

**United States Antarctic Program**

**Medical Screening Guidelines**

**2000-2001**

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## Introduction

Antarctica is the highest, driest and coldest continent on earth. Temperatures at McMurdo Station are frequently below freezing in the summer, while at the South Pole average winter temperatures dip below -70 degrees F. Employees live in a confined space during the unrelenting six month period of summer daylight or winter blackness. Altitudes vary from sea level to 9,000 feet at the South Pole.

Due to the remoteness of the continent, the sophistication of medical care is limited. Medical facilities in Antarctica can comfortably manage routine primary care problems, but advanced diagnostic technology and specialty medical expertise is not readily available. Under optimal conditions, a medical evacuation from McMurdo Station to New Zealand may take 12 hours in the summer season. From Palmer station, the process requires several days. During the winter season, medical evacuation from the continent cannot be reliably established.

The resupply of the medical clinics in Antarctica can take several weeks, and the supply of pharmaceutical agents being limited both in quantity and selection. Laboratory diagnostics are limited to basic chemistry profiles, radiology limited to standard plain film x-rays.

The physical qualifications for deployment are based on a compilation of recommendations from the U.S. Navy, the Peace Corps and NASA guidelines for medical screening. These recommendations have been modified to accommodate to the unique conditions of Antarctica. The two types of medical clearance are defined as follows:

- 1) **Unrestricted** – This clearance applies to all candidates who have no apparent medical issues that will require evaluation or treatment in Antarctica. Unrestricted clearance allows the applicant to travel to all sites on the continent and authorizes medical clearance for winter over candidates.
- 2) **Restricted** - This clearance indicates that the applicant has some medical concerns that require potential further evaluation, or is at risk of recurrence of a condition that would require a medical evacuation. Restricted clearance allows for deployment during the summer months. It implies that there is a medical condition that warrants reassessment prior to a clearance decision for winter deployment. Winter deployment is considered on a case by case basis. In certain cases, the physician advisor may also advise to restrict the applicant to certain locations on the continent.

The screening guidelines also include criteria for the ordering and successful completion of a cardiovascular exercise stress test and for drug and alcohol clearance.

## **PQ/NPQ and Waiver Process**

1. Use the current Medical Screening Guidelines – USAP 2000-2001 as guidelines: e.g. merely an indication of the many factors that go into the Medical Chart Reviewer's decision to classify applicants. Allow the Medical Chart Reviewer to classify someone who does not adhere strictly to ALL guidelines of the set classifications (e.g. NPQ, Restricted Clearance, Unrestricted Clearance).

All patients falling in the NPQ category per medical screening guidelines for deployment to Antarctica are required to waiver if they wish to deploy. This sets a boundary on the range of the Medical Chart Reviewer's decision making.

2. Allow the Medical Chart Reviewer to summer-only PQ an applicant whose condition would lead the Medical Chart Reviewer to support a waiver request should the applicant pursue a waiver. Medical Charter Reviewer will briefly document rationale for summer only PQ. (e.g. Shortcut the waiver process when the Medical Chart Reviewer is going to support it anyway and reserve the waiver process for those truly NPQed thus restoring NSF as the true "final word").

Summer-only clearances may be reassessed if the USAP participant requests winter-over status. The medical advisor is authorized, upon consultation with the physician on station, to make a clearance decision. The Medical Advisor will briefly document rationale for the clearance decision. An applicant may apply for a waiver if the decision is not in accordance to his/her desires. The Antarctica physicians, including the onsite winter physician, have direct input into whether they think they can handle the medical problem in question.

3. Allow the Medical Chart Reviewer to change a summer-only PQ to unrestricted PQ or vice/versa if new facts come to light. Such facts might arise from USAP funded repeat testing when such retesting is medically indicated and has so been recommended by the Medical Chart Reviewer, or may arise from the applicant independently seeking additional information for the purposes of influencing the Medical Chart Reviewer's classification.

This allows a change in status based on the receipt of new information that would change status from summer only PQ to unrestricted PQ or to NPQ.

4. When on site USAP resources can provide such follow-up testing with nominal cost to the program, the cost of testing should not be an issue. When the medically indicated testing exceeds the on-hand resources of the USAP, the applicant should be held responsible for the cost.
5. Any change that removes a restriction imposed through a NSF granted waiver cannot be removed without consultation with NSF. The Medical Chart Reviewer should forward reasons for requesting change in writing to NSF.

## Cardiovascular Disease

	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>General</b>	Absence of clinical symptoms or signs of angina, congestive heart failure, syncope or arrhythmia, with a baseline ECG indicating no evidence of MI, significant arrhythmia, conduction delays or ventricular hypertrophy.	Medical signs or symptoms of angina, congestive heart failure, arrhythmia, including dizziness, syncope and palpitations, with a normal evaluation including a stress ECG, holter monitor and cardiology consultation addressing the presumptive etiology and prognosis for the underlying condition.	<p>Winter-over, field camp or South Pole candidates with any current evidence of signs, symptoms, or cardiovascular tests suggestive of a current cardiac condition, excluding benign structural abnormalities.</p> <p>Unexplained chest pain, dyspnea, orthopnea or edema.</p> <p>Cardiac conditions treated with medications that may require drug monitoring. Such medications may include, but are not limited to, digoxin, and certain antiarrhythmics.</p>	<p><i>Limited capacity to diagnose and treat cardiovascular disease on the Antarctic continent.</i></p> <p><i>Remote or winter evacuation unfeasible.</i></p> <p><i>Cardiac conditions treated with medications that require drug monitoring. Such medications may include, but are not limited to, digoxin, and certain antiarrhythmics.</i></p>
<b>ECG</b>	Minor ECG abnormalities, of no clinical significance.	Cardiac pacemaker, for demand purposes of physiological sinus bradycardia, with letter from cardiologist documenting pacemaker is current and not malfunctioning.	<p>Signs, symptoms or ECG evidence of an arrhythmia or conduction abnormality for which a cardiac etiology cannot be reasonably excluded.</p> <p>Cardiac pacemaker, for reason other than sinus bradycardia.</p>	<p><i>Limited capacity to diagnose and treat cardiovascular disease on the Antarctic continent.</i></p> <p><i>Treatment unavailable</i></p>

## Cardiovascular Disease

	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Exercise Stress Test</b>	If indicated, successful completion of a cardiovascular stress test. (Appendix 1)		Stress echocardiogram or thallium treadmill either positive or equivocal for ischemia.	<i>Further diagnostic testing necessary</i>
<b>Pericarditis</b>	History of pericarditis, resolved, with normal ECG and echocardiogram, absence of clinical signs and symptoms, and no underlying systemic illness.		History of pericarditis, recurrent, with abnormal ECG or echocardiogram, presence of clinical signs and symptoms, or an underlying systemic illness.	<i>Echocardiography not available</i>
<b>Valvular Heart Disease</b>	Valvular heart disease, with no signs or symptoms, evidence of congestive heart failure or arrhythmia	History of heart valve replacement, duration of greater than twelve months prior to deployment, with no clinical signs or symptoms, and a normal stress echocardiogram.	Symptomatic valvular heart disease.  Idiopathic Hypertrophic Subaortic Stenosis.	<i>Echocardiography and stress testing are not available on the ice.</i>  <i>Risk of sudden death</i>
<b>Congestive Heart Failure</b>		Congestive heart failure, resolved, with left ventricular ejection fraction > 50%.	Congestive heart failure or left ventricular ejection fraction < 50%.	<i>Risk of sudden death. Long term antiarrhythmic therapy unavailable.</i>
<b>Coronary Artery Disease</b>		History of atherosclerotic heart disease, with no current evidence of diabetes mellitus, smoking, hypertension not controlled on medication, LDL < 100 and Chol/HDL < 5, with stable stress echocardiogram or thallium treadmill.	History of atherosclerotic heart disease, with current evidence of diabetes mellitus, smoking, hypertension not controlled on medication, LDL > 100 and Chol/HDL > 5, or with abnormal stress echocardiogram or thallium treadmill	<i>Unacceptable risk of symptomatic disease. Winter evacuation is not feasible.</i>

