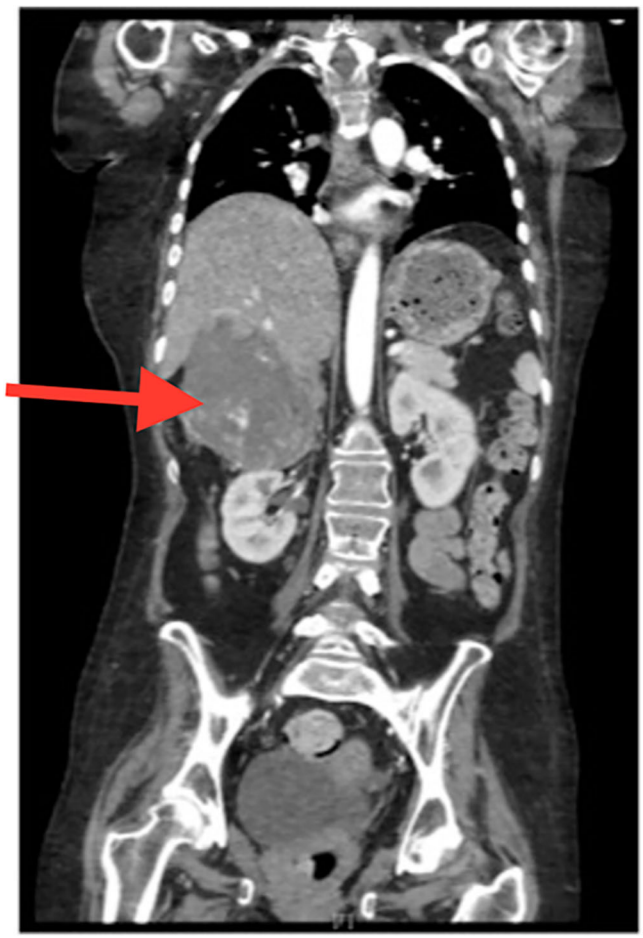

**Fig. 2 Abdominal CT scan with large right-sided adrenal mass.**

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***Compliance with ethical standards:***

***Conflict of interest:*** *The authors declare that they have no conflicts of interest.*

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