



Return To Fly After Anaplastic Large Cell Lymphoma a Case Report

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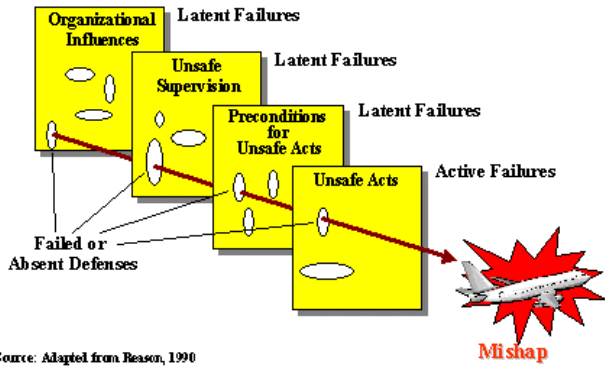


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- I will not discuss off-label use and/or investigational use in my presentation.
- The author opinion and do not reflect the official policy of the Royal Thai Air Force, the Ministry of Defense, or the Thai Government.

The Reason Model and Accident Causal Chain



Pre Condition for Unsafe Act

Substandard Conditions of Operators

Substandard Practices of Operators

Adverse Mental States

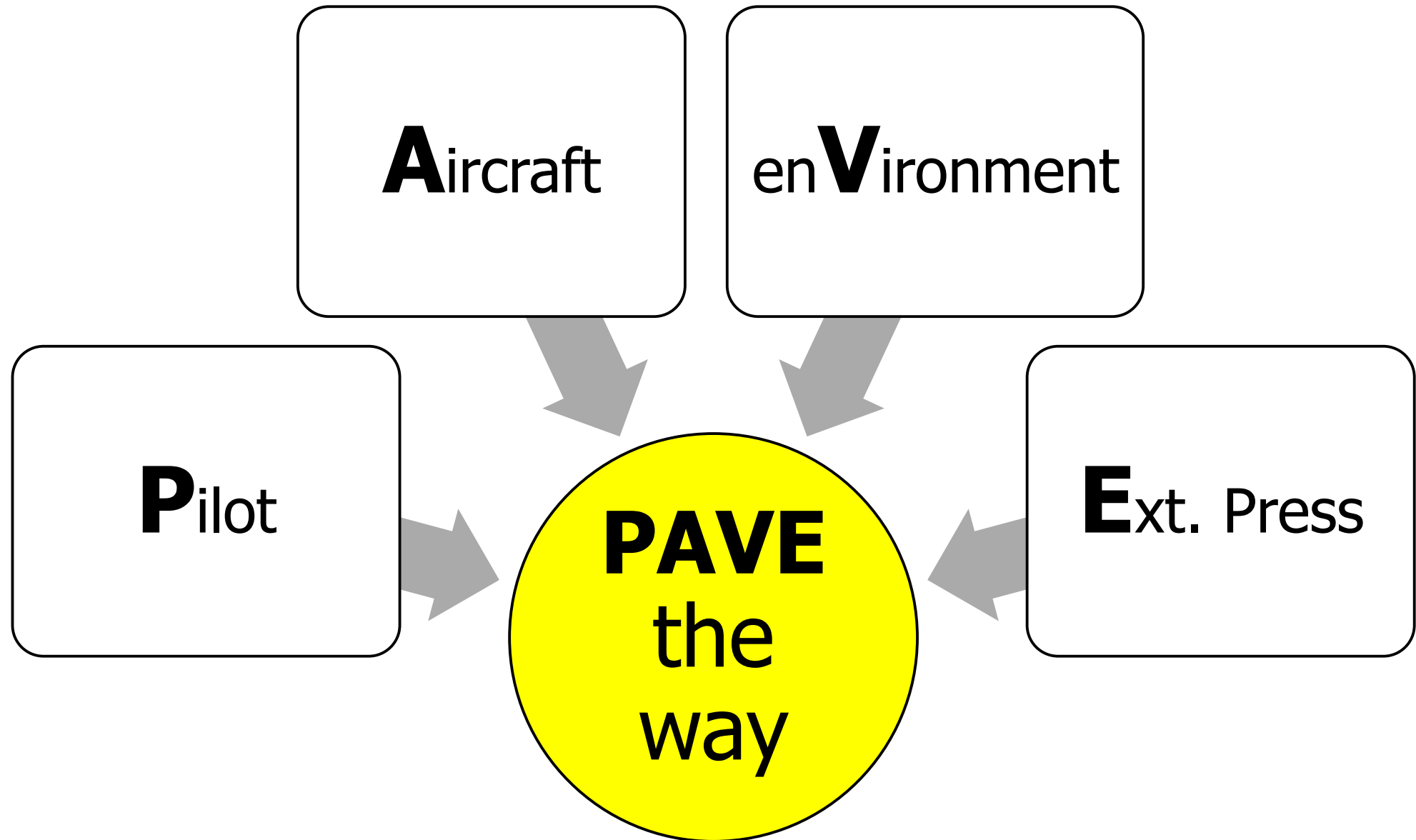
Adverse Physiological States

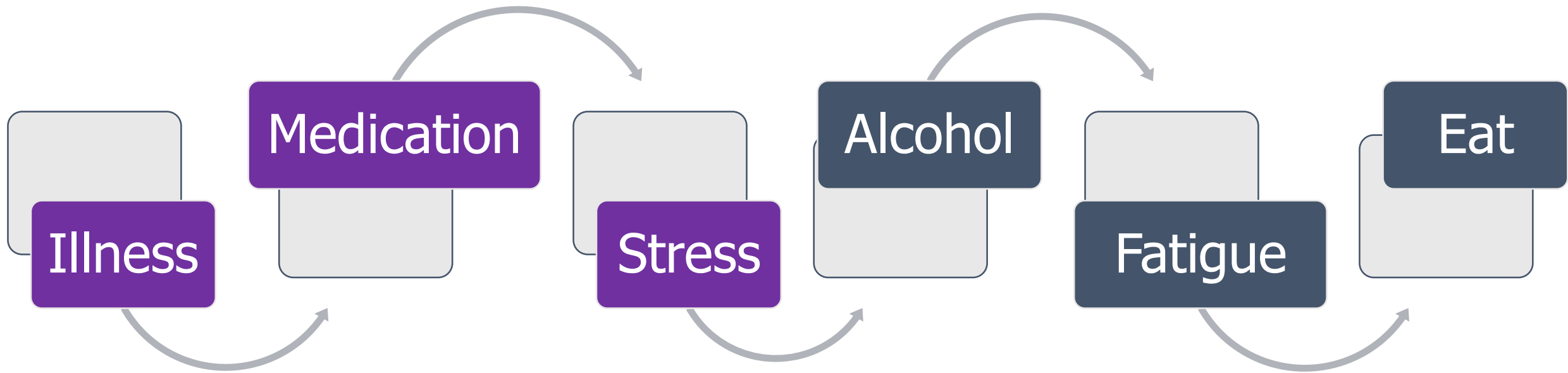
Physical/Mental Limitations

Crew Resource Mismanagement

Personal Readiness

Personal Minimums Checklist

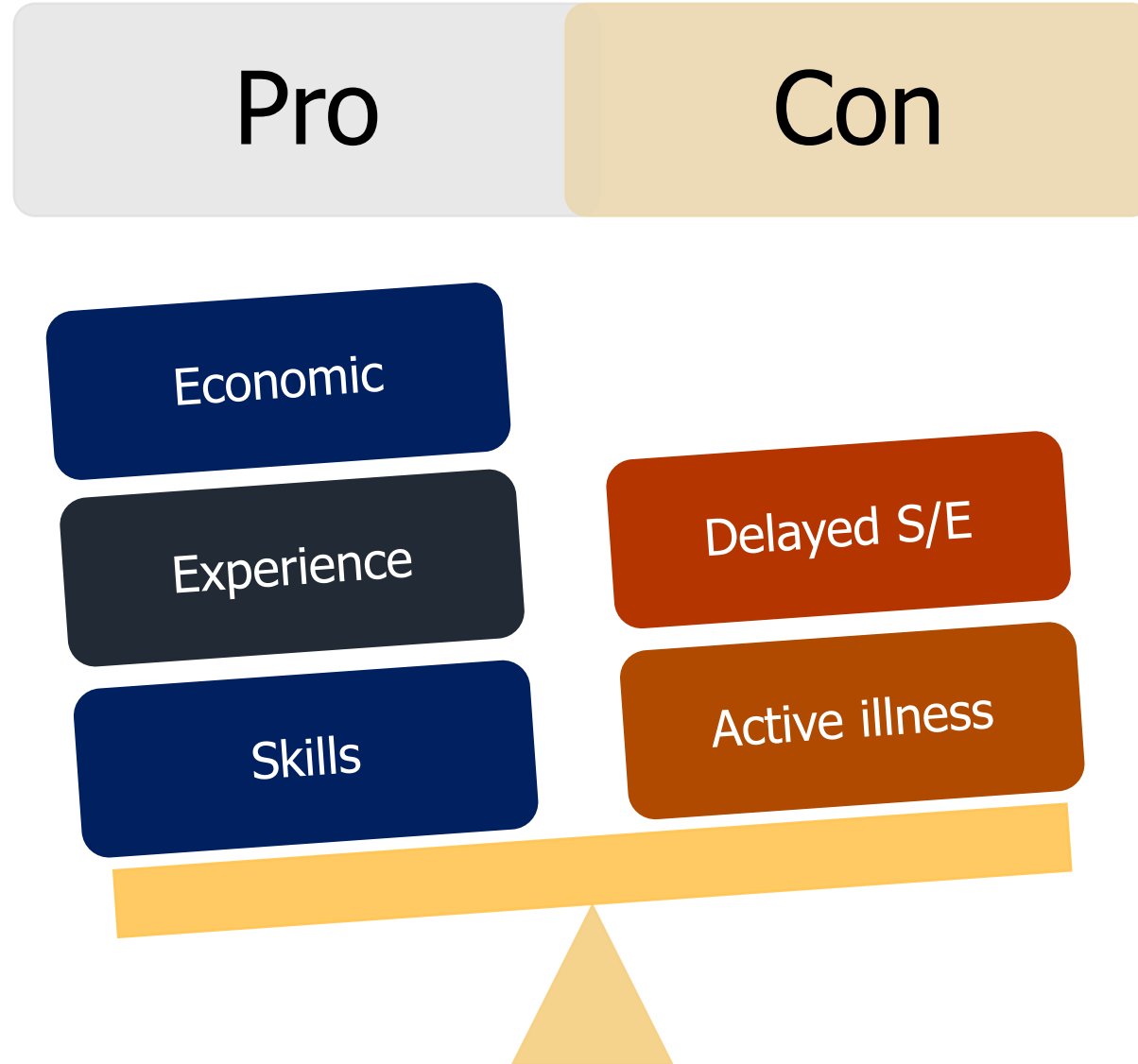




AIM

- 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

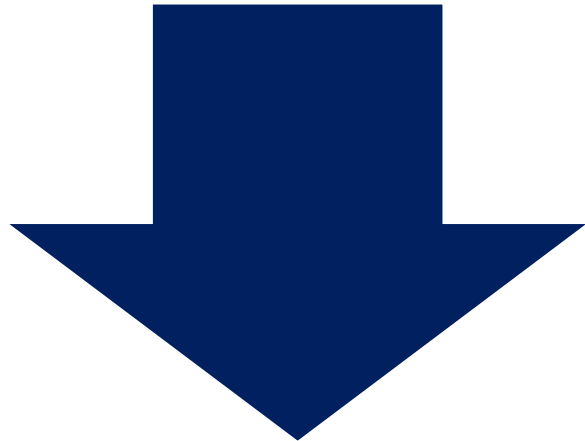


Increasing Malignancy Disease



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

Risk of incapacitation from Recurrence of Tumour

Risk of
Recurrence

Site of
Recurrence

Weighting
Factor

Incapacitation Risk Weighting for Recurrence at Different Metastatic Sites

Site	Incapacitation risk weighting (%)
Local	5
Lymph nodes	5
Liver	5
Lung	5
Bone	5
Bone Marrow	20
Brain	100

Potential Cure Rates in Patients with Lymphoid Malignancy

Group	Potential Cure (%)	Diagnosis
A	>80	MZ MALT (stage I/II) DLBC (stage I/II) ALCL (stage I/II) , including ALK-positive solitary plasmacytoma
B	70	Primary mediastinal lymphoma
C	60	DLBC stage III/IV MZ MALT stage 3-4
D	50	ALCL (stage III/IV) including ALK negative
E	40	Pre-T ALL Pre-T LBL
F	<10	Other peripheral T-cell and NK lymphoma/leukaemia
G	Considered incurable	SLL B-cell CLL Lymphoplasmacytic lymphoma
H	Miscellaneous group	Primary cutaneous lymphoma