## Cardiovascular Disease

	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Cardiac Arrhythmia</b>	<p>Normal sinus rhythm, sinus arrhythmia, or premature atrial contractions. Unifocal PVCs, infrequent, not back to back, nor with R on T phenomena.</p> <p>Supraventricular tachycardia, last episode &gt;5 years prior to deployment.</p>	<p>Supraventricular tachycardia, single occurrence, with no recurrence for &gt;1 but &lt;5 years, with or without medication.</p> <p>Chronic atrial fibrillation, with no underlying structural abnormality, on digoxin and warfarin, with stable levels requiring no drug modification for period of &gt;1 year prior to deployment.</p>	<p>Supraventricular tachycardia, last episode &lt;1 year prior to deployment.</p> <p>Recurrent supraventricular tachycardia, with history of breakthrough on current medication.</p> <p>Frequent or sequential PVCs, R on T phenomena, or any ventricular arrhythmia.</p> <p>Chronic atrial fibrillation, with structural abnormality or medication adjustment &lt;1 year prior to deployment.</p>	<p><i>Risk of sudden cardiac death</i></p> <p><i>Warjiaren dosages can be monitored at McMurdo and the South Pole. Without underlying structural or ischemic etiologies, complication rate of atrial fibrillation is acceptable to allow for summer deployment at sites of where monitoring is available.</i></p>
<b>Ventricular Hypertrophy</b>		<p>Left ventricular hypertrophy, with no clinical signs or symptoms, no arrhythmia, normal blood pressure, no diabetes, hyperlipidemia or history of smoking &gt;5 years duration.</p>	<p>Left ventricular hypertrophy with the following: signs, symptoms or EKG evidence of arrhythmia, valvular heart disease, hypertension, diabetes, hyperlipidemia or history of smoking &lt;5 years.</p> <p>Right ventricular hypertrophy</p>	<p><i>Limited ability to evaluate and treat</i></p> <p><i>Increased risk of progression and unsuitable risk of cardiovascular event</i></p> <p><i>Pathological jinding</i></p>
<b>Hypertension</b>	<p>Hypertension, well-controlled, with or without medication, with systolic BP &lt;140 and diastolic BP &lt;90.</p>	<p>Hypertension, with systolic blood pressure &lt;160 or diastolic blood pressure &lt;100.</p>	<p>Hypertension, with systolic blood pressure &gt;160 or diastolic blood pressure &gt;100.</p>	<p><i>Limited pharmaceutical options and resources available in pharmacy.</i></p>

## Dental Screening

	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Abscessed Tooth</b>	Periapical or periodontal infection, resolved with root canal or periodontal therapy, or extraction.		Periapical or periodontal infection, current	
<b>Orthodontics, Braces, Retainers</b>	Fixed or removable orthodontic retainer only, with no active appliance.	Braces, duration > 2 months, summer only, where dental care accessible, and x-ray evidence of stability.	Braces, duration < 2 months, or winter deployment.	<i>Orthodontic therapy requires monthly follow-up.</i>
<b>Caries Root Canal Restorations</b>	Incipient lesions that have not advanced through the enamel  Root canal or bridge, adequately treated, sealed and permanently restored.  Complete permanent restorations.		Caries that have advanced through the enamel.  Defective restoration (recurrent decay, fractures, open margin).  Temporary restorations.	<i>Untreated caries has increased risk of abscess.</i>
<b>Dentures</b>	Well fitting.		Fractured or ill fitting.	
<b>Fractured Teeth Missing Teeth</b>	Restored or missing teeth.		Fractured tooth.	

<b>Dental</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Impacted Third Molars</b>	<p>Fully erupted third molar with no caries or periodontal disease.</p> <p>Asympmtomatic fully impacted third molar with no radiographic pathology.</p> <p>Partially erupted third molar, with evidence that peridontal probe cannot contact the crown of an unerupted third molar, no bleeding, good hygiene, no contact with the ascending ramus, no evidence that soft tissue extends onto the occlusal surface of the third molar, absence of pseudo or bony pockets, and presence of opposing occlusion in the case of a nonfunctional third molar.</p>	Partially erupted third molars, patient age > 30 years.	<p>Symptomatic, or with letter from dentist advising extraction.</p> <p>Partially erupted third molars, patient age &lt; 30 years.</p> <p>Peridontal probe can contact the crown of an unerupted third molar.</p> <p>Bleeding or poor hygiene is evident in the third molar area.</p> <p>Distal crown of the third molar lies on the ascending ramus.</p> <p>Soft tissue extends onto the occlusal surface of the third molar.</p> <p>Pseudo pockets, bony pockets are present.</p> <p>Lack of opposing occlusion in the case of a nonfunctional third molar.</p>	<i>At risk for becoming symptomatic</i>
<b>Peridontal Disease</b>	Early disease, bleeding pockets < 5 mm. depth, no bone loss, requiring no therapy.	Early disease, bleeding pockets < 5 mm. depth, mild bone loss,, requiring scaling every 6 months.	Advanced periodontal disease, or with bleeding pockets >5 mm. Depth.	

<b>Dental</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Congenital</b>  <b>Cleft Palate</b>  <b>Dentinogenesis Imperfecta</b>  <b>Amelogenesis Imperfecta</b>	Cleft palate repair, no residual sequelae	Dentinogenesis Imperfecta  Amelogenesis Imperfecta  Congenital abnormality, with evaluation by dentist and letter of clearance.	Congenital abnormality, with no dental consult or letter of clearance.  Cleft palate or other deformities, severe, producing speech or eating impairments.	<i>Congenital defects require evaluations every <b>six</b> months.</i>
<b>Temporo-mandibular Joint</b>	Asymptomatic for > 5 years.  Surgery > 6 months, asymptomatic	Asymptomatic for > 6 months but < 5 years, with letter of documentation from treating dentist.  Uses night guard or requires occasional NSAID therapy, with letter of documentation from treating dentist.	Symptomatic, requiring chronic NSAID therapy, supplementary analgesics, or < 6 months after TMJ surgery.	

