

## SUPPLEMENTARY

### Supplementary Table 1 Search term translation example

Query translation:

((("endoscopy"[MeSH Terms] OR "endoscopy"[All Fields] OR "endoscopic"[All Fields]) OR (minimally[All Fields] AND invasive[All Fields])) AND (open[All Fields] OR traditional[All Fields] OR external[All Fields]) AND (sinonasal[All Fields] OR ("nasopharynx"[MeSH Terms] OR "nasopharynx"[All Fields] OR "nasopharyngeal"[All Fields])))

Direct translations:

endoscopic	"endoscopy"[MeSH Terms] OR "endoscopy"[All Fields] OR "endoscopic"[All Fields]
nasopharyngeal	"nasopharynx"[MeSH Terms] OR "nasopharynx"[All Fields] OR "nasopharyngeal"[All Fields]

## Supplementary Table 2

### Newcastle-Ottawa Score Assessment <sup>19</sup>

The criteria for quality assessment consist of eight criteria, which can be answered as either present/implied (\*) or absent (.). The criteria, with maximum score in brackets, are:

#### Selection

1. Representativeness of Cohort (\*)
2. Selection of Nonexposed (\*)
3. Cohort Ascertainment of Exposure (\*)
4. Outcome of Interest (\*)

#### Comparability

5. Comparability of Cohorts (\*\*)

#### Outcome

6. Assessment of Outcome (\*)
7. Adequate Duration of Follow-up (\*)
8. Adequate Follow-up of Cohort (\*)

The results for each study are displayed below.

Study	Criteria								Score	Quality
	1	2	3	4	5	6	7	8		
Hagemann et al. 2018	*	*	*	*	**	*	*	*	9	Good
Huang et al. 2018	*	.	*	*	*	*	*	*	7	Good
Fu et al. 2017	*	*	*	*	*	*	.	*	7	Good
Farquhar et al. 2016	*	*	*	*	*	*	*	*	8	Good
Mortuaire et al. 2016	*	*	*	*	**	*	*	*	9	Good
Naunheim et al.2016	*	*	*	*	*	*	.	*	7	Good
Bhayani et al. 2014	*	*	*	*	**	*	*	*	8	Good
Guo et al. 2014	*	*	*	*	**	*	*	.	8	Good
Saedi et al. 2014	*	*	*	*	**	*	.	*	8	Good
Arnold et al. 2012	*	*	*	*	**	*	*	*	9	Good

Good quality: 3 or 4 stars in selection domain AND 1 or 2 stars in comparability domain AND 2 or 3 stars in outcome/exposure domain.

Fair quality: 2 stars in selection domain AND 1 or 2 stars in comparability domain AND 2 or 3 stars in outcome/exposure domain.

Poor quality: 0 or 1 star in selection domain OR 0 stars in comparability domain OR 0 or 1 stars in outcome/exposure domain.