European Aviation Safety Agency

NOTICE OF PROPOSED AMENDMENT

NPA 2012-18 (B.VI)

RMT.0153 & RMT.0154 (ATM.003(a)&(b))

Licensing and medical certification of air traffic controllers

NPA 2012-18 (B.VI)

Acceptable Means of Compliance and Guidance Material to Part-ATCO.MED

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AMC/GM TO PART-ATCO.MED

SUBPART A — GENERAL REQUIREMENTS

SECTION 1
GENERAL

AMC1 ATCO.MED.A.015 Medical confidentiality

To ensure medical confidentiality, all medical reports and records should be securely held with accessibility restricted to personnel authorised by the medical assessor.

AMC1 ATCO.MED.A.020 Decrease in medical fitness

(a) Holders of class 3 medical certificates should seek the advice of an AeMC or AME if they have been suffering:

(1) from any illness involving incapacity to function as ATCO or any illness for a period of more than 20 days; or

(2) if they are in any doubt about their medical fitness, use of medication or treatment.

(b) Any advice provided should be recorded in the applicant's file.

AMC1 ATCO.MED.A.025 Obligations of AeMC and AME

(a) The report required in ATCO.MED.A.025(b)(4) should detail the results of the examination and the evaluation of the findings with regard to medical fitness.

(b) The report may be submitted in electronic format, but adequate identification of the AME should be ensured.

(c) If the medical examination is carried out by two or more AMEs, only one of them should be responsible for coordinating the results of the examination, evaluating the findings with regard to medical fitness, and signing the report.

SECTION 2
REQUIREMENTS FOR MEDICAL CERTIFICATES

AMC1 ATCO.MED.A.035 Application for a medical certificate

When applicants do not present a current or previous medical certificate to the AeMC or AME prior to the relevant examinations, the AeMC or AME should not issue the medical certificate unless relevant information is received from the licensing authority.

AMC1 ATCO.MED.A.045 Validity, revalidation and renewal of medical certificates

The validity period of a medical certificate (including any associated examination or special investigation) is determined by the age of the applicant at the date of the medical examination.

SUBPART B — SPECIFIC REQUIREMENTS FOR CLASS 3 MEDICAL CERTIFICATES

SECTION 1
GENERAL

AMC1 ATCO.MED.B.001 Limitations to Class 3 medical certificates

(a) An AeMC or AME may refer the decision on fitness of the applicant to the licensing authority in borderline cases or where fitness is in doubt.

(b) In cases where a fit assessment can only be considered with a limitation, the AeMC, AME or the licensing authority should evaluate the medical condition of the applicant in consultation with control operations and other experts, if necessary.

(c) Limitation codes:

Code	Limitation
TML	restriction of the period of validity of the medical certificate
VDL	correction for defective distant vision
VXL	correction for defective distant vision depending on the working environment
VML	correction for defective distant, intermediate and near vision
VNL	correction for defective near vision
VXN	correction for defective near vision; correction for defective distant vision depending on the working environment
CCL	correction by means of contact lenses only
HAL	valid only when hearing aids are worn
SIC	specific regular medical examination(s) — contact licensing authority
SSL	special restrictions as specified
RXO	specialist ophthalmological examinations

(d) Entry of limitations

(1) Limitations TML, VDL, VML, VNL, CCL, HAL, RXO may be imposed by an AME or an AeMC.

(2) Limitations VXL and VXN should be imposed with advice of the air navigation service provider.

(3) Limitations SIC and SSL should only be imposed by the licensing authority.

(e) Removal of limitations

(1) All limitations should only be removed by the licensing authority.

GM1 ATCO.MED.B.001 Limitations to medical certificates
LIMITATIONS CODES

TML — Time limitation

The period of validity of the medical certificate is limited to the duration as shown on the medical certificate. This period of validity commences on the date of the medical examination. Any period of validity remaining on the previous medical certificate is no longer valid. The air traffic controller should present him/herself for re-assessment or examination when advised and should follow any medical recommendations.

VDL — Wear corrective lenses and carry a spare set of spectacles

Correction for defective distant vision: whilst exercising the privileges of the licence, the air traffic controller should wear spectacles or contact lenses that correct for defective distant vision as examined and approved by the AME. Contact lenses may not be worn until cleared to do so by an AME. If contact lenses are worn, a spare set of spectacles, approved by the AME, should be readily available.

VXL — Correction for defective distant vision depending on the working environment

Correction for defective distant vision does not have to be worn if the air traffic controller's visual working environment is in the area of up to 100 cm. Applicants who do not meet the uncorrected distant visual acuity requirement but meet the visual acuity requirement for intermediate and near vision without correction and whose visual working environment is only the intermediate and near vision area (up to 100 cm) may work without corrective lenses.

VML — Wear multifocal spectacles and carry a spare set of spectacles

Correction for defective distant, intermediate and near vision: whilst exercising the privileges of the licence, the air traffic controller should wear spectacles that correct for defective distant, intermediate and near vision as examined and approved by the AME. Contact lenses or full frame spectacles, when either correct for near vision only, may not be worn.

VNL — Have available corrective spectacles and a spare set of spectacles

Correction for defective near vision: whilst exercising the privileges of the licence, the air traffic controller should have readily available spectacles that correct for defective near vision as examined and approved by an AME. Contact lenses or full frame spectacles when either correct for near vision only may not be worn.

VXN — Have available corrective spectacles and a spare set of spectacles; correction for defective distant vision depending on the working environment

Correction for defective distant vision does not have to be worn if the air traffic controller's visual working environment is in the area of up to 100 cm. Applicants who do not meet the uncorrected distant and uncorrected near visual acuity requirements, but meet the visual acuity requirement for intermediate vision without correction and whose visual working environment is only the intermediate and near vision area (up to 100 cm) should have readily available spectacles and a spare set that correct for defective near vision as examined and approved by an AME. Contact lenses or full frame spectacles when either correct for near vision only may not be worn.

SIC — Specific regular medical examination(s) — contact licensing authority

This limitation requires the AME to contact the licensing authority before embarking upon renewal or revalidation medical assessment. It is likely to concern a medical history of which the AME should be aware prior to undertaking the assessment.

SSL — Special restrictions as specified

This limitation is for use in cases that are not clearly defined in the requirements/AMC but where a limitation is considered to be appropriate by the medical assessor of the licensing authority.

RXO — Specialist ophthalmological examinations

Specialist ophthalmological examinations are required for a significant reason.

SECTION 2
SPECIFIC REQUIREMENTS FOR CLASS 3 MEDICAL CERTIFICATES

AMC1 ATCO.MED.B.010 Cardiovascular system

(a) Electrocardiography

(1) An exercise electrocardiogram (ECG) when required as part of a cardiovascular assessment should be symptom limited and completed to a minimum of Bruce Stage IV or equivalent.