## Dermatology

	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>General</b>	Actinic keratosis.  Nevi, nondysplastic.  Cyst, asymptomatic, or excised > 2 months prior to deployment.  Viral warts.	Nevi, Multiple, with history of dysplasia.	Cyst, symptomatic, or excised < 6 weeks prior to deployment.	<i>Benign skin lesions can be treated at all facilities. All cyst excisions should be completely healed prior to deployment.</i>  <i>No pathology services available in winter.</i>
<b>Acne</b>	Acne, untreated, or acne, treated with accutane therapy, duration > two months prior to deployment.		Acne, treated with accutane therapy, duration < two months prior to deployment.	<i>Accutane therapy requires laboratory monitoring, ongoing therapy is a specialty service unavailable in Antarctica.</i>
<b>Malignant Melanoma</b>	Malignant melanoma, depth < .75mm, and excised greater than five years prior to deployment, with no evidence of recurrence.	Malignant melanoma, depth < .75 mm, or >.75 mm and excised greater than five years prior to deployment, with no evidence of recurrence.	Malignant melanoma, excised less than five years prior to deployment.	<i>Limited diagnostic equipment.</i> <i>Melanomas &gt; .75 mm. at risk for metastatic disease.</i>
<b>Basal Cell Carcinoma</b>	Basal cell carcinoma, single episode.	Basal cell carcinoma, multiple lesions or recurrences..	Basal cell carcinoma, active.	<i>Risk of recurrence without suitable pathology services during winter.</i>
<b>Squamous Cell Carcinoma</b>	Squamous cell carcinoma, duration > 5 years, no recurrence.	Squamous cell carcinoma, duration > 2 but < 5 years, no recurrence.	Squamous cell carcinoma, duration < 5 years, or with history of metastasis or local spread.	<i>Risk of recurrence, with inability to diagnose and treat during winter.</i>
<b>Psoriasis Eczema</b>	Atopic dermatitis, including psoriasis and eczema, well controlled, on no systemic immunosuppressive therapy.		Atopic dermatitis, including psoriasis and eczema, poorly controlled, or requiring systemic immunosuppressive therapy.	<i>Limited diagnostic capacity, with risk of opportunistic infection</i>

## Dermatology

	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Fungal or Tinea Infections</b>	Fungal or tinea infections, superficial, with no systemic manifestations and no systemic therapy.	Fungal or tinea infections, superficial requiring systemic therapy.	Systemic fungal infections.	<i>Systemic fungal therapy implies a chronically immunosuppressed patient.</i>
<b>Herpes Zoster</b>	Herpes zoster, resolved for one month, with no post-herpetic neuralgia.	Herpes zoster, resolved for one month, with post-herpetic neuralgia controlled with NSAID therapy.	Herpes zoster, active, or resolved for one month, with post-herpetic neuralgia, poorly controlled with NSAID therapy.	<i>Pain control options are limited.</i>

## Endocrinology and Metabolism

	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>General</b>			Diabetes Insipidus, nephrogenic or vasopressin sensitive, treated or untreated. Addison's disease.	<i>Expertise unavailable on ice, exacerbations are difficult to diagnose.</i>
<b>NIDDM</b>	NIDDM, duration < 10 years, controlled on dietary therapy, with no complications and a HbA1C < 8.0.	NIDDM, > 10 years duration, with FBS < 130, HBA1C 8.0-9.5%, on stable oral hypoglycemic regimens no significant hypoglycemia or DKA > 2 years, no complications, body weight < 130% IBW, with physician support.	NIDDM, > 10 years duration, with FBS > 130, HBA1C > 9.5%, with treatment regimen changes < 6 months prior to deployment, significant hypoglycemia or DKA < 2 years, complications, or with body weight > 130% IBW.	<i>Risks of infection, complications</i>
<b>IDDM</b>		IDDM, > 1 but < 10 years HBASC 6.0-9.5%, on stable insulin regimen, no significant hypoglycemia or DKA > 2 years, no complications, body weight < 130% IBW, with physician letter confirming ability to manage disease.	IDDM, < 1 or > 10 years, HBA1C > 9.5% on insulin regimen adjusted < 6 months prior to deployment, with significant hypoglycemia or DKA < 2 years, complications, or body weight > 130% IBW.	<i>Risk of infection, complications can be difficult to diagnose. Pharmaceutical resources are limited. Recurrent hypoglycemia is difficult to manage.</i>
<b>Hypoglycemia</b>	Reactive hypoglycemia		Hypoglycemia due to insulinoma.	<i>Reactive hypoglycemia is common.</i>
<b>Pituitary Adenoma</b>	Pituitary adenoma, > 5 years prior to deployment, with normal radiographic evaluation, normal prolactin and TSH levels, and letter from endocrinologist stating confirming data and stating prognosis.	Pituitary adenoma, treatment > 2 but < 5 years prior to deployment, with normal radiographic evaluation, normal prolactin and TSH levels, and letter from endocrinologist stating confirming data and stating prognosis.	Pituitary adenoma, duration < 2 years prior to deployment.	<i>Limited diagnostic, therapeutic availability</i>

<b>Endocrinology and Metabolism</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not-Physically Qualified</b>	
<b>Thyroid Nodule</b>	Solitary thyroid nodule, biopsy benign.	Thyroid nodule, undetermined, followup planned, deployment < 4 weeks duration.	Thyroid nodule, undetermined etiology.	<i>Risk of cancer, surgical intervention not available.</i>
<b>Thyroid Cancer</b>	History of papillary, follicular or mixed cell cancer of the thyroid, > 5 years prior to deployment, with radiological evidence of no recurrent or metastatic disease, normal TSH, and letter of confirmation from endocrinologist stating prognosis.	History of papillary, follicular or mixed cell cancer of the thyroid, > 2 but < 5 years prior to deployment, with radiological evidence of no recurrent or metastatic disease, normal TSH, and letter of confirmation from endocrinologist stating prognosis.	History of papillary, follicular or mixed cell cancer of the thyroid, < 2 years prior to deployment, or with radiological evidence of recurrent or metastatic disease, or with an abnormal TSH.	<i>Risk of recurrence is unacceptably high within first 5 years and cannot be treated in Antarctica.</i>
<b>Graves Hyperthyroidism</b>	History of Graves hyperthyroidism, > 2 years prior to deployment, with normal TSH with or without thyroid replacement therapy, or > 1 year and normal TSH on thyroid replacement therapy.	History of Graves hyperthyroidism, duration > 1 year prior to deployment, with normal TSH without thyroid replacement therapy.	History of Graves hyperthyroidism, < 1 year prior to deployment, or with an abnormal TSH	<i>Condition requires stabilization prior to deployment. After treatment, Graves disease has a high risk of hypothyroidism. TSH levels cannot be determined in Antarctica.</i>
<b>Toxic Adenoma</b>	Toxic adenoma or toxic multinodular goiter, > 2 years prior to deployment, with normal TSH.	Toxic adenoma or toxic multinodular goiter, > 1 but < 2 years prior to deployment, with normal TSH.	History of toxic adenoma or multinodular goiter, < 1 year prior to deployment, or with an abnormal TSH.	<i>Condition requires stabilization prior to deployment. Radioactive iodine therapy not available.</i>
<b>Hypothyroidism</b>	History of hypothyroidism, any cause, > 1 year prior to deployment, with normal TSH on replacement therapy.	History of hypothyroidism, > 3 but < 12 months prior to deployment, with normal TSH on replacement therapy.	History of hypothyroidism, any cause, < 3 months prior to deployment, or with an abnormal TSH.	<i>Low risk for complications. Thyroid function testing is not available during the winter.</i>

<b>Endocrinology and Metaboiiism</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Hyper-triglyceride</b>	Hypertriglyceridemia with fasting triglycerides < 300.	Hypertriglyceridemia with fasting triglycerides > 300 but < 500.	Hypertriglyceridemia with fasting triglycerides > 500.	<i>Requires chronic therapy that should be instituted prior to deployment. Increased risk of pancreatitis and CAD.</i>
<b>Hyper-cholesterol</b>	Hypercholesterol, age < 40  Hypercholesterol, with Cholesterol < 240, LDL < 160 and Chol/HDL < 5.0, and duration less < 5 years.	Hypercholesterol, age > 40, Cholesterol > 240 but < 300, LDL > 160 but < 190, Chol/HDL < 7.0.  Hypercholesterol, age > 40, duration > 5 years, with LDL > 140 but < 160 or Chol/HDL < 7.0.	Hypercholesterol, with Cholesterol > 300, LDL > 190 or Chol/HDL > 7.0 and age > 40.  Hypercholesterol, age > 40, Cholesterol > 240 and LDL > 160 or Chol/HDL > 7.0 and duration > 5 years.	<i>Requires chronic therapy, needs to be initiated prior to deployment. Chronic medication to be supplied in U.S.  Chronic high cholesterol is associated with increased vascular disease.,</i>
<b>Gout</b>	History of gout. Last episode > 6 months prior to deployment, with uric acid less than 8.0 mg/dl.	Gout, last exacerbation < 6 months prior to deployment, with uric acid < 8.0 mg/dl or IBW < 150%.	Gout, last exacerbation < 6 months prior to deployment, with uric acid > 8.0 mg/dl or IBW > 150%.	<i>Diagnostic difficulties, requires chronic therapy. Obesity associated with gout.</i>

