Return To Fly After Anaplastic Large Cell Lymphoma: a Case Report

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ICASM 2018 Author’s Declaration
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• I have **not received** Non-Governmental or Non-Academic support or funding for the material, which I intend to present.

• I will not discuss off-label use and/or investigational use in my presentation.

• The author opinion and do not reflect the official policy of the Royal Thai Air Force, the Ministry of Defense, or the Thai Government.
Pre Condition for Unsafe Act

- Substandard Conditions of Operators
  - Adverse Mental States
  - Adverse Physiological States
  - Physical/Mental Limitations

- Substandard Practices of Operators
  - Crew Resource Mismanagement
  - Personal Readiness
Personal Minimums Checklist

**PAVE**

- **A**ircraft
- **V**environment
- **P**ilot
- **E**xt. Press

*PAVE the way*
The aim of medical certification is to reduce the medical component of human factors that may contribute to aircraft accidents to an acceptable level of risk.
Early return to normal working life

**Pro**
- Economic
- Experience
- Skills

**Con**
- Delayed S/E
- Active illness
Increasing Malignancy Disease

Life Expectancy
Early Detection

All cause mortality
Certification After Treatment for Malignant Disease

• Considered only if
  • After primary treatment (Sx, ChT, RT)
    • curative
    • no residual evidence of tumour

• Few exceptions
  • Chronic lymphoid malignancies
  • Early prostate cancer

Gradwell, David. Ernsting's Aviation and Space Medicine, 5th Edition
Risk of incapacitation from Recurrence of Tumour

Risk of Recurrence

Site of Recurrence

Weighting Factor

Gradwell, David. Ernsting's Aviation and Space Medicine, 5th Edition
<table>
<thead>
<tr>
<th>Site</th>
<th>Incapacitation risk weighting (%)</th>
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<tbody>
<tr>
<td>Local</td>
<td>5</td>
</tr>
<tr>
<td>Lymph nodes</td>
<td>5</td>
</tr>
<tr>
<td>Liver</td>
<td>5</td>
</tr>
<tr>
<td>Lung</td>
<td>5</td>
</tr>
<tr>
<td>Bone</td>
<td>5</td>
</tr>
<tr>
<td>Bone Marrow</td>
<td>20</td>
</tr>
<tr>
<td>Brain</td>
<td>100</td>
</tr>
<tr>
<td>Group</td>
<td>Potential Cure (%)</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------</td>
</tr>
<tr>
<td>A</td>
<td>&gt;80</td>
</tr>
<tr>
<td>B</td>
<td>70</td>
</tr>
<tr>
<td>C</td>
<td>60</td>
</tr>
<tr>
<td>D</td>
<td>50</td>
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<tr>
<td>E</td>
<td>40</td>
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<tr>
<td>F</td>
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<tr>
<td>G</td>
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</tr>
<tr>
<td>H</td>
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<td>Group</td>
<td>Class 1 Multicrew</td>
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<tr>
<td>-------</td>
<td>------------------</td>
</tr>
<tr>
<td>A</td>
<td>3 months</td>
</tr>
<tr>
<td>B</td>
<td>6 months</td>
</tr>
<tr>
<td>C</td>
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</tr>
<tr>
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<tr>
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<td>3 months</td>
</tr>
<tr>
<td>H</td>
<td>6 weeks</td>
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Background

- Known prognostic factors at presentation
  - age
  - stage
    - number of extranodal sites
    - performance status related to mobility impairment,
  - full oncology report

- Medical certification is possible if remission is sustained for a minimum of one year after chemotherapy.
Case Report

- A 53-year-old male
  - prolonged fever with dyspepsia
- CT scan
  - retroperitoneal and left diaphragmatic lymphadenopathy
- Lymph node core biopsy
  - malignant round cell neoplasm

Anaplastic Large Cell Lymphoma - ALCL stage II
Case Report

• ChT (**CHOP** regimen x 6 cycles)
  • Cyclophosphamide
  • Hydroxydaunorubicin (doxorubicin or adriamycin)
  • Oncovin ® (Vincristine)
  • Prednisone
Re-evaluation after 4th cycle

- CT of whole abdomen
  - resolution of lymphadenopathy
- F/U q 3 months
- 18F-FDG PET : negative study
- Condition improved >> returned to flying
  - Class 1 OML
Discussion

• Annual medical examination is not enough
• Accurate assessment of ALCL is challenging
• Limit data in adult patients
Discussion

• Weighting time period to re-certification
• Relapse
  • Malaise, Fatigue, Lymphoid swollen
• Symptomatic relapse \( \Rightarrow \text{uncommon} \)
• Sudden incapacitation is \text{rare}.  


Lymphoma

Aggressive
Curable

indolent
inexorably
progressive

Slim Relapse

Delayed Relapse

ChT
Conclusion

• The key to certification of lymphoma
  • **Fair and Objective**
  • Strong and clear in policy
  • Multidisciplinary
  • Need Scientific data support
• Should be **audited** by board of specialist
Question ?
The International Congress of Aviation and Space Medicine

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