Head and Neck Cancer: Referral pathway and beyond

Rafael Moleron
Consultant Clinical Oncologist
Aberdeen Royal Infirmary
Suspected Cancer Urgent Referral Electronically (SeCURE)

HEAD AND NECK

Suspected Head & Neck Cancer

Persistent unexplained head and neck lumps for >3 weeks.
- Ulceration or unexplained swelling of the oral mucosa persisting for >3 weeks
- All red or mixed red and white patches of the oral mucosa persisting for >3 weeks.
- Persistent hoarseness lasting for >3 weeks (request a chest x-ray at the same time)
- Dysphagia or odynophagia (pain on swallowing) lasting for >3 weeks.
- Persistent pain in the throat lasting for >3 weeks.

NB: Stridor should be referred as an emergency.
Scottish Referral Guidelines for Suspected Cancer

- Persistent unexplained head and neck lumps for >3 weeks
- Unexplained ulceration or unexplained swelling/induration of the oral mucosa persisting for >3 weeks
- All unexplained red or mixed red and white patches of the oral mucosa persisting for >3 weeks
- Persistent (not intermittent) hoarseness lasting for >3 weeks. If other symptoms are present to suggest suspicion of lung cancer, refer via lung cancer guideline
- Persistent pain in the throat or pain on swallowing lasting for >3 weeks
The Head and Neck Cancer Pathway
Time targets

THE CANCER REFERRAL TARGET

GP REFERRAL → FIRST SEEN BY A SPECIALIST → DECISION TO TREAT MADE → FIRST TREATMENT

MAXIMUM TIME FROM GP URGENT SUSPECTED CANCER REFERRAL TO TREATMENT

TARGET 14 DAYS MAX

TARGET 31 DAYS MAX

WE WILL BEAT CANCER SOONER
cruk.org
Pathway and survival
The English case

Wong BYW et al. Eur Arch Otorhinolaryngol 2017
Pathway and survival
The English case

Wong BYW et al. Eur Arch Otorhinolaryngol 2017
Incidence of H&N Cancer UK

Incidence of H&N Cancer UK: HPV

Risk factors: HPV

K Ang et al. NEJM 2010
Management

- Early disease
  - Surgery
  - Radiotherapy

- Locally advanced disease
  - Chemoradiotherapy
  - Surgery + Radiotherapy (or Chemoradiotherapy)

- Recurrent or metastatic disease
  - Chemotherapy
  - Immunotherapy
Surgery
MACH-NC
Meta-analysis of chemotherapy in H&N cancer

- 87 trials
- 16,485 patients
- Trials performed between 1965 and 2000
- HR death 0.88 p <0.0001
- Absolute improvement in survival 4.5% at 5 years
- Concomitant chemoradiotherapy

Blanchard et al. Radiother Oncol 2011
MACH-NC
Meta-analysis of chemotherapy in H&N cancer

Absolute survival benefit of concurrent chemoradiotherapy

Oral cavity 8.9%
Oropharynx 8.1%
Larynx 5.4%
Hypopharynx 4%

Blanchard et al Radiother Oncol 2011
<table>
<thead>
<tr>
<th>Category</th>
<th>No. Deaths / No. Entered</th>
<th>LRT+CT O-E</th>
<th>Variance</th>
<th>Hazard Ratio</th>
<th>HR [95% CI]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral cavity</td>
<td>1400/2182 1449/2149</td>
<td>-96.2</td>
<td>664.7</td>
<td></td>
<td>0.87 [0.80;0.93]</td>
</tr>
<tr>
<td>Oropharynx</td>
<td>1981/2954 2097/2924</td>
<td>-127.4</td>
<td>980.6</td>
<td></td>
<td>0.86 [0.82;0.93]</td>
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<tr>
<td>Larynx</td>
<td>926/1523 949/1593</td>
<td>-60.2</td>
<td>447.1</td>
<td></td>
<td>0.87 [0.80;0.96]</td>
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<tr>
<td>Hypopharynx</td>
<td>958/1800 1001/1387</td>
<td>-53.9</td>
<td>460.6</td>
<td></td>
<td>0.88 [0.80;0.96]</td>
</tr>
<tr>
<td>Total</td>
<td>5254/9139 5496/8053</td>
<td>-342.7</td>
<td>2553.1</td>
<td></td>
<td>0.87 [0.84;0.91]</td>
</tr>
</tbody>
</table>

Test for interaction: p = 0.99  I² = 19 %
LRT+CT better | LRT better
LRT+CT effect: p < 0.0001

Blanchard et al Radiother Oncol 2011
Survival in before and after adoption of chemoradiotherapy

Gupta et al IJROBP 2014
Radiotherapy plus cisplatin or cetuximab in low-risk human papillomavirus-positive oropharyngeal cancer (De-ESCALaTE HPV): an open-label randomised controlled phase 3 trial

Hisham Mehanna, Max Robinson, Andrew Hartley, Anthony Kong, Bernadette Foran, Tessa Fulton-Lieuw, Matthew Dalby, Pankaj Mistry, Mehmet Sen, Lorcan O’Toole, Hoda Al Booz, Karen Dyker, Rafael Moleron, Stephen Whitaker, Sinead Brennan, Audrey Cook, Matthew Griffin, Eleanor Aynsley, Martin Rolles, Emma De Winton, Andrew Chan, Devraj Srinivasan, Ioanna Nixon, Joanne Grumett, C René Leemans, Jan Buter, Julia Henderson, Kevin Harrington, Christopher McConkey, Alastair Gray, Janet Dunn, on behalf of the De-ESCALaTE HPV Trial Group*

www.thelancet.com  Published online November 15, 2018
EPIDERMAL GROWTH FACTOR RECEPTOR INHIBITORS

Cons:

2 meta-analyses suggests inferiority of EGFR inhibitors compared to cisplatin in HNC generally

- Huang, BMC Cancer, 2016
- Tian, I J Cancer, 2018

Only 40% of HPV+ tumours are high EGFR expressors

\[\text{cf 70-80\% HPV negative tumours}\]

EGFR status not predictive of response

- Kumar et al, JCO, 2008

Kindly shared by Prof H Mehanna
SURVIVAL

Worse overall survival with cetuximab

2 yr OS:
97.5% vs 89.4%
p = 0.001

HR = 4.99
95% CI: 1.70 to 14.67

Adjusted HR: 5.94,
95% CI: 1.98-17.79, p=0.001

NNT for harm
12

Kindly shared by Prof H Mehanna
RECURRENCE

Significantly higher recurrence rates with cetuximab

All recurrences

2 yr RR
6.0% vs 16.1%
HR=3.39
(1.61 to 7.19)
p=0.0007

Kindly shared by Prof H Mehanna
Parotid sparing
Delivery innovation

- Deliver Intensity Modulated RadioTherapy (IMRT) or Volumetric Modulated Arc Therapy (VMAT)

- Monitor soft tissue movement by use of Cone Beam Computed Tomography (CBCT)

- Gate delivery of treatment to compensate for breathing motion
Target definition

- How to get the most accurate information about the position of the cancerous cells

- Utilizing information from CT, MRI, PET, US

- For head and neck mainly MRI fusion if possible, but often difficult with the differences in patient positioning from diagnostic to therapy
MRI
MRI
PET
PET
VMAT delivery
Any question?