<b>Gastroenterology</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>General</b>	No clinical symptoms or signs of abdominal pain, bloating, nausea, anorexia, weight loss, changes in stool habits, blood in stool, persistent or chronic diarrhea or constipation, with normal physical examination and laboratory testing.	Irritable bowel syndrome, < 2 exacerbations per yr., normal gastrointestinal x-rays and/or colonoscopy, and symptoms well controlled by diet, stress reduction or as needed medication.  Stable LFTs, < 3X high normal.	Unexplained abdominal pain weight loss or anorexia.  Unexplained blood in stool, either gross or occult.  Colostomy.  Increasing LFTs or LFTs > 3X high normal.	<i>Diagnostic evaluation required, cannot do ultrasound or GI barium imaging at the clinic sites</i>  <i>Expertise unavailable</i>
<b>Esophagus</b>	Barrett's esophagus, with normal biopsy < 6 months prior to deployment.	Achalasia, post dilatation, with no recurrence < 2 years prior to deployment.	Barrett's esophagus with dysplasia.	<i>Risk of cancer, unable to do endoscopy or UGI in Antarctica.</i>
<b>GERD Stricture</b>	Gastroesophageal reflux disease or recurrent gastritis, episodic and well controlled on medication.	History of esophageal stricture or obstruction > 2 years prior to deployment, with normal upper gastrointestinal x-rays or endoscopy	History of esophageal stricture or obstruction < 2 years prior to deployment, without current evidence of resolution.	<i>Risk of recurrence, treatment not available</i>
<b>Peptic Ulcer UGI Bleeding</b>	Peptic ulcer disease, including benign gastric ulcer, > 1 year prior to deployment, or > 6 months prior to deployment, with no evidence of recurrent disease as documented by x-ray or endoscopy.	Upper gastrointestinal bleeding, with source identified at time of occurrence, duration > 2 but < 6 months prior to deployment, with no evidence of recurrent disease as documented by x-ray or endoscopy	Upper gastrointestinal bleeding, < 6 months prior to deployment.  Upper gastrointestinal bleeding, past etiology undetermined	<i>Diagnostic and therapeutic options limited. Increased risk of recurrence, UGI, endoscopy and surgery not available during winter season.</i>

<b>Gastroenterology</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Gastrectomy</b>	Partial gastrectomy, > 1 yr. prior to deployment, with no recurrent symptoms or complications.		Partial gastrectomy, < 1 yr. prior to deployment, or with recurrent symptoms or complications.	<i>Risk of recurrent disease, obstruction, endoscopy and surgery not available during winter.</i>
<b>Bowel Obstruction</b>	Partial proctocolectomy, > 2 yr. prior to deployment, with no evidence of recurrent disease as documented by colonoscopy, X-rays, and laboratory findings.	Bowel obstruction, etiology identified. > 2 years prior to deployment	Bowel obstruction, occurring < 2 years prior to deployment.	<i>Risk of recurrence, UGI, BE and surgery unavailable during winter.</i>
<b>GI Cancer</b>		Cancer of GI tract. asymptomatic > 3 years, and no evidence of recurrent or metastatic disease, as documented by colonoscopy, endoscopy, x-ray and laboratory findings within 3 months before deployment.	Cancer of the gastrointestinal tract, liver, pancreas or peritoneum, < 3 years prior to deployment, or with evidence suggestive of recurrent or metastatic disease.	<i>Risk of recurrence, limited diagnostic and therapeutic options, surgery for bowel obstruction nor available during the winter.</i>
<b>Ulcerative Colitis</b>		Ulcerative colitis or proctitis, with no exacerbations of symptoms > 5 yrs. with normal colonoscopy within six months prior to deployment.	Ulcerative colitis or proctitis, with last exacerbation < 5 years, or with an abnormal gastrointestinal x-ray or colonoscopy.	<i>Limited diagnostic and therapeutic options. Surgery nor available, blood transfusions rely on compatible donor from walking blood bank.</i>
<b>Crohn's Disease</b>		Crohn's disease. no exacerbation of symptoms > 5 years. with upper gastrointestinal and small bowel follow x-rays indicating no significant lumen narrowing. adhesions or fistula formation.	Crohn's disease with exacerbation < 5 years, or with an abnormal gastrointestinal x-ray series suggesting lumen narrowing, adhesions, or fistula formation.	<i>Risk of recurrence, limited diagnostic and therapeutic options</i>

<b>Gastroenterology</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Diverticular Disease</b>	Diverticulosis, asymptomatic	Diverticulitis, single episode > 2 years prior to deployment	Diverticulitis, recurrent or last episode < 2 years prior to deployment	<i>Risk of recurrence, colonoscopy and BE unavailable, limited pharmaceutical resources</i>
<b>Colonic Polyps</b>	Adenomatous colonic polyps, with excision < 3 years prior to deployment	Adenomatous colonic polyps, with previous colonoscopy and excisional biopsy > 3 but < 5 years prior to deployment.	Adenomatous colonic polyps, with previous colonoscopy and excisional biopsy > 5 years prior to deployment.	<i>Evaluation indicated prior to deployment per U.S. practice standards.</i>
<b>Anal Fissure Anal fistula</b>	Anal fissure, abscess and/or fistula, resolved > 3 months prior to deployment, with no underlying illness contributing to the etiology of the condition.		Current anal fissure, fistula or abscess or occurring < 3 months prior to deployment	<i>Risk of recurrence, limited diagnostic and therapeutic options</i>
<b>Hemorrhoids</b>	Grade 1,2 and 3 hemorrhoids, averaging < 1/month, with symptoms lasting < 1 week, and responsive to medical therapy.	Grade 1,2 and 3 hemorrhoids, averaging > 1/month, or with symptoms lasting > 1 week, and responsive to medical therapy.	Grade 4 hemorrhoids.  Hemorrhoids requiring prolonged therapy	<i>Surgical correction unavailable</i>
<b>Cholelithiasis</b>		Cholelithiasis, asymptomatic.	Cholelithiasis, symptomatic.	<i>Risk of acute abdomen</i>
<b>Pancreatic Pseudocyst</b>		Pancreatic pseudocyst, > 2 years prior to deployment, resolution confirmed by radiographic imaging < 1 month prior to deployment, and accompanied by a letter of consultation from an attending physician.	Pancreatic pseudocyst < 2 years duration prior to deployment.	<i>Risk of recurrence, limited diagnostic and therapeutic options, ultrasound and CT scan unavailable during winter.</i>

