Major surgical resections for head and neck cancers in England – does age, sex or place of residence matter?

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Background

✓ Surgery is often the primary treatment for head and neck (H&N) cancers but choice of treatment modality will depend on cancer sub-site, stage, co-morbidities and clinical practice.

✓ Major surgical resections (MSRs) are non-diagnostic surgical operations performed with the intent to remove the tumour.

✓ Patients often require intensive multi-modality treatments and rehabilitation with long-term support to achieve an adequate recovery.

✓ The concentration of special senses in the head and neck means that even minor changes in tissues can have a profound impact upon an individual's quality of life.

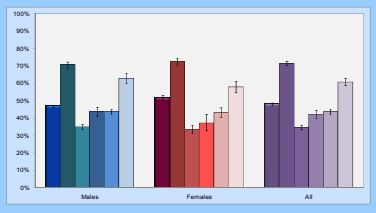
Methods

Patients diagnosed with H&N cancers (excluding nasopharynx) between 2004 and 2008 were identified from the National Cancer Data Repository (NCDR) and linked to Hospital Episode Statistics (HES). Only HES-matched patients were included in the analysis. Patients with multiple records of MSRs (30 days prior and six months post diagnosis) were included once. Differences in patients receiving MSRs were analysed by:

- cancer sub-sites (all H&N, oral cavity, oropharynx, hypopharynx, larynx and major salivary gland),
- sex,
- age (under 40, 40-49, 50-59, 60-69, 70-79, 80 plus),
- place of residence (linked to deprivation quintile and Cancer Network).

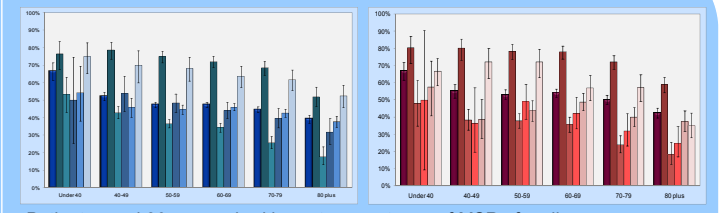
Key findings

Cancer sub-site and sex



- Oral cavity cancer (71.4%) had the highest and the hypopharynx cancer (42.1%) the lowest percentage of MSRs.
- For all head and neck cancers, the percentage of MSRs was significantly lower for males (46.7%) than for females (51.7%).
- However, the sex differences by various head and neck cancer sites were not statistically significant.

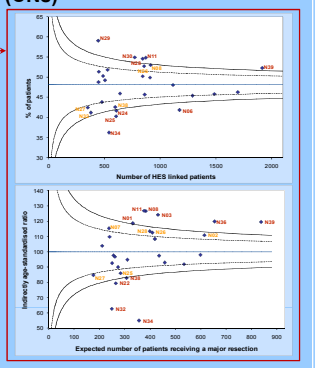
Age and sex



- Patients aged 80 or over had lowest percentages of MSRs for all cancer groups examined.
- For this age group, patients with oropharynx cancer were least likely to be treated with major surgical resection (17.9%).
- The smallest gap between the age bands was noted for larynx cancers.

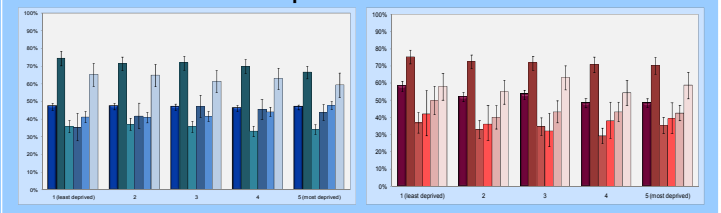
Cancer Networks (CNs)

	Number of CNs outside confidence limits	
	% of MSRs	Indirectly ASRs
All H&N cancers	14	16
Oral Cavity	5	14
Oropharynx	14	13
Hypopharynx	5	11
Larynx	14	14
Major salivary gland	1	3



- Variations at CNs level were observed for all H&N combined and for individual cancer sub-sites examined.
- Generally, more CNs fell outside the confidence limits for age standardised ratios (ASRs) than for unadjusted proportions of MSRs.
- This suggests that differences exist between CNs which cannot be solely explained by different age structure of the population.

Deprivation and sex



- The significant differences observed between quintiles were relatively small.
- For all head and neck cancers, the percentage of MSRs for females decreased for more deprived groups with a gap of 2.2% per quintiles.
- For oral cavity cancer, the proportion decreased per deprivation quintile by 1.8% for males and 1.2% for females.
- For larynx cancer, the percentage in males increased for more deprived groups by 1.8% per quintile.

Conclusions

✓ Variations in the proportion of H&N cancer patients undergoing MSRs exist by sex, age and deprivation.

✓ For older age groups, there was a clear, decreasing trend in the proportion of patients undergoing a major surgical resection.

✓ The analysis of the proportion of patients with a record of major surgical resection by socio-economic deprivation revealed that there was some evidence of significant differences between quintiles.

✓ Variations in major surgical rates were also observed between CNs.

Recommendations

Cancer networks that are significant outliers for one or more of the cancer sites should ask the following questions of their H&N services:

✓ Is there a well functioning H&N MDT and are all relevant patients discussed?

✓Are all appropriate treatment modalities available, accessible and offered to patients?

✓Are there any variations in case mix (stage, co-morbidities, performance status) that might explain higher/lower resection rates?

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