(2) Reporting of resting and exercise ECGs should be carried out by the AME or an appropriate specialist.

(b) General

(1) Cardiovascular risk factor assessment

(i) Serum/plasma lipid estimation is case finding and significant abnormalities should require investigation and management under the supervision by the AeMC or AME in consultation with the licensing authority.

(ii) An accumulation of risk factors (smoking, family history, lipid abnormalities, hypertension, etc.) should require cardiovascular evaluation by the AeMC or AME in consultation with the licensing authority.

(2) Extended cardiovascular assessment

(i) The extended cardiovascular assessment should be undertaken at an AeMC or by a cardiologist.

(ii) The extended cardiovascular assessment should include an exercise ECG or other test that will provide equivalent information.

(c) Peripheral arterial disease

Applicants with peripheral arterial disease, before or after surgery, should undergo satisfactory cardiological evaluation including an exercise ECG and 2D echocardiography. Further tests may be required which should show no evidence of myocardial ischaemia or significant coronary artery stenosis. A fit assessment may be considered provided:

(1) exercise ECG is satisfactory; and

(2) there is no sign of significant coronary artery disease or evidence of significant atheroma elsewhere, and no functional impairment of the end organ supplied.

(d) Aortic aneurysm

(1) Applicants with an aneurysm of the infra-renal abdominal aorta may be assessed as fit following a satisfactory cardiological evaluation.

(2) Applicants may be assessed as fit after surgery for an infra-renal aortic aneurysm without complications and subject to being free of disease of the carotid and coronary circulation.

(e) Cardiac valvular abnormalities

(1) Applicants with previously unrecognised cardiac murmurs should require cardiological evaluation. If considered significant, further investigation should include at least 2D Doppler echocardiography.

(2) Applicants with minor cardiac valvular abnormalities may be assessed as fit by the licensing authority. Applicants with significant abnormality of any of the heart valves should be assessed as unfit.

(3) Aortic valve disease

(i) Applicants with bicuspid aortic valve may be assessed as fit if no other cardiac or aortic abnormality is demonstrated. Regular cardiological follow-up, including 2D Doppler echocardiography, may be required.

(ii) Applicants with mild aortic stenosis may be assessed as fit. Annual cardiological follow-up may be required and should include 2D Doppler echocardiography.

(iii) Applicants with aortic regurgitation may be assessed as fit only if regurgitation is minor and there is no evidence of volume overload. There should be no demonstrable abnormality of the ascending aorta on 2D Doppler echocardiography. Cardiological follow-up including 2D Doppler echocardiography may be required.

(4) Mitral valve disease

(i) Applicants with rheumatic mitral stenosis may only be assessed as fit in favourable cases after cardiological evaluation including 2D echocardiography.

(ii) Applicants with uncomplicated minor regurgitation may be assessed as fit. Regular cardiological follow-up including 2D echocardiography may be required.

(iii) Applicants with mitral valve prolapse and mild mitral regurgitation may be assessed as fit.

(iv) Applicants with evidence of volume overloading of the left ventricle demonstrated by increased left ventricular end-diastolic diameter should be assessed as unfit.

(f) Valvular surgery

Applicants with cardiac valve replacement/repair should be assessed as unfit. After a satisfactory cardiological evaluation fit assessment may be considered.

(1) Asymptomatic applicants may be assessed as fit by the licensing authority 6 months after valvular surgery subject to:

(i) normal valvular and ventricular function as judged by 2D Doppler echocardiography;

(ii) satisfactory symptom limited exercise ECG or equivalent;

(iii) demonstrated absence of coronary artery disease unless this has been satisfactorily treated by re-vascularisation;

(iv) no cardioactive medication is required;

(v) annual cardiological follow-up to include an exercise ECG and 2D Doppler echocardiography. Longer periods may be acceptable once a stable condition has been confirmed by cardiological evaluations.

(2) Applicants with implanted mechanical valves may be assessed as fit subject to documented exemplary control of their anti-coagulant therapy. Age factors should form part of the risk assessment.

(g) Thromboembolic disorders

Arterial or venous thrombosis or acute pulmonary embolism are disqualifying whilst anticoagulation is being used as treatment. In cases of anticoagulation as prophylaxis for pulmonary embolism or DVT risk, a fit assessment may be considered subject to a satisfactory report from an appropriate specialist after full evaluation. Anticoagulant therapy should be stable and subject to exemplary control. Subcutaneous heparin treatment may be acceptable subject to a satisfactory report from an appropriate specialist.

(h) Other cardiac disorders

(1) Applicants with a primary or secondary abnormality of the pericardium, myocardium or endocardium should be assessed as unfit. A fit assessment may be considered following complete resolution and satisfactory cardiological evaluation which may include 2D Doppler echocardiography, exercise ECG, 24-hour ambulatory ECG, and/or myocardial perfusion scan or equivalent test. Coronary angiography may be indicated. Regular cardiological follow-up may be required.

(2) Applicants with a congenital abnormality of the heart, including those who have undergone surgical correction, should be assessed as unfit. Applicants with minor abnormalities that are functionally unimportant may be assessed as fit following cardiological assessment. No cardioactive medication is acceptable. Investigations may include 2D Doppler echocardiography, exercise ECG and 24-hour ambulatory ECG. Regular cardiological follow-up may be required.

(i) Syncope

(1) Applicants with a history of recurrent episodes of syncope should be assessed as unfit. A fit assessment may be considered after a sufficient period of time without recurrence provided that cardiological evaluation is satisfactory.

(2) A cardiological evaluation should include:

(i) a satisfactory symptom exercise ECG. If the exercise ECG is abnormal, a myocardial perfusion scan or equivalent test should be required;

(ii) a 2D Doppler echocardiogram showing neither significant selective chamber enlargement nor structural or functional abnormality of the heart, valves or myocardium;

(iii) a 24-hour ambulatory ECG recording showing no conduction disturbance, complex or sustained rhythm disturbance or evidence of myocardial ischaemia;

(iv) a tilt test carried out to a standard protocol showing no evidence of vasomotor instability.

(3) Neurological review should be required.

(j) Blood pressure

(1) Anti-hypertensive treatment should be agreed by the licensing authority. Medication may include:

(i) non-loop diuretic agents;

(ii) Angiotensin Converting Enzyme (ACE) inhibitors;

(iii) angiotensin II receptor blocking agents;

(iv) long-acting slow channel calcium blocking agents;

(v) certain (generally hydrophilic) beta-blocking agents.

(2) Following initiation of medication for the control of blood pressure, applicants should be re-assessed to verify that the treatment is compatible with the safe exercise of the privileges of the licence held.