## Gastroenterology

	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Pancreatitis</b>	Pancreatitis, single episode, > 2 years prior to deployment, and no history of malabsorption, hypertriglyceridemia or alcoholism.	Pancreatitis, single episode, > 1 but < 2 years prior to deployment, and no history of malabsorption, hypertriglyceridemia or alcoholism.	Chronic pancreatitis  Acute pancreatitis, occurring < 1 year prior to deployment.	<i>Risk of recurrence, limited diagnostic and therapeutic options. No surgical options for pseudocysts during winter.</i>
<b>Hepatitis</b>	Acute hepatitis A or B, with serological evidence of resolution, and no clinical symptoms	Chronic hepatitis B or C, with radiographical and/or pathological evidence of absence of cirrhosis, hepatoma and HIV infection, with no systemic manifestations, and a note from an attending physician confirming discussion of the disease with the applicant.	Hepatitis B or C, with associated cirrhosis, hepatoma, concomitant HIV infection or systemic manifestations of disease	<i>Risk of systemic complications, limited diagnostic and therapeutic options. Applicants need evidence they have been offered the option for therapeutic intervention prior to deployment.</i>
<b>Abdominal Surgery</b>	Abdominal surgery, including appendectomy, cholecystectomy, inguinal hernia, ventral hernia, hiatal hernia and hemorrhoidectomy, < 6 weeks prior to deployment, with surgical clearance from physician or > 6 months duration prior to deployment without intervening complications.		History of abdominal surgery < 6 weeks prior to deployment.	<i>Risk of post-op complications</i>

<b>Genitourinary</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>General Genitourinary Surgery</b>	Genitourinary surgery, including nephrectomy, TURP, or orchiectomy, performed at least 6 weeks prior to deployment, with no complications, and letter of medical clearance from surgeon.		Any genitourinary surgery less than 6 weeks prior to deployment.  Urinary tract diversion, or urinary catheter, either temporary or permanent.	<i>Most post operative complications appear prior to 6 weeks.</i>  <i>Lack of medical expertise</i>
<b>Testicular Cancer</b>	History of seminoma or teratocarcinoma of testes, surgical excision > 5 years prior to deployment, with no evidence of recurrent or metastatic disease, normal chest x-ray, normal tumor markers and letter of clearance from attending physician.  History of nonseminoma or nonteratoma carcinoma of testes, surgical excision > 5 years prior to deployment, with no evidence of recurrent or metastatic disease, normal chest x-ray, normal tumor markers and letter of clearance from attending physician.	Seminoma or teratocarcinoma of testes, surgical resection > 3 months but < 5 years prior to deployment, with no evidence of recurrent or metastatic disease, as documented by tumor markers, radiological findings, and confirmatory letter from attending physician.  Nonseminoma or nonteratoma carcinoma of testes, surgical resection > 6 months but < 5 years prior to deployment, with no evidence of recurrent or metastatic disease, as documented by tumor markers, radiological findings, and confirmatory letter from attending physician.	Seminoma or teratocarcinoma of testes, surgical resection < 3 months prior to deployment, or with no evidence of recurrent or metastatic disease, as documented by tumor markers, radiological findings.  Nonseminoma or nonteratoma carcinoma of testes, surgical resection < 6 months prior to deployment or with evidence of recurrent or metastatic disease, as documented by tumor markers or radiological findings.	<i>Risk of recurrence, diagnostic monitoring limited, no CT or ultrasound in Antarctica.</i>  <i>Cannot do assays for tumor markers</i>  <i>No surgery in Antarctica or evacuation to New Zealand or Chile during winter.</i>

<b>Genitourinary</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Benign Scrotal Conditions</b>	Asymptomatic hydrocoele, varicocele or spermatocele.		Symptomatic hydrocoele, varicocele or spermatocele.	<i>Standard practice to repair symptomatic scrotal lesions.</i>
<b>Urinary Stress Incontinence</b>		Urinary stress incontinence, mildly symptomatic.	Urinary fistula.	<i>Can be surgically repaired prior to deployment</i>
<b>Cystocoele</b>		Cystocoele, asymptomatic.	Symptomatic cystocoele.	
<b>Urethral Strictures</b>	Urethral stricture, last occurrence > 5 years prior to deployment	Urethral stricture, occurrence >1 but < 5 years prior to deployment.	Urethral stricture < 1 year prior to deployment.	<i>Risk of recurrence, no surgical options available.</i>
<b>Urinary Tract Infections</b>	UTI, last episode > 2 years.  Male, with 1 or female, with 2 urinary infections in past 24 months	Male, with >1 or female with >2 recurrent urinary tract infections in the past two year period, with normal urological evaluation.	Chronic pyelonephritis.	<i>Limited pharmacy, laboratory C&amp;S available for limited number of organisms, technical inexperience.</i>
<b>Benign Prostatic Hypertrophy</b>	Benign prostatic hypertrophy, with PSA < 4.0, no nodules on prostate examination, and no more than 2 episodes of nocturia per evening.	Benign prostatic hypertrophy, with PSA 4.0-10.0, no nodules on prostate examination, normal ultrasound, no more than 3 episodes of nocturia per evening, and confirmatory letter from attending physician.	Benign prostatic hypertrophy, with PSA > 10.0, or prostate nodule, or abnormal prostate ultrasound, or nocturia greater or equal to four episodes per evening.	<i>Treatment unavailable, cannot follow PSA levels in Antarctica.</i>
<b>Prostate Cancer</b>	Prostate cancer > 10 years with no evidence of recurrent or metastatic disease, as documented by normal PSA, pelvic and/or abdominal CT scan, pathology report of tumor free surgical margins, letter from physician.	Carcinoma of the prostate, localized, with no evidence of recurrent or metastatic disease as documented by PSA and radiological findings, duration >1 but < 10 years prior to deployment, with confirmation from physician.	Cancer of the prostate, diagnosed < 1 year prior to deployment, or with a rising PSA, or with any evidence suggestive of recurrence or metastasis.	<i>PSA not available</i>

<b>Genitourinary</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Bladder Cancer</b>	Cancer of bladder, with no recurrences duration > 10 years prior to deployment, with confirmatory letter from urologist,	Cancer of bladder, with no recurrence, >2 but < 10 years prior to deployment, with confirmatory letter from urologist..	Cancer of bladder, diagnosed < 2 years prior to deployment.	<i>Diagnostic equipment, therapeutic options unavailable</i>
<b>Kidney Cancer</b>	Adenocarcinoma of kidney, with surgical nephrectomy > 10 years to deployment, with no evidence of recurrent or metastatic disease, as documented by radiological findings. normal renal function, and confirmatory letter from attending physician.	Adenocarcinoma of kidney, with surgical nephrectomy >2 but < 10 years prior to deployment, with no evidence of recurrent or metastatic disease, as documented by radiological findings. normal renal function, and confirmatory letter from attending physician.	Adenocarcinoma of the kidney, diagnosed < 2 years prior to deployment.	<i>Risk of recurrence, no CT or Ultrasound in Antarctica, evacuation for diagnostic testing unfeasible in winter.</i>
	History of nephrectomy, due to obstruction of nonmalignant etiology, duration > 6 months prior to deployment, with normal renal function.		Unilateral nephrectomy with abnormal renal function.	<i>Chronic renal failure commonly requires intensive monitoring and medical expertise not uniformly available in Antarctica.</i>
<b>Chronic Renal Diseases</b>		Polycystic Kidney Disease, with normal renal function, and no evidence suggestive of cerebral aneurysm.  Chronic Glomerulonephritis with normal renal function.  Chronic nephritis with normal renal function.	Abnormal renal function, with Creatinine > 2.0 or urinary protein > 500 mg/day. Acute or chronic progressive glomerulonephritis.  Acute or chronic progressive nephritis	<i>Chronic renal failure commonly requires intensive monitoring and medical expertise not uniformly available in Antarctica. Ultrasound, CT and vascular imaging available off continent during the summer season.</i>

