

# Endocrine remission of Cushing's disease after Endoscopic Transsphenoidal Surgery: a single centre experience

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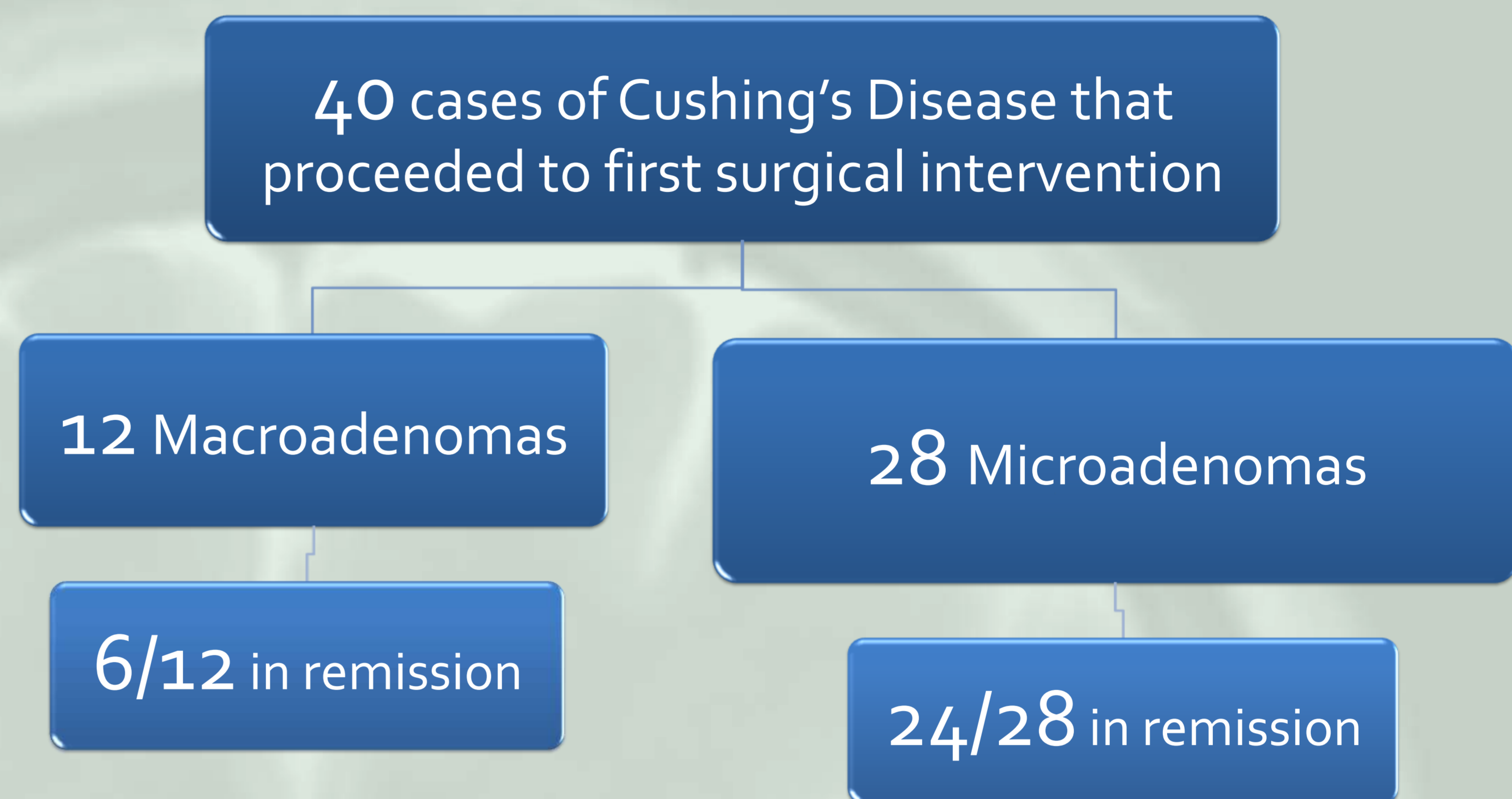
## BACKGROUND

Trans-sphenoidal surgery (TSS) is the first line treatment for Cushing's disease (CD).

The newer endoscopic method is increasingly replacing the traditional microscopic trans-sphenoidal approach.

The reported success rates for endoscopic TSS for CD are highly variable, averaging around 70-80% in experienced tertiary centres.