(k) Coronary artery disease

(1) Applicants with suspected asymptomatic coronary artery disease should undergo a cardiological evaluation including exercise ECG. Further tests (myocardial perfusion scanning, stress echocardiography, coronary angiography or equivalent) may be required, which should show no evidence of myocardial ischaemia or significant coronary artery stenosis.

(2) After an ischaemic cardiac event, including revascularisation, applicants without symptoms should have reduced any vascular risk factors to an appropriate level. Medication, when used to control cardiac symptoms, is not acceptable. All applicants should be on acceptable secondary prevention treatment.

(i) A coronary angiogram obtained around the time of, or during, the ischaemic myocardial event and a complete, detailed clinical report of the ischaemic event and of any operative procedures should be available:

(A) there should be no stenosis more than 50 % in any major untreated vessel, in any vein or artery graft or at the site of an angioplasty/stent, except in a vessel subtending a myocardial infarction. More than two stenoses between 30 % and 50 % within the vascular tree should not be acceptable;

(B) the whole coronary vascular tree should be assessed as satisfactory by a cardiologist, and particular attention should be paid to multiple stenoses and/or multiple revascularisations;

(C) an untreated stenosis greater than 30 % in the left main or proximal left anterior descending coronary artery should not be acceptable.

(ii) At least 6 months from the ischaemic myocardial event, including revascularisation, the following investigations should be completed:

(A) an exercise ECG showing neither evidence of myocardial ischaemia nor rhythm or conduction disturbance;

(B) an echocardiogram or equivalent test showing satisfactory left ventricular function with no important abnormality of wall motion (such as dyskinesia or akinesia) and a left ventricular ejection fraction of 50 % or more;

(C) in cases of angioplasty/stenting, a myocardial perfusion scan or equivalent test, which should show no evidence of reversible myocardial ischaemia. If there is any doubt about myocardial perfusion, in other cases (infarction or bypass grafting), a perfusion scan should also be required.

(D) further investigations, such as a 24-hour ECG, may be necessary to assess the risk of any significant rhythm disturbance.

(iii) Follow-up should be conducted annually (or more frequently, if necessary) to ensure that there is no deterioration of the cardiovascular status. It should include a cardiological evaluation, exercise ECG and cardiovascular risk assessment. Additional investigations may be required.

(iv) After coronary artery vein bypass grafting, a myocardial perfusion scan or equivalent test should be performed on clinical indication, and in all cases within 5 years from the procedure.

(v) In all cases, coronary angiography, or an equivalent test, should be considered at any time if symptoms, signs or non-invasive tests indicate myocardial ischaemia.

(vi) Applicants may be assessed as fit after successful completion of the 6-month or subsequent review.

(l) Rhythm and conduction disturbances

(1) Applicants with any significant rhythm or conduction disturbance may be assessed as fit after cardiological evaluation and with appropriate follow-up. Such evaluation should include:

(i) exercise ECG which should show no significant abnormality of rhythm or conduction, and no evidence of myocardial ischaemia. Withdrawal of cardioactive medication prior to the test should be required;

(ii) 24-hour ambulatory ECG which should demonstrate no significant rhythm or conduction disturbance;

(iii) 2D Doppler echocardiogram which should show no significant selective chamber enlargement or significant structural or functional abnormality, and a left ventricular ejection fraction of at least 50 %.

Further evaluation may include:

(iv) 24-hour ECG recording repeated as necessary;

(v) electrophysiological study;

(vi) myocardial perfusion imaging or equivalent test;

(vii) cardiac magnetic resonance imaging (MRI) or equivalent test;

(viii) coronary angiogram or equivalent test.

(2) Applicants with supraventricular or ventricular ectopic complexes on a resting ECG may require no further evaluation, provided the frequency can be shown to be no greater than one per minute, for example on an extended ECG strip.

Applicants with asymptomatic isolated uniform ventricular ectopic complexes may be assessed as fit but frequent or complex forms require full cardiological evaluation.

(3) Ablation

(i) Applicants who have undergone ablation therapy should be assessed as unfit for a minimum period of 2 months.

(ii) A fit assessment may be considered following successful catheter ablation provided an electrophysiological study (EPS) demonstrates satisfactory control has been achieved.

(iii) Where EPS is not performed, longer periods of unfitness and cardiological follow-up should be considered.

(iv) Follow-up should include a cardiological review.

(4) Supraventricular arrhythmias

Applicants with significant disturbance of supraventricular rhythm, including sinoatrial dysfunction, whether intermittent or established, should be assessed as unfit. A fit assessment may be considered if cardiological evaluation is satisfactory.

(i) For initial applicants with atrial fibrillation/flutter a fit assessment should be limited to those with a single episode of arrhythmia which is considered to be unlikely to recur.

(ii) Applicants with asymptomatic sinus pauses up to 2.5 seconds on a resting ECG may be assessed as fit if exercise ECG, 2D echocardiography and 24-hour ambulatory ECG are satisfactory.

(iii) Applicants with symptomatic sino-atrial disease should be assessed as unfit.

(5) Mobitz type 2 atrio-ventricular block

Applicants with Mobitz type 2 AV block may be assessed as fit after a full cardiological evaluation confirms the absence of distal conducting tissue disease.

(6) Complete right bundle branch block

Applicants with complete right bundle branch block should require cardiological evaluation on first presentation.

(7) Complete left bundle branch block

A fit assessment may be considered:

(i) Initial applicants may be assessed as fit after full cardiological evaluation showing no pathology.

(ii) Applicants for revalidation or renewal of a medical certificate with a de-novo left bundle branch block may be assessed as fit after cardiological evaluation. A period of 12 months of stability may be required.

(iii) A cardiological evaluation should be required after 12 months in all cases.

(8) Ventricular pre-excitation

Applicants with pre-excitation may be assessed as fit if they are asymptomatic, and an electrophysiological study, including an adequate drug-induced autonomic stimulation protocol, reveals no inducible re-entry tachycardia and the existence of multiple pathways is excluded. Cardiological follow-up should be required including a 24 hour ambulatory ECG recording showing no tendency to symptomatic or asymptomatic tachy-arrhythmia.

(9) Pacemaker

Applicants with a subendocardial pacemaker may be assessed as fit 3 months after insertion provided:

(i) there is no other disqualifying condition;

(ii) bipolar lead systems programmed in bipolar mode without automatic mode change have been used;

(iii) that the applicant is not pacemaker dependent;

(iv) regular cardiological follow-up should include a symptom limited exercise ECG that shows no abnormality or evidence of myocardial ischaemia, a pacemaker check.

(10) QT prolongation

Applicants with QT-prolongation require cardiological evaluation. A fit assessment may be considered in asymptomatic applicants.

GM1 ATCO.MED.B.010 Cardiovascular system

CARDIOLOGICAL TESTING

(a) Indications for exercise ECG or other appropriate cardiological testing include but are not limited to:

(1) signs and symptoms suggestive of cardiovascular disease;

(2) clarification of a pathological resting ECG.