### Genitourinary

	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Renal Calculi</b>	Renal calculi, last occurrence > 1 year duration, with normal renal function, IVP, and kidney stone risk factor analysis.	Renal calculi, last occurrence > 6 months but < 1 year prior to deployment, with normal renal function, IVP, and kidney stone risk factor analysis.	Renal calculus < six months prior to deployment.  Persistent renal calculi.  History of renal calculi > 6 months prior to deployment, with abnormal renal stone risk factors.	<i>Surgical intervention unavailable, diagnostics limited</i>

<b>Gynecology</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Pregnancy Termination</b>	Abortion, duration > 2 weeks prior to deployment, with no complications and a normal HCG	Abortion, duration < 2 weeks than two weeks prior to deployment, with no complications and a decreasing HCC	Abortion, < 2 weeks prior to deployment, with complications or a persistently positive HCC.	<i>Treatment usually uncomplicated.</i>
<b>Breast Cancer</b>	Carcinoma of the breast, duration > 5 years prior to deployment, with no evidence of recurrent or metastatic disease, S/P subtotal or radical mastectomy, with negative lymph nodes.	Carcinoma of the breast, duration < 1 but > 5 years prior to deployment, with no evidence of recurrent or metastatic disease, S/P subtotal or radical mastectomy, with negative lymph nodes.	Carcinoma of the breast, duration < 1 year prior to deployment, or with evidence of recurrent or metastatic disease, or S/P subtotal or radical mastectomy, with positive lymph nodes.	<i>High risk of recurrence, no mammography available, CT and nuclear medicine not available in Antarctica</i>
<b>Breast Mass</b>	Any uncomplicated breast surgery for excision of benign mass, duration > 6 weeks prior to deployment.  Any breast mass, determined to be benign by biopsy, aspiration or mammogram, with followup examination advised for no less than 1 year after the evaluation.	Any breast mass, determined to be benign by biopsy, aspiration or mammogram, with followup examination advised for > 6 months after the evaluation.	Any uncomplicated breast surgery for excision of benign mass, duration < 6 weeks prior to deployment.  Any breast mass, determined to be benign by biopsy, aspiration or mammogram, with followup examination advised for < 3 months after the evaluation.	<i>Mammography unavailable</i>
<b>Contraception</b>	Contraception by hormonal manipulation, with no evidence of complications, duration > 3 three months prior to deployment.	Contraception by hormonal manipulation, with no evidence of complications, duration < 3 months prior to deployment.	Contraception by hormonal manipulation, with evidence of persistent abnormal menses.	<i>Abnormal menstrual bleeding requires evaluation, D&amp;C beyond skill level of most primary care physicians.</i>

<b>Gynecology</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Tubal Ligation</b>	Tubal ligation, uncomplicated, >6 weeks prior to deployment.		Tubal ligation, complicated, or <6 weeks prior to deployment.	
<b>Cervical Dysplasia</b>	History of cervical dysplasia, treated or untreated, with normal pap smear occurring < 3 months prior to deployment.	History of cervical dysplasia, treated or untreated, with normal pap smear occurring > 3 months prior to deployment.	History of cervical dysplasia, treated or untreated, with abnormal pap smear, not due to HPV infection or metaplastic squamous cells, or with followup evaluation recommended within a duration of < 6 months.	<i>Recently treated cervical dysplasia offers low risk of imminent health hazard.</i>  <i>Analysis of Pap smear is not feasible during winter season.</i>
<b>Hysterectomy</b>	Hysterectomy, any cause, duration > 6 weeks prior to deployment, with negative biopsy results.		Hysterectomy, any cause, duration < 6 weeks prior to deployment, or with positive biopsy results.	<i>Major surgical procedures are assigned a six week period of convalescence prior to clearance.</i>
<b>Endometriosis</b>	Endometriosis, with mild symptoms controlled with hormonal therapy, OTC or NSAID medications, and no surgical procedure occurring < 6 weeks prior to deployment.	Endometriosis, with moderate symptoms controlled with hormonal therapy, OTC or NSAID medications, and no surgical procedure occurring < 6 weeks prior to deployment.	Endometriosis, with moderate to severe symptoms, with or without hormonal therapy, OTC or NSAID medications, or requiring other forms of pain control, or requiring a surgical procedure < 6 weeks prior to deployment.	<i>Potentially debilitating, no winter availability of ultrasound, laparoscopic surgery cannot be performed in Antarctica.</i>
<b>Bartholin Cysts</b>	Bartholin gland abscess, single episode, S/P I&D > 6 weeks prior to deployment.	Bartholin gland abscess, multiple recurrences, S/P I&D > 6 weeks prior to deployment.	Bartholin gland abscess, persistent or chronic, or S/P I&D < 6 weeks prior to deployment.	<i>Chronic infections tend to persist in Antarctic climate. Limited pharmaceutical resources.</i>

<b>Gynecology</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Pelvic Inflammatory disease</b>	PID, acute episode, resolved > 3 months prior to deployment.	PID, acute episode, resolved > 1 but > 3 months prior to deployment	PID, persistent or recurrent, or resolved < 1 month prior to deployment.	<i>Only chronic PID offers diagnostic and therapeutic challenges</i>
<b>Vaginitis</b>	Vaginitis, episodic, responsive to antimicrobial therapy.	Vaginitis, persistent, responsive to antimicrobial therapy.	Vaginitis, chronic, unresponsive to antimicrobial therapy	<i>Limited laboratory capability to diagnose complex vaginal infections, limited pharmaceutical resources available.</i>
<b>Menorrhea Menorrhagia</b>	History of menorrhea or menorrhagia, resolved, > 1 year prior to deployment without medical therapy, or > 6 months with medical therapy.	History of menorrhea or menorrhagia, resolved, > 6 months but < 1 year prior to deployment without medical therapy, or > 3 but < 6 months with medical therapy.	History of menorrhea or menorrhagia, recurrent or resolved, < 6 months prior to deployment without medical therapy, or < 3 months with medical therapy.	<i>Condition generally well controlled with hormonal therapy.</i>  <i>Hysterectomy not feasible during winter season in Antarctica.</i>
<b>Premenstrual Syndrome</b>	Premenstrual syndrome, mild, controlled with medical or dietary therapy not including tranquilizers, antidepressants or counseling	Premenstrual syndrome, moderate, controlled with medical or dietary therapy antidepressants or counseling	Premenstrual syndrome, moderate to severe, controlled with medical or dietary therapy including tranquilizers, antidepressants or counseling.	<i>Psychological risk factor, symptoms of depression are more prevalent during seasons of darkness.</i>
<b>Polycystic Ovary Disease</b>	Polycystic ovarian syndrome, symptoms controlled with hormonal therapy, > 6 months prior to deployment.	Polycystic ovarian syndrome, symptoms controlled with hormonal therapy, > 3 but < 6 months prior to deployment.	Polycystic ovarian syndrome, symptoms, uncontrolled, or controlled with hormonal therapy, < 3 months prior to deployment.	<i>Generally well controlled with therapeutic intervention</i>
<b>Oophorectomy</b>	History of oophorectomy, benign etiology, > 6 weeks prior to deployment.		History of oophorectomy, < 6 weeks prior to deployment.	