## RESULTS



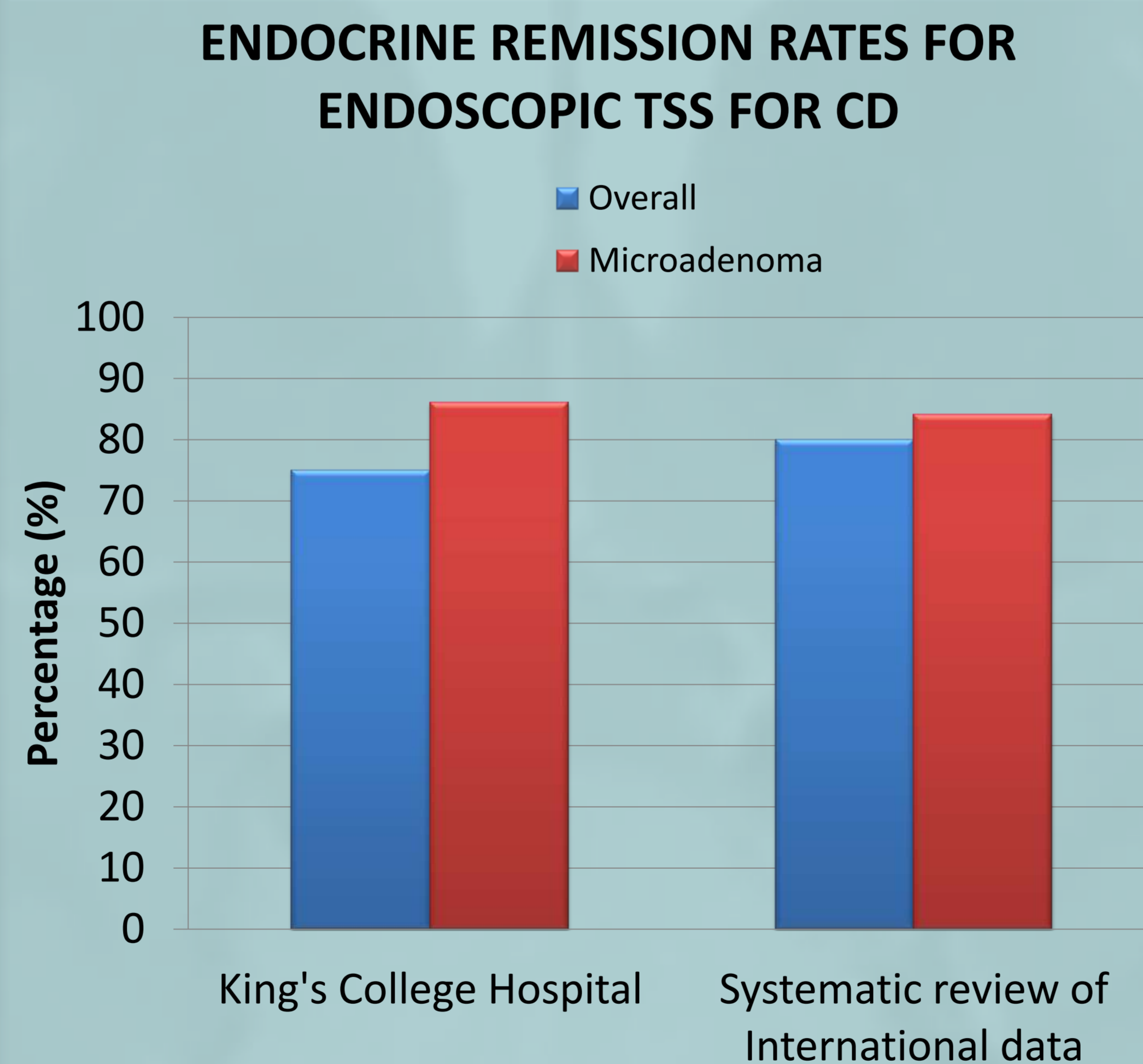
## OUR STUDY

Our study was a retrospective audit of the endocrine remission rates for patients who had endoscopic TSS for suspected or proven CD.

Data was collected using the electronic patient database from Jan 2007, when the department commenced endoscopic surgery, until Nov 2012.

We also conducted a systematic review of the international literature in order to compare our remission rates with other centres.

## GRAPH 1



## KEY POINTS

- The endocrine remission rate for endoscopic TSS at KCH for microadenomas was 86%. The overall post-operative remission rate was 75%.
- This is comparable to the highest remission rates reported in the international literature.

## METHODS

For the purpose of this analysis:

1. Patients who had surgery followed by a re-exploration *during the same admission* were treated as having a single surgical intervention.
2. Patients who had undergone previous pituitary surgery were excluded.
3. Post-operative remission was defined as serum cortisol <50nmol/l within 3 months of the surgical intervention.

## SYSTEMATIC REVIEW OF INTERNATIONAL COMPARATIVE DATA FOR ENDOSCOPIC TSS FOR CD

Method: An electronic literature search in MEDLINE, EMBASE and Web of Science was performed from 5th November 2012 to 6th December 2012 to identify all studies that answered the research question of interest. For this purpose, the following key terms were used: adrenocorticotrophic hormone, corticotrophin-releasing hormone, cortisol, Cushing's, Cushing's disease, disease, endoscopic, hypercortisolism, macroadenoma, meta-analysis, microadenoma, microscopic, microsurgery, neuronavigation, outcome assessment, pituitary adenoma, pituitary surgery, recurrence, relapse, remission, secretory tumo(u)r(s), surgery, treatment, transsphenoidal.

Study, Year, Journal	Initial overall remission rate (%)	Microadenoma remission rate (%)
Starke <i>et al.</i> , 2012, Neurosurgery	95	97
Leach <i>et al.</i> , 2010, Neurosurgery	70	NA
Hwang <i>et al.</i> , 2009, J Korean Med Sci	80	73
Dehdashti <i>et al.</i> , 2008, Neurosurgery	81	100
Netea-Maier <i>et al.</i> , 2006, Eur J Endocrine	77	79
Frank <i>et al.</i> , 2006, Neuroendocrinology	68	68
<b>TOTAL AVERAGE</b>	<b>80 (68-95)</b>	<b>84 (68-100)</b>