GM2 ATCO.MED.B.010 Cardiovascular system
BLOOD PRESSURE MEASUREMENT

(a) The systolic blood pressure should be recorded at the appearance of the Korotkoff sounds (phase I) and the diastolic pressure at their disappearance (phase V), or the electronic measurement equivalent.

(b) Blood pressure readings, taken on separate occasions should be made in the same fashion to ensure uniform results.

(c) If the blood pressure is raised and/or the resting heart rate is increased, further observations should be made.

GM3 ATCO.MED.B.010 Cardiovascular system
COMPLETE LEFT BUNDLE BRANCH BLOCK

Left bundle branch block is more commonly associated with coronary artery disease and thus requires more in-depth investigation, which may be invasive.

GM4 ATCO.MED.B.010 Cardiovascular system
PACEMAKER

(a) Scintigraphy may be helpful in the presence of conduction disturbance/paced complexes in the resting ECG.

(b) Experience has shown that any failures of pacemakers are most likely to occur in the first 3 months after being fitted. Therefore, a fit assessment should not be considered before this period has elapsed.

(c) It is known that certain operational equipment may interfere with the performance of the pacemaker. The type of pacemaker used, therefore, should have been tested to ensure it does not suffer from interference in the operational environment. Supporting data and a performance statement to this effect should be available from the supplier.

AMC1 ATCO.MED.B.015 Respiratory system

(a) Examination

(1) Spirometric examination is required for initial examination. An FEV1/FVC ratio less than 70 % should require evaluation by a specialist in respiratory disease before a fit assessment can be considered.

(2) Posterior/anterior chest radiography may be required at initial, revalidation or renewal examinations when indicated on clinical or epidemiological grounds.

(b) Chronic obstructive airways disease

Applicants with chronic obstructive airways disease should be assessed as unfit. Applicants with only minor impairment of their pulmonary function may be assessed as fit after specialist respiratory evaluation. Applicants with pulmonary emphysema may be assessed as fit following specialist evaluation showing that the condition is stable and not causing significant symptoms.

(c) Asthma

Applicants with asthma requiring medication or experiencing recurrent attacks of asthma may be assessed as fit if the asthma is considered stable with satisfactory pulmonary function tests and medication is compatible with the safe execution of the of the privileges of the applicable licence. Use of low dose systemic steroids may be acceptable.

(d) Inflammatory disease

(1) For applicants with active inflammatory disease of the respiratory system a fit assessment may be considered when the condition has resolved without sequelae and no medication is required.

(2) Applicants with chronic inflammatory diseases may be assessed as fit following specialist evaluation showing mild disease with acceptable pulmonary function test and medication compatible with the safe execution of the privileges of the applicable licence.

(e) Sarcoidosis

(1) Applicants with active sarcoidosis should be assessed as unfit. Specialist evaluation should be undertaken with respect to the possibility of systemic, particularly cardiac, involvement. A fit assessment may be considered if no medication is required, and the disease is limited to hilar lymphadenopathy and inactive. Use of low dose systemic steroids may be acceptable.

(2) Applicants with cardiac sarcoid should be assessed as unfit.

(f) Pneumothorax

Applicants with a spontaneous pneumothorax should be assessed as unfit. A fit assessment may be considered:

(1) 6 weeks after the event provided full recovery from a single event has been confirmed in a full respiratory evaluation including a CT scan or equivalent;

(2) following surgical intervention in the case of a recurrent pneumothorax provided there is satisfactory recovery.

(g) Thoracic surgery

(1) Applicants requiring thoracic surgery should be assessed as unfit until such time as the effects of the operation are no longer likely to interfere with the safe exercise of the privileges of the applicable licence.

(2) A fit assessment may be considered after satisfactory recovery and full respiratory evaluation including a CT scan or equivalent. The underlying pathology which necessitated the surgery should be considered in the assessment process.

(h) Sleep apnoea syndrome/sleep disorder

(1) Applicants with unsatisfactorily treated sleep apnoea syndrome and suffering from excessive daytime sleepiness should be assessed as unfit.

(2) A fit assessment may be considered subject to the extent of symptoms, including vigilance, and satisfactory treatment. ATCO education and work place considerations are essential components of the assessment.

AMC1 ATCO.MED.B.020 Digestive system

(a) Oesophageal varices

Applicants with oesophageal varices should be assessed as unfit.

(b) Pancreatitis

(1) Applicants with pancreatitis should be assessed as unfit pending assessment. A fit assessment may be considered if the cause (e.g. gallstone, other obstruction, medication) is removed.

(2) Alcohol may be a cause of dyspepsia and pancreatitis. If considered appropriate, a full evaluation of its use/abuse should be required.

(c) Gallstones

(1) Applicants with a single large gallstone may be assessed as fit after evaluation.

(2) Applicants with asymptomatic multiple gallstones may be assessed as fit while awaiting assessment or treatment.

(d) Inflammatory bowel disease

Applicants with an established diagnosis or history of chronic inflammatory bowel disease may be assessed as fit if the disease is in established stable remission, and only minimal, if any, medication is being taken. Regular follow-up should be required.

(e) Dyspepsia

Applicants with recurrent dyspepsia requiring medication should be investigated by internal examination including radiologic or endoscopic examination. Laboratory testing should include haemoglobin assessment and faecal examination. Any demonstrated ulceration or significant inflammation requires evidence of recovery before a fit assessment may be considered.

(f) Abdominal surgery

Major abdominal surgery may be disqualifying for 3 months or until recovery is complete, the applicant is asymptomatic and the risk of secondary complication or recurrence is minimal.

AMC1 ATCO.MED.B.025 Metabolic and endocrine system

(a) Metabolic, nutritional or endocrine dysfunction

Applicants with metabolic, nutritional or endocrine dysfunction may be assessed as fit if the condition is asymptomatic, clinically compensated and stable with or without replacement therapy, and regularly reviewed by an appropriate specialist.

(b) Obesity

(1) Applicants with a Body Mass Index $\geq$ 35 may be assessed as fit only if the excess weight is not likely to interfere with the safe exercise of the applicable licence(s) and a satisfactory cardiovascular risk review has been undertaken. The presence of sleep apnoea syndrome should be ruled out.

(2) Functional testing in the working environment may be necessary before a fit assessment may be considered.

(c) Thyroid dysfunction

Applicants with hyperthyroidism or hypothyroidism should attain a stable euthyroid state before a fit assessment may be considered.

(d) Abnormal glucose metabolism

Glycosuria and abnormal blood glucose levels require investigation. A fit assessment may be considered if normal glucose tolerance is demonstrated (low renal threshold) or impaired glucose tolerance without diabetic pathology is fully controlled by diet and regularly reviewed.