<b>Gynecology</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Pap Smear</b>	Normal pap smear.  Abnormal pap smear, with non-specific inflammation, squamous metaplasia, HPV changes, or S/P culposcopy with biopsy proven negative results.	Normal pap smear lacking endocervical cells	Abnormal pap smear, not due to nonspecific inflammation, squamous metaplasia, or HPV changes.	<i>Further evaluation indicated, pap smears cannot be analyzed during the winter season, cannot perform culposcopy during winter season.</i>
<b>Uterine Fibroids</b>	Uterine fibroids, with normal menses, and no clinical symptoms of pain.	Uterine fibroids, with normal menses, and minimal clinical symptoms of pain, controlled with hormonal, OTC or NSAID therapy.	Uterine fibroids, with abnormal menses, or clinical symptoms of moderate to severe pain.	<i>Treatment of symptomatic uterine fibroids is hysterectomy, procedure unavailable during winter season.</i>
<b>Uterine Cancer</b>	Cancer of uterus, > 5 years prior to hysterectomy, with no evidence of recurrence or metastatic disease.	Cancer of uterus, > 1 but < 5 years prior to hysterectomy, with no evidence of recurrence or metastatic disease.	Cancer of uterus, < 1 year prior to hysterectomy, or with evidence of recurrence or metastatic disease.	<i>Ultrasound, CT and nuclear medicine not available in Antarctica.</i>
<b>Ovarian Cancer</b>	Cancer of the ovary, duration > 5 years prior to deployment, with laparoscopic, serological and radiographical evidence of no recurrent or metastatic disease.	Cancer of the ovary, > 3 but < 5 years prior to deployment, with no evidence serological or radiographical of recurrent or metastatic disease.	Cancer of the ovary, < 3 years prior to deployment, or with evidence of recurrent or metastatic disease.	<i>High risk of recurrence, ultrasound, CT and laparoscopic surgery unavailable in Antarctica.</i>

<b>Hematology</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Iron Deficiency Anemia</b>	Iron deficiency anemia, with etiology of low iron determined, Hct > 35 and responsive to iron supplementation	Iron deficiency anemia, with etiology of low iron determined, Hct > 30 but < 35, and responsive to dietary or iron replacement therapy.	Iron deficiency anemia, with etiology of low iron undetermined, or Hct < 30, or unresponsive to iron supplementation.	<i>Unexplained iron deficiency requires diagnostic evaluation</i>  <i>High altitude at South Pole exacerbates symptoms of anemia.</i>
<b>Hemoglobinopathy</b>	Hemoglobinopathy trait, asymptomatic and Hct > 35.	Sickle cell or hemoglobin C trait, no history of symptoms, and Hct > 35.	Hemoglobinopathy including sickle cell or hemoglobin C disease, or with history of symptoms, or with Hct < 35.	<i>High altitude at South Pole exacerbates symptoms of anemia. Infection can trigger sickle cell crises.</i>
<b>Spherocytosis Elliptocytosis</b>	Spherocytosis or Elliptocytosis, single event, > 2 years prior to deployment.	Spherocytosis or Elliptocytosis, single event, duration > 1 but < 2 years prior to deployment.	Spherocytosis or Elliptocytosis, multiple events, or < 1 year prior to deployment.	<i>Risk of recurrence, can possibly be exacerbated by environmental stressors.</i>
<b>Megaloblastic Anemia</b>	Megaloblastic anemia, etiology determined, asymptomatic, under treatment > 1 year, with normalization of blood indices and no clinical symptoms.	Megaloblastic anemia, etiology determined, asymptomatic, under treatment for > 3 months but < 1 year, with normalization of blood indices and no clinical symptoms.	Megaloblastic anemia, etiology determined, asymptomatic, under treatment for duration < 3 months, or with abnormal blood indices, or with clinical findings.	<i>Etiology requires identification.</i>  <i>Usually responsive to therapy</i>
<b>Idiopathic Thrombocytopenia purpura</b>	ITP, single episode, resolved > 5 years prior to deployment.	ITP, single episode, resolved > 2 but < 5 years prior to deployment.	ITP, multiple episodes, or < 2 years prior to deployment.	<i>Risk of recurrence, only source of platelets is via a limited walking blood bank.</i>
<b>Autoimmune Hemolytic Anemia</b>		History of autoimmune hemolytic anemia, single episode, resolved > 1 year prior to deployment.	History of autoimmune hemolytic anemia, single or recurrent episode, or occurring < 1 year prior to deployment.	<i>Risk of recurrence</i>  <i>Only source of blood transfusion is via a limited walking blood bank</i>

<b>Hematology</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Thrombocytopenia</b>	Thrombocytopenia, stable, asymptomatic, with etiology determined to be nonmalignant and nonprogressive, duration > 2 years prior to deployment.	Thrombocytopenia, stable, asymptomatic, with etiology determined to be nonmalignant and nonprogressive, duration > 6 months but < 2 years prior to deployment.	Thrombocytopenia, unstable, symptomatic, or with etiology undetermined or malignant, or duration < 6 months.	<i>Demonstrated stability of thrombocytopenia is required. The underlying etiology must be documented prior to deployment. Limited capacity to treat in Antarctica.</i>
<b>Myeloproliferative Disorders</b>	Acute leukemia, with biopsy proven normal bone marrow, and duration of disease free status following medical therapy > 10 years prior to deployment.	Acute leukemia, with biopsy proven normal bone marrow, and duration of disease free status following medical therapy > 5 years prior to deployment.	Acute or chronic myeloproliferative disorder, including polycythemia, multiple myeloma, non Hodgkin's lymphoma, or myelodysplastic disorders, or treated with medical therapy < 5 years prior to deployment, or with history of recurrence.	<i>High risk of recurrent disease</i>
<b>Lymphoma</b>	Hodgkin's disease, Stage IA, S/P radiation therapy, with no evidence of recurrent or metastatic disease > 5 years prior to deployment.	Hodgkin's or non Hodgkin's disease, any stage, with no evidence of recurrent or metastatic disease > 5 years prior to deployment; or Stage IA S/P radiation therapy, in remission for a duration of no less than two years.	Hodgkin's or non Hodgkin's disease, < 5 years prior to deployment, or Stage IA, S/P radiation therapy, treated < 2 years prior to deployment, or with evidence suggestive of recurrent or metastatic disease.	<i>Stage IA Hodgkins has low risk of recurrence</i>  <i>Increased risk of leukemia with chemotherapy</i>  <i>Lymphomas frequently recur</i>

<b>Hematology</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Splenectomy</b>	History of traumatic splenectomy, with no underlying medical illness, > 6 weeks prior to deployment.		History of traumatic splenectomy, with no underlying medical illness, < 6 weeks prior to deployment.  History of nontraumatic splenectomy, with underlying medical illness, < 1 year prior to deployment.	<i>Surgical procedures are assigned a six week convalescence period prior to final clearance.</i>  <i>The underlying medical condition must be proven to be resolved or stable prior to winter deployment.</i>
<b>Hemochromatosis</b>	Hemochromatosis, with ferritin < 500 and no evidence of internal organ dysfunction.	Hemochromatosis, with ferritin > 500 and no evidence of internal organ dysfunction, with note from attending physician documenting a treatment plan.	Hemochromatosis, with evidence of internal organ dysfunction.	<i>Therapeutic phlebotomy can be performed in Antarctica.</i>  <i>Advanced Hemochromatosis can lead to pituitary, hepatic, pulmonary and, pancreatic insufficiency or cardiac failure. Cannot monitor ferritin levels in Antarctica.</i>