Minimum Time to Class 1 Certification after Lymphoid Malignancy

Group	Class 1 Multicrew	Class 1 Unrestrict
A	3 months	3 months
B	6 months	2 years
C	1 year	2 years
D	2 years	3 years
E	2 years	3 years
F	5 years	10 years
G	3 months	1 year
H	6 weeks	6 weeks

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

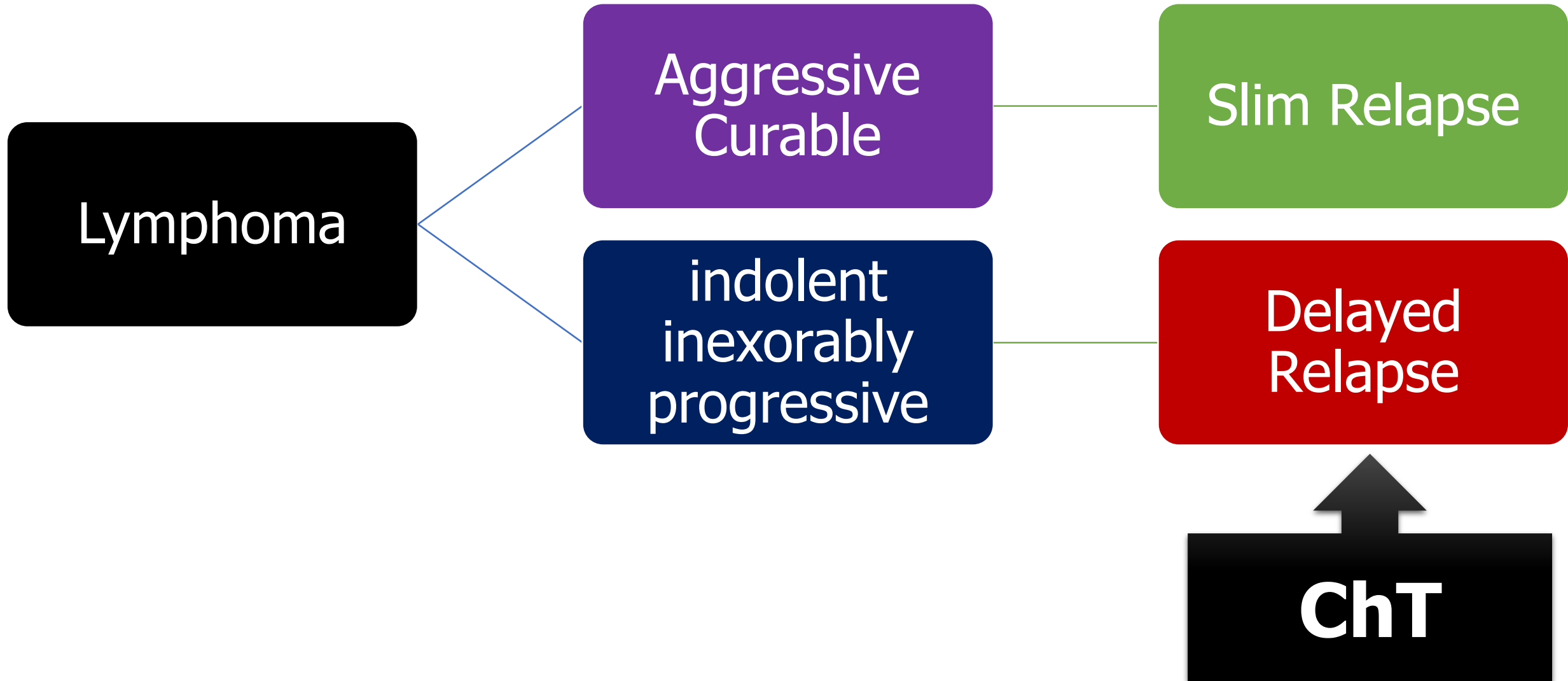
- CT of whole abdomen
 - **resolution** of lymphadenopathy
 - F/U q 3 months
- 18F-FDG PET : negative study
- Condition **improved** >> returned to flying
 - **Class 1 OML**

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 >> **uncommon**
- Sudden incapacitation is **rare**.



Lymphoma

Aggressive
Curable

Slim Relapse

indolent
inexorably
progressive

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

ICASM

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