(e) Diabetes mellitus

(1) The following medication, alone and in combination, may be acceptable for control of type 2 diabetes:

(i) alpha-glucosidase inhibitors;

(ii) thiazolidinediones;

(iii) medication that acts on the incretin pathway;

(iv) biguanides.

(2) A fit assessment may be considered after evaluation of the operational environment, including means of glucose monitoring/management whilst performing rated duties, and with demonstrated exemplary glycaemic control.

(3) Annual follow-up by a specialist should be required including demonstration of absence of complications, good glycaemic control demonstrated by 6-monthly Hb1c measurements, and a normal exercise tolerance test.

AMC1 ATCO.MED.B.030 Haematology

(a) Anaemia

(1) Anaemia demonstrated by a reduced haemoglobin level should require investigation. A fit assessment may be considered in cases where the primary cause has been treated (e.g. iron or B12 deficiency) and the haemoglobin or haematocrit has stabilised at a satisfactory level. The recommended range of the haemoglobin level is 11 g/dl – 17 g/dl.

(2) Anaemia which is unamenable to treatment should be disqualifying.

(b) Haemoglobinopathy

(1) Applicants with a haemoglobinopathy should be assessed as unfit. A fit assessment may be considered where minor thalassaemia or other haemoglobinopathy is diagnosed without a history of crises and where full functional capability is demonstrated.

(2) Applicants with sickle cell disease should be assessed as unfit.

(c) Coagulation disorders

(1) Significant coagulation disorders require investigation. A fit assessment may be considered if there is no history of significant bleeding or clotting episodes and the haematological data indicate that it is safe to do so.

(2) If anticoagulant therapy is prescribed, AMC1 ATCO.MED.B.010(g) should be followed.

(d) Disorders of the lymphatic system

Lymphatic enlargement requires investigation. A fit assessment may be considered in cases of an acute infectious process which is fully recovered or Hodgkin's lymphoma or other lymphoid malignancy which has been treated and is in full remission.

(e) Leukaemia

(1) Applicants with acute leukaemia should be assessed as unfit. Once in established remission, applicants may be assessed as fit.

(2) Applicants with chronic leukaemia should be assessed as unfit. A fit assessment for revalidation or renewal of a medical certificate may be considered after a period of full remission and demonstrated stability.

(3) Applicants with a history of leukaemia should have no history of central nervous system involvement and no continuing side effects from treatment of flight safety importance. Haemoglobin and platelet levels should be satisfactory.

(4) Regular follow-up is required in all cases of leukaemia.

(f) Splenomegaly

Splenomegaly requires investigation. A fit assessment may be considered if the enlargement is minimal, stable and no associated pathology is demonstrated, or if the enlargement is minimal and associated with another acceptable condition.

GM1 ATCO.MED.B.030 Haematology
BLOOD TESTING

Blood testing may form part of the aero-examination:

(a) for initial issue of a medical certificate;

(b) for revalidation or renewal of medical certificates:

(1) at 4-yearly intervals until the age of 40; and

(2) at 2-yearly intervals thereafter.

GM2 ATCO.MED.B.030 Haematology
HODGKIN'S LYMPHOMA

Due to potential side effects of specific chemotherapeutic agents, the precise regime utilised should be taken into account.

GM3 ATCO.MED.B.030 Haematology
CHRONIC LEUKAEMIA

A fit assessment may be considered if the chronic leukaemia has been diagnosed as:

(a) lymphatic at stages 0, I, and possibly II without anaemia and minimal treatment; or

(b) stable 'hairy cell' leukaemia with normal haemoglobin and platelets.

GM4 ATCO.MED.B.030 Haematology
SPLENOMEGALY

(a) Splenomegaly should not preclude a fit assessment, but should be assessed on an individual basis.

(b) Associated pathology of splenomegaly is e.g. treated chronic malaria.

(c) An acceptable condition associated with splenomegaly is e.g. Hodgkin's lymphoma in remission.

AMC1 ATCO.MED.B.035 Genito-urinary system

(a) Abnormal urinalysis

(1) Any abnormal finding on urinalysis requires investigation. This investigation should include proteinuria, haematuria and glycosuria.

(2) Particular attention should be paid to disease affecting the urinary passages and genital organs.

(b) Renal disease

(1) Applicants presenting with any signs of renal disease should be assessed as unfit. A fit assessment may be considered if blood pressure is satisfactory and renal function is acceptable.

(2) The requirement for dialysis is disqualifying.

(c) Urinary calculi

(1) An asymptomatic calculus or a history of renal colic requires investigation. A fit assessment may be considered after successful treatment for a calculus and with appropriate follow-up, which is to be decided by a specialist.

(2) Residual calculi should be disqualifying unless they are in a location where they are unlikely to move and give rise to symptoms.

(d) Renal/urological surgery

(1) Applicants who have undergone a major surgical operation on the urinary tract or the urinary apparatus involving a total or partial excision or a diversion of any of its organs should be assessed as unfit for a period of 3 months or until such time as the effects of the operation are no longer likely to interfere with the safe exercise of the privileges of the licence. A fit assessment may be considered if the applicant is completely asymptomatic and there is minimal risk of secondary complication or recurrence.

(2) Applicants with compensated nephrectomy without hypertension or uraemia may be considered for a fit assessment.

(3) Applicants for a revalidation or renewal of a medical certificate who have undergone renal transplantation may be considered for a fit assessment if it is fully compensated and tolerated with only minimal immuno-suppressive therapy after at least 12 months.

(4) Applicants for a revalidation or renewal of a medical certificate who have undergone total cystectomy may be considered for a fit assessment if there is satisfactory urinary function, no infection and no recurrence of primary pathology.

AMC1 ATCO.MED.B.040 Infectious disease

(a) Infectious disease — General

In cases of infectious disease, consideration should be given to a history of, or clinical signs indicating, underlying impairment of the immune system.

(b) Tuberculosis

(1) Applicants with active tuberculosis should be assessed as unfit. A fit assessment may be considered for revalidation of a medical certificate not earlier than 2 months after instatement of the therapy after specialist evaluation.

(2) Applicants with quiescent or healed lesions may be assessed as fit. Specialist evaluation should consider the extent of the disease, the treatment required and possible side effects of medication.

(c) Syphilis

Acute syphilis is disqualifying. A fit assessment may be considered in the case of those fully treated and recovered from the primary and secondary stages.

(d) HIV infection

(1) HIV positivity is disqualifying. A fit assessment may be considered for individuals with stable, non-progressive disease. Frequent review is required.

(2) An AIDS defining condition is disqualifying except in individual cases for revalidation of a medical certificate after complete recovery and dependent on the review.

(3) The assessment of individual cases under (1) and (2) should be dependent on the absence of symptoms or signs of the disease and the acceptability of serological markers. Treatment should be assessed by a specialist on an individual basis for its appropriateness and any side effects.

