Interesting Case Conference

10/14/2013
Presentation

• 71 yo M history of right-sided pulmonary squamous cell carcinoma (T2, N1, Mx) Jan 2006
  – S/P right pneumonectomy and chemotherapy

• Fatigue, weight loss (15 lbs)

• Surveillance CT there are two indeterminate nodules (largest 6mm) in left upper lobe of lung.

• New irregular superficial mass in soft tissues of the right inguinal region
Physical exam

• Firm, subcutaneous nodule in the inguinal crease
• fixed
• 2x3 cm
• Non-tender
• Additional smaller sub centimeter inguinal nodules
Pass # 1. Diff-Quik
Pass # 2. Diff-Quik
On-site Assessment

• Clinician (dermatologist), patient, and family in room

• Favor reactive lymphocytes
  – *But need to r/u a low grade lymphoproliferative process*

• Negative for metastatic carcinoma

• Additional passes
  – Total of 6 passes
  – One pass dedicated for flow
Pap stain, low power
Cytospin in heme path
Flow summary

- CD10: Dim
- CD19: Dim-moderate
- CD20: moderate
- FMC-7: moderate
- Kappa: moderate
- K/L ratio: 712

Flow sign-out:

C10+-, kappa restricted mature B-cell neoplasm.
Histopathologic assessment of a core or excisional biopsy required for final diagnosis and classification.
## Cancer Epidemiology

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>Estimated New Cases</th>
<th>Estimated Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bladder</td>
<td>72,570</td>
<td>15,210</td>
</tr>
<tr>
<td>Breast (Female – Male)</td>
<td>232,340 – 2,240</td>
<td>39,620 – 410</td>
</tr>
<tr>
<td>Colon and Rectal (Combined)</td>
<td>142,820</td>
<td>50,830</td>
</tr>
<tr>
<td>Endometrial</td>
<td>49,560</td>
<td>8,190</td>
</tr>
<tr>
<td>Kidney (Renal Cell) Cancer</td>
<td>59,938</td>
<td>12,586</td>
</tr>
<tr>
<td>Leukemia (All Types)</td>
<td>48,610</td>
<td>23,720</td>
</tr>
<tr>
<td>Lung (Including Bronchus)</td>
<td>228,190</td>
<td>159,480</td>
</tr>
<tr>
<td>Melanoma</td>
<td>76,690</td>
<td>9,480</td>
</tr>
<tr>
<td>Non-Hodgkin Lymphoma</td>
<td>69,740</td>
<td>19,020</td>
</tr>
<tr>
<td>Pancreatic</td>
<td>45,220</td>
<td>38,460</td>
</tr>
<tr>
<td>Prostate</td>
<td>238,590</td>
<td>29,720</td>
</tr>
<tr>
<td>Thyroid</td>
<td>60,220</td>
<td>1,850</td>
</tr>
</tbody>
</table>

http://www.cancer.org/cancer/cancerbasics/cancer-prevalence
Cytology and Lymphoma

• Although tissue often required FNA can
  – Rule out other benign causes for lymphadenopathy
  – Rule out carcinoma metastasis
  – Confirm LN vs cyst vs soft tissue tumor, salivary gland, etc
  – Collect material for ancillary studies

Cytology and lymphoma

Small cells (1-2 x RBC)
- SLL/CLL
- Mantle cell
- Follicular
- Marginal Zone, (MALT)
- Lymphoplasmacytic

Intermediate (2-3x RBC)
- Burkitt
- Mantle cell, blastoid variant
- Lymphoblastic lymphoma

Large cells (>3x RBC)
- DLBCL
- ALCL
- PTLD
- T-cell lymphomas (mixed populations)

Cibas, E. Ducatman. Cytology Diagnostic Principles and Clinical Correlates. 3rd Ed
# TABLE 11.6 -- DIFFERENTIAL IMMUNOPHENOTYPE AND GENETICS OF SMALL B-CELL LYMPHOMAS

<table>
<thead>
<tr>
<th></th>
<th>Small Lymphocytic</th>
<th>Mantle Cell</th>
<th>Follicular</th>
<th>Marginal Zone</th>
<th>Lymphoplasmacytic</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD5</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>CD10</td>
<td>−</td>
<td>−/+</td>
<td>+/−</td>
<td>−</td>
<td>−</td>
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<tr>
<td>CD20</td>
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<td>+</td>
<td>+</td>
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<td>+</td>
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<tr>
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<td>+</td>
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<td>−/+</td>
<td>−</td>
<td>−</td>
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<tr>
<td>cyclin D1</td>
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<td>+</td>
<td>−</td>
<td>−</td>
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<tr>
<td>CD43</td>
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<td>+/−</td>
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<td>Tdt</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>genetics</td>
<td>trisomy 12 (30%), others</td>
<td>t(11;14)</td>
<td>t(14;18)</td>
<td>trisomy 3, t(11;18), others</td>
<td>inconsistent</td>
</tr>
</tbody>
</table>

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