INTRODUCTION

Management of pituitary tumors: 2020 and beyond

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ALTHOUGH pituitary tumors are seldom malignant, their potential for local invasion, recurrence, and prolonged hormonal secretion can make them formidable challenges for patients and physicians alike. Fortunately, the overall management of pituitary tumors, including diagnostic and imaging capabilities, surgical intervention, medical therapy, and strategies for radiation delivery have steadily improved over the past several decades. In this issue of *Neurosurgical Focus*, a diverse array of reports attesting to the accomplishments of numerous centers in advancing pituitary tumor management is presented. Among these, several reports corroborate that the advent of endoscopy has had arguably the greatest impact on the management of pituitary adenomas over the past several decades, particularly for functional adenomas causing acromegaly and Cushing's disease. Numerous additional strategies for maximizing extent of tumor resection, such as intraoperative MRI, as well as those for skull base reconstruction, are presented in major series in this issue of *Neurosurgical Focus*. 2020 heralds a new era in the management of pituitary adenomas in that neurosurgeons are playing a major role in identifying precision and targeted therapies for these and other tumors, in this case

defined by genomic and epigenetic markers and transcription factors rather than solely according to immunostaining criteria. Alongside this, substantial discussion of the relatively novel 2017 WHO criteria for pituitary adenomas is noted in these studies. Several updates on reports and the utility of novel diagnostics, including PET imaging for acromegaly, are provided. Also relatively novel to the current issue of *Neurosurgical Focus* are some of the first uses of machine learning analysis to predict outcomes in patients with pituitary tumors, particularly in Cushing's disease. It is the issue editors' hope that this collection of timely and pertinent studies will help share established and emerging strategies for the management of these common and often challenging tumors.

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Disclosures

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