(e) Infectious hepatitis

Infectious hepatitis is disqualifying. A fit assessment may be considered after treatment and specialist evaluation.

GM1 ATCO.MED.B.040 Infectious disease
HIV INFECTION

(a) There is no requirement for routine testing of HIV status, but testing may be carried out on clinical indication or epidemiological grounds.

(b) If HIV positivity has been confirmed, a process of rigorous assessment and follow-up should be introduced to enable individuals to continue working provided their ability to exercise their licenced privileges to the required level of safety is not impaired. The operational environment should be considered in the decision making.

AMC1 ATCO.MED.B.045 Obstetrics and gynaecology

(a) Gynaecological surgery

An applicant who has undergone a major gynaecological surgery should be assessed as unfit for a period of 3 months or until such time as the effects of the surgery are not likely to interfere with the safe exercise of the privileges of the licence, the holder is completely asymptomatic and there is only a minimal risk of secondary complication or recurrence.

(b) Pregnancy

(1) A pregnant licence holder may be assessed as fit up to the end of the 34th week of gestation provided obstetric evaluation continuously indicates a normal pregnancy.

(2) The AeMC or AME, or the licensing authority, should provide written guidance to the applicant and the attending physician of potentially significant complications of pregnancy which may negatively influence the safe exercise of the privileges of the licence.

AMC1 ATCO.MED.B.050 Musculoskeletal system

(a) An applicant with any significant sequela from disease, injury or congenital abnormality affecting the bones, joints, muscles or tendons with or without surgery requires full evaluation prior to a fit assessment.

(b) An applicant shall have sufficient sitting height, arm and leg length and muscular strength for the safe exercise of the privileges of the applicable licence.

(c) Abnormal physique, including obesity, or muscular weakness may require medical assessment and particular attention should be paid to an assessment in the working environment.

(d) Locomotor dysfunction, amputations, malformations, loss of function and progressive osteoarthritic disorders should be assessed on an individual basis in conjunction with the appropriate operational expert with a knowledge of the complexity of the tasks of the applicant.

GM1 ATCO.MED.B.050 Musculoskeletal system

Osteoarthritic or muscular tendon progressive conditions may be of congenital or acquired origin. Any functional upset as well as side effects of medication, if needed to control symptoms, should be evaluated against the impact on the individual's ability to operate satisfactorily in the working environment.

AMC1 ATCO.MED.B.055 Psychiatry

(a) Disorders due to alcohol or other substance use

(1) A fit assessment may be considered after successful treatment, a period of documented sobriety or freedom from substance use, and review by a psychiatric specialist. The licensing authority, with the advice of the psychiatric specialist, should determine the duration of the period to be observed before a medical certificate can be issued.

(2) Depending on the individual case, treatment may include in-patient treatment of some weeks.

(3) Continuous follow-up including blood testing and peer reports may be required indefinitely.

(b) Mood disorder

Applicants with an established mood disorder should be assessed as unfit. A fit assessment may be considered after full recovery and psychotropic treatment has been stopped for an appropriate period. Full consideration should be given to the individual case and the characteristics and gravity of the mood disorder.

(c) Psychotic disorder

Applicants with a history, or the occurrence, of a functional psychotic disorder is disqualifying unless it can be confirmed that the original diagnosis was inappropriate or inaccurate, or was a result of a single toxic episode.

(i) Deliberate self-harm

A single self-destructive action or repeated overt acts are disqualifying. A fit assessment may be considered after full consideration of an individual case and should require psychiatric or psychological review.

AMC1 ATCO.MED.B.060 Psychology

(a) If a psychological evaluation is indicated, it should be carried out by a psychologist taking into account the ATC environment and the associated risks.

(b) A psychological evaluation should only be required on the basis of established evidence. This evidence should be verifiable information from an identifiable source which evokes doubts concerning the mental fitness or personality of a particular individual. Sources for this information can be accidents or incidents, problems in training or competency assessment, delinquency or knowledge relevant to the safe exercise of the privileges of the licence.

(c) The psychological evaluation should be broad-based and may include medical history, life-event history and aptitude as well as personality tests and psychological interview.

(d) The psychologist should submit a written report to the AME, AeMC or licensing authority as appropriate, detailing his/her opinion and recommendation.

AMC1 ATCO.MED.B.065 Neurology

(a) Electroencephalography

(1) EEG should be carried out when indicated by the applicant's history or on clinical grounds.

(2) Epileptiform paroxysmal EEG abnormalities and focal slow waves should be disqualifying. A fit assessment may be considered after further evaluation.

(b) Epilepsy

(1) Applicants who have experienced one or more convulsive episodes after the age of 5 should be assessed as unfit.

(2) A fit assessment may be considered if:

(i) the applicant is seizure free and off medication for a period of at least 10 years;

(ii) full neurological evaluation shows that a seizure was caused by a specific non-recurrent cause, such as trauma or toxin.

(3) Applicants who have experienced an episode of benign Rolandic seizure may be assessed as fit provided the seizure has been clearly diagnosed including a properly documented history and typical EEG result and the applicant has been free of symptoms and off treatment for at least 10 years.

(c) Neurological disease

Applicants with any stationary or progressive disease of the nervous system which has caused or is likely to cause a significant disability should be assessed as unfit. A fit assessment may be considered in cases of minor functional losses associated with stationary disease after full neurological evaluation.

(d) Disturbance of consciousness

Applicants with a history of one or more episodes of disturbed consciousness may be assessed as fit if the condition can be satisfactorily explained by a non-recurrent cause. A full neurological evaluation is required.

(e) Head injury

Applicants with a head injury which was severe enough to cause loss of consciousness or is associated with penetrating brain injury should be evaluated by a consultant neurologist. A fit assessment may be considered if there has been a full recovery and the risk of epilepsy is sufficiently low. Behavioural and cognitive aspects should be taken into account.

AMC1 ATCO.MED.B.070 Visual system

(a) Eye examination

(1) At each aero-medical revalidation examination, an assessment of the visual fitness should be undertaken and the eyes should be examined with regard to possible pathology.

(2) All abnormal and doubtful cases should be referred to an ophthalmologist. Conditions which indicate ophthalmological examination include, but are not limited to, a substantial decrease in the uncorrected visual acuity, any decrease in best corrected visual acuity and/or the occurrence of eye disease, eye injury, or eye surgery.

(3) Where ophthalmological examinations are required for any significant reason, this should be imposed as a limitation on the medical certificate.

(4) The effect of multiple eye conditions should be evaluated by an ophthalmologist with regard to possible cumulative effects. Functional testing in the working environment may be necessary to consider a fit assessment.

(5) Visual acuity should be tested using Snellen charts, or equivalent, under appropriate illumination. Where clinical evidence suggests that Snellen may not be appropriate, Landolt 'C' may be used.

(b) Comprehensive eye examination

A comprehensive eye examination by an eye specialist is required at the initial examination. All abnormal and doubtful cases should be referred to an ophthalmologist. The examination should include:

(1) history;

(2) visual acuities — near, intermediate and distant vision; uncorrected and with best optical correction if needed;

(3) objective refraction — hyperopic initial applicants with a hyperopia of more than +2 dioptres and under the age of 25 in cycloplegia;

(4) ocular motility and binocular vision;

(5) colour vision;

(6) visual fields;

(7) tonometry;

(8) examination of the external eye, anatomy, media (slit lamp) and fundoscopy;

(9) assessment of contrast and glare sensitivity.

(c) Routine eye examination

At each revalidation or renewal examination an assessment of the visual fitness of the applicant should be performed and the eyes should be examined with regard to possible pathology. All abnormal and doubtful cases should be referred to an ophthalmologist. This routine eye examination should include:

(1) history;

(2) visual acuities — near, intermediate and distant vision; uncorrected and with best optical correction if needed;

(3) morphology by ophthalmoscopy;

(4) further examination on clinical indication.

(d) Refractive error

(1) Applicants with a refractive error exceeding +5.0 dioptres should be assessed as unfit.

(2) Applicants with a refractive error between +5.0/-6.0 dioptres may be assessed as fit provided that optimal correction has been considered and no significant pathology is demonstrated. If the refractive error exceeds +3.0/-3.0 dioptres a 4-yearly follow up by an eye specialist should be required.

(3) Applicants with:

(i) a refractive error exceeding -6 dioptres;

(ii) an astigmatic component exceeding 3 dioptres; or

(iii) anisometropia exceeding 3 dioptres;

may be considered for a fit assessment if:

(A) no significant pathology can be demonstrated;

(B) optimal correction has been considered;

(C) visual acuity is at least 6/6 (1.0) in each eye separately with normal visual fields while wearing the optimal spectacle correction;

(D) 2-yearly follow-up is undertaken by an eye specialist.

(4) Applicants who need a myopic correction exceeding –6 dioptres, should wear contact lenses or spectacles with high-index lenses in order to minimise peripheral field distortion.

(e) Convergence

Applicants with convergence outside the normal range may be assessed as fit provided it does not interfere with near vision (30-50 cm) or intermediate vision (100 cm) with or without correction.

(g) Substandard vision

(1) Applicants with reduced central vision in one eye may be assessed as fit for a revalidation or renewal of a medical certificate if the binocular visual field is normal and the underlying pathology is acceptable according to ophthalmological evaluation. Testing should include functional testing in the appropriate working environment.

(2) Applicants with acquired substandard vision in one eye (monocularity, functional monocular vision including eye muscle imbalance) may be assessed as fit for revalidation or renewal if the ophthalmological examination confirms that:

(i) the better eye achieves distant visual acuity of 1.0 (6/6), corrected or uncorrected;

(ii) the better eye achieves intermediate and near visual acuity of 0.7 (6/9), corrected or uncorrected;

(iii) there is no significant ocular pathology; and

(iv) a functional test in the working environment is satisfactory;

(v) in the case of acute loss of vision in one eye, a period of adaptation time has passed from the known point of visual loss, during which the applicant is assessed as unfit.

(3) An applicant with a monocular visual field defect may be assessed as fit if the binocular visual fields are normal.

(g) Keratoconus

Applicants with keratoconus may be considered for a fit assessment if the visual requirements are met with the use of corrective lenses and periodic review is undertaken by an ophthalmologist.

(h) Heterophoria

Applicants with heterophoria (imbalance of the ocular muscles) exceeding when measured with optimal correction, if prescribed:

(1) at 6 metres:

2.0 prism dioptres in hyperphoria,

10.0 prism dioptres in esophoria,

8.0 prism dioptres in exophoria

and

(2) at 33 centimetres:

1.0 prism dioptre in hyperphoria,

8.0 prism dioptres in esophoria,

12.0 prism dioptres in exophoria

may be assessed as fit provided that orthoptic evaluation demonstrates that the fusional reserves are sufficient to prevent asthenopia and diplopia. TNO testing should be carried out to demonstrate fusion.

(h) Eye surgery

(1) After refractive surgery or surgery of the cornea including cross linking, a fit assessment may be considered, provided that:

(i) pre-operative refraction was between +5 or -6 dioptres;

(ii) satisfactory stability of refraction has been achieved (less than 0.75 dioptres variation diurnally);

(iii) examination of the eye shows no post-operative complications;

(iv) glare sensitivity is normal;

(v) mesopic contrast sensitivity is not impaired;

(vi) evaluation is undertaken by an ophthalmologist.

(2) Cataract surgery

Applicants who underwent cataract surgery may be assessed as fit after 2 months provided that the visual requirements are met either with contact lenses or with intraocular lenses (monofocal, non-tinted).

(3) Retinal surgery/retinal laser therapy

(i) After retinal surgery applicants may be assessed fit around 6 months after successful surgery. Annual ophthalmological follow-up may be necessary. Longer periods may be acceptable after 2 years on recommendation of the ophthalmologist.

(ii) After successful retinal laser therapy applicants may be assessed as fit provided that an ophthalmological evaluation shows stability.

(4) Glaucoma surgery

After glaucoma surgery applicants may be assessed as fit around 6 months after successful surgery. 6-monthly ophthalmological examinations to follow-up secondary complications caused by the glaucoma may be necessary.

(5) Extra ocular muscle surgery

A fit assessment may be considered not less than 6 months after surgery and after a satisfactory ophthalmological evaluation.

(j) Correcting lenses

Correcting lenses should permit the licence holder to meet the visual requirements at all distances.

GM1 ATCO.MED.B.070 Visual system

1. Test distance: 40 cm

Comparison of different reading charts (approximately)

Decimal	Nieden	Jaeger	Snellen	N	Parinaud
1,0	1	2	1,5	3	2
0,8	2	3	2	4	3
0,7	3	4	2,5		
0,6	4	5	3	5	4
0,5	5	5		6	5
0,4	7	9	4	8	6
0,35	8	10	4,5		8
0,32	9	12	5,5	10	10
0,3	9	12		12	
0,25	9	12		14	
0,2	10	14	7,5	16	14
0,16	11	14	12	20	

2. Test distance: 80 cm

Comparison of different reading charts (approximately)

Dezimal	Nieden	Jäger	Snellen	N	Parinaud
1,2	4	5	3	5	4
1,0	5	5		6	5
0,8	7	9	4	8.0	6
0,7	8	10	4,5		8
0,63	9	12	5,5	10	10
0,6	9	12		12	10
0,5	9	12		14	10
0,4	10	14	7,5	16	14
0,32	11	14	12	20	14

AMC1 ATCO.MED.B.075 Colour vision

(a) Colour vision should be assessed using means able to demonstrate normal trichromacy.

(b) Pseudoisochromatic plate testing alone is not sufficient.

AMC1 ATCO.MED.B.080 Otorhinolaryngology

(a) Examination

(1) An otorhinolaryngological examination includes:

(i) history;

(ii) clinical examination including otoscopy, rhinoscopy, and examination of the mouth and throat;

(iii) clinical assessment of the vestibular system.

(2) ENT specialists involved in the assessment of air traffic controllers should have an understanding of the functionality required by air traffic controllers in the exercise of their licences functions.

(3) Where a full assessment and functional check is needed, due regard should be paid to the operating environment in which the operational functions are undertaken.

(b) Hearing

(1) The follow-up of an applicant with hypoacusis should be decided by the licensing authority. If at the next annual test there is no indication of further deterioration, the normal frequency of testing may be resumed.

(2) An appropriate prosthetic aid may be a special headset with individual earpiece volume controls. Full functional and environmental assessments should be carried out with the chosen prosthetic equipment in use.

(c) Ear conditions

An applicant with a single dry perforation of non-infectious origin and which does not interfere with the normal function of the ear may be considered for a fit assessment.

(d) Vestibular disturbance

The presence of vestibular disturbance and spontaneous or positional nystagmus requires complete vestibular evaluation by a specialist. Significant abnormal caloric or rotational vestibular responses are disqualifying. At revalidation and renewal examinations abnormal vestibular responses should be assessed in their clinical context.

(e) Speech disorder

Applicants with a speech disorder should be assessed with due regard to the operational environment in which the operational functions are undertaken. Applicants with significant disorder of speech or voice should be assessed as unfit.

GM1 ATCO.MED.B.080 Otorhinolaryngology
HEARING

(a) Speech discrimination test: discriminating speech against other noise including other sources of verbal communication and ambient noise in the working environment, but not against engine noise.

(b) Functional hearing test: the objective of this test is to evaluate the controller's ability to hear the full range of communications that occur in an operational environment and not just through a headset or speaker. The controller should be able to compensate the hearing loss between 20 dB and 35 dB with experience.

(c) Prosthetic aid: the functional hearing test to be carried out with the prosthetic aid in use is to ensure that the individual is able to perform the functions of his/her licence and that the equipment is not adversely affected by interference from headsets or other factors.

(d) Pure-tone audiometry: testing at frequencies at or above 4000 Hz will aid the early diagnosis of acoustic neuroma, noise induced hearing loss (NIH), and other disorders of hearing. Particular attention should be paid in cases where there is a significant difference between thresholds of the left and right ear.

AMC1 ATCO.MED.B.085 Dermatology

(a) Referral to the licensing authority should be made if doubt exists about the fitness of an applicant with eczema (exogenous and endogenous), severe psoriasis, chronic infections, drug induced, or bullous eruptions or urticaria.

(b) Systemic effects of radiation or pharmacological treatment for a dermatological condition should be evaluated before a fit assessment can be considered.

(c) An applicant with a skin condition that causes pain, discomfort, irritation or itching may only be assessed as fit if the condition can be controlled and does not interfere with the safe exercise of the of the privileges of the licence.

AMC1 ATCO.MED.B.090 Oncology

(a) Applicants who underwent treatment for malignant disease may be assessed as fit if:

(1) there is no evidence of residual malignant disease after treatment;

(2) time appropriate to the type of tumour has elapsed since the end of treatment;

(3) the risk of incapacitation from a recurrence or metastasis is sufficiently low;

(4) there is no evidence of short or long-term sequelae from treatment;

(5) satisfactory oncology follow-up reports are provided to the licensing authority.

(b) Applicants with a benign intracerebral tumour may be assessed as fit after satisfactory specialist and neurological evaluation and the condition does not compromise the safe exercise of the privileges of the licence.

(c) Applicants with pre-malignant conditions may be assessed as fit if treated or excised as necessary and there is regular follow-up.

SUBPART C — AERO-MEDICAL EXAMINERS (AMEs)

AMC1 ATCO.MED.C.010 Requirements for the issue of an AME certificate
REQUIREMENTS FOR THE BASIC AND ADVANCED TRAINING COURSES

(a) Basic training course for AMEs

The basic training course for AMEs should consist of 60 hours theoretical and practical training, including specific examination techniques.

(b) The syllabus for the basic training course should cover at least the following subjects:

— Introduction to aviation medicine;

— Physics of atmosphere and space;

— Basic aeronautical knowledge;

— Aviation physiology;

— Ophthalmology, including demonstration and practical;

— Otorhinolaryngology, including demonstration and practical;

— Cardiology and general medicine;

— Neurology;

— Psychiatry in aviation medicine;

— Psychology;

— Accidents, escape and survival;

— Legislation, rules and regulations;

— Air evacuation, including demonstration and practical;

— Medication and air traffic control.

(c) Advanced training course for AMEs

The advanced training course for AMEs should consist of another 60 hours of theoretical and practical training, including specific examination techniques.

(d) The syllabus for the advanced training course should concentrate on the specific air traffic control environment and cover at least the following subjects:

— Air traffic control working environment;

— Ophthalmology, including demonstration and practical;

— Otorhinolaryngology, including demonstration and practical;

— Cardiology and general medicine, including demonstration and practical;

— Neurology/Psychiatry, including demonstration and practical;

— Oncology, including demonstration and practical;

— Metabolic and endocrine systems, including demonstration and practical;

— Human factors in aviation, including demonstration and practical;

— Problematic use of substances.

(e) Practical training in an AeMC should be under the guidance and supervision of the Head of the AeMC.

(f) After the successful completion of the practical training, a report of demonstrated competency should be issued.

AMC1 ATCO.MED.C.025(b) Validity of AME certificates
REFRESHER TRAINING IN AVIATION MEDICINE

(a) During the period of authorisation certification an AME should attend 20 hours of refresher training, including training with regard to the environment of air traffic control.

(b) A proportionate number of refresher training hours should be provided by, or conducted under the direct supervision of the competent authority or the medical assessor.

(c) Attendance at scientific meetings and congresses and air traffic control observation may be credited by the competent authority for a specified number of hours against the training obligations of the AME, provided the medical assessor has assessed it in advance as being relevant for crediting purposes.

GM1 ATCO.MED.C.025(b) Validity of AME certificates
REFRESHER TRAINING IN AVIATION MEDICINE

Scientific meetings, congresses or air traffic control observation that may be credited by the competent authority:

(a) European Conference of Aerospace Medicine;

(b) International Academy of Aviation and Space Medicine Annual Congresses;

(c) Aerospace Medical Association annual scientific meetings;

(d) Other scientific meetings;

(e) Air traffic control observation.