<b>Infectious Diseases</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Tuberculosis</b>	History of positive tuberculin skin test with no clinical signs or symptoms of tuberculosis, chest x-ray indicating no active disease or negative sputum cultures or smears, > 2 years prior to deployment.	History of positive tuberculin skin test with chronic cough or sputum production, but with, chest x-ray indicating no active tuberculosis and having negative sputum cultures or smears > 6 months but < 2 years, accompanied by consult from pulmonologist.	History of positive tuberculin skin test with clinical signs or symptoms of tuberculosis, or chest x-ray indicating active disease, or positive sputum cultures or smears, or < 6 months prior to deployment.	<i>Risk of recurrence.</i>  <i>Unable to perform AFB testing in Antarctica.</i>  <i>Active TB is a threat to the health of the community. Winter epidemic potentially disastrous.</i>
<b>Fungal Infections</b>	History of fungal infection, including coccidioidomycosis and histoplasmosis, asymptomatic, or resolved with no evidence of active disease > 2 years prior to deployment.	History of fungal infection, including coccidioidomycosis and histoplasmosis, asymptomatic, or resolved with no evidence of active disease > 6 months but < 2 years prior to deployment.	History of fungal infection, including coccidioidomycosis and histoplasmosis, with evidence of active disease or treated < 6 months prior to deployment.	<i>Risk of recurrence.</i>  <i>Ability to diagnose specific fungal infections is dependent on lab expertise. No lab technician during winter season. Limited pharmaceutical resources.</i>
<b>Lyme Disease</b>	Lyme disease, with or without cardiac or neurological abnormalities, resolved with no clinical symptoms > 1 year prior to deployment.	Lyme disease, with or without cardiac or neurological abnormalities, resolved with no clinical symptoms > 6 months but < 1 year prior to deployment.	Lyme disease, treated < 6 months prior to deployment, or with cardiac or neurological abnormalities, or with residual clinical symptoms.	<i>Risk of recurrence.</i>  <i>Cannot transport serological sample to certified lab during winter months.</i>
<b>Chronic Fatigue Syndrome</b>	Chronic fatigue syndrome, resolved with no residual sequelae > 3 years prior to deployment.	Chronic fatigue syndrome, resolved with no residual sequelae > 1 but < 3 years prior to deployment.	Chronic fatigue syndrome, with symptoms occurring < 1 year prior to deployment.	<i>Risk of relapse, limited therapeutics. Continuous darkness may exacerbate depression during winter season</i>

<b>Infectious Diseases</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Sexually Transmitted Disease</b>	History of any sexually transmitted disease, including syphilis, gonorrhea, chlamydia, and herpes simplex, resolved after antimicrobial therapy, > 3 months prior to deployment.	History of any sexually transmitted disease, including syphilis, gonorrhea, chlamydia, and herpes simplex, resolved after antimicrobial therapy, > 1 but < 3 months prior to deployment.	History of any sexually transmitted disease, including syphilis, gonorrhea, chlamydia, and herpes simplex, resolved after antimicrobial therapy, < 1 month prior to deployment.	<i>Usually responsive to course of antimicrobials.</i>  <i>Unresolved infections require more complex microbial analysis that is not available in Antarctica.</i>
<b>Hepatitis</b>	History of Hepatitis A or B, resolved  Chronic hepatitis B or C, with radiographical and/or pathological evidence of absence of cirrhosis, hepatoma or HIV infection, normal ALT, with no systemic manifestations, and a note from an attending physician confirming discussion of the disease with the applicant	Chronic hepatitis B or C, with radiographical and/or pathological evidence of absence of cirrhosis, hepatoma or HIV infection, ALT < 3X high normal, with no systemic manifestations, and a note from an attending physician confirming discussion of the disease with the applicant.	Chronic hepatitis B or C, with radiographical and/or pathological evidence of cirrhosis, hepatoma or HIV infection, or ALT > 3X normal, or with systemic manifestations, or lacking a note from an attending physician confirming discussion of the disease with the applicant.	<i>Systemic complications possible.</i>  <i>Therapeutic options for hepatitis B and C are available and the options must be discussed with the applicant prior to deployment.</i>  <i>Pharmaceutical options for treatment are not in the pharmacy formulary.</i>
<b>HIV</b>		HIV infection, with no clinical evidence of AIDS, and with CD4 count > 300, with letter from attending physician stating prognosis and treatment.	HIV infection, with clinical diagnosis of AIDS, or CD4 count < 300.	<i>Systemic complications possible, sophisticated diagnostic lab and therapeutic options limited.</i>

<b>Neurology</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Bell's Palsy</b>	Bell's palsy, stable or resolving, > 3 months prior to deployment, with letter from attending physician documenting the condition.	Bell's palsy, stable or resolving, > 1 but < 3 months prior to deployment, with letter from attending physician documenting the condition.	Bell's palsy, stable or resolving, < 1 month prior to deployment, with letter from attending physician documenting the condition.	<i>Usually benign condition, requires documentation that it is not due to an underlying CNS lesion or represents a complication of an underlying medical condition.</i>
<b>CNS Vascular Abnormalities</b>			Any ventricular shunt.  Cerebral aneurysm or arteriovenous malformation.	<i>High risk of infection, CVA.  No CT or MRI or invasive radiology available.</i>
<b>Headaches</b>	Headaches, with no underlying systemic illness, controlled with self-injections, OTC, NSAID therapy or preventative measures, with normal neurological evaluation, and not requiring narcotic injections.	Headaches, with no underlying systemic illness, controlled with self-injections, OTC, NSAID therapy or preventative measures, with normal neurological evaluation, and occasionally requiring therapeutic intervention by a physician.	Headaches, with underlying systemic illness, or not controlled with self-injections, OTC, NSAID therapy or preventative measures, or with an abnormal neurological evaluation, or frequently requiring therapeutic intervention by a physician.	<i>Chronic pain difficult to assess  Limited diagnostic and therapeutic capacity. No CT or MRI.  Strong association with depression that can be exacerbated by darkness and isolation of the winter season.</i>

<b>Neurology</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>CNS Malignancy</b>	Malignancy of the Central Nervous System, with no evidence of recurrence or metastatic disease, as documented by radiological imaging and letter from attending physician, last treated > 5 years prior to deployment.	Malignancy of the Central Nervous System, with no evidence of recurrence or metastatic disease, as documented by radiological imaging and letter from attending physician, last treated > 2 but < 5 yrs prior to deployment.	Malignancy of the Central Nervous System, with no evidence of recurrence or metastatic disease, as documented by radiological imaging and letter from attending physician, last treated < 2 years prior to deployment.	<p><i>Risk of recurrence</i></p> <p><i>Must be disease free for 5 years prior to winter deployment.</i></p> <p><i>No MRI or CT available during the winter season.</i></p>
<b>Seizure Disorder</b>	Seizure disorder, single episode, last > 5 years prior to deployment, with normal radiological imaging and EEG, and off all anticonvulsant therapy > 2 years prior deployment.	Seizure disorder, single episode, last occurring > 1 year prior to deployment, with normal radiological imaging and EEG, and stable on or off anticonvulsant therapy > 1 year prior to deployment.	Seizure disorder, single or multiple episodes, < 1 year prior to deployment, or with abnormal radiological imaging or EEG, or requiring adjustments in anticonvulsant therapy < 1 year prior to deployment.	<p><i>Unable to monitor medication level in Antarctica. Antarctic environment likely does not increase overall risk. Low morbidity and mortality of stable seizure disorder. Acute seizures can be treated at Antarctica medical facilities.</i></p>
<b>Neuro-muscular Disorders</b>		Any neuro-muscular disorder, including multiple sclerosis, parkinson's disease or muscular dystrophy, with no progression > 2 years prior to deployment, and exhibiting independent function including ambulation and communication, and not interfering with activities of daily living.	Any neuro-muscular disorder, including multiple sclerosis, parkinson's disease or muscular dystrophy, with progression < 2 years prior to deployment, or exhibiting the necessity for equipment including that for ambulation or communication, or otherwise affecting activities of daily living.	<p><i>No feasible accommodations for disability access</i></p>

<b>Ophthalmology</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Visual acuity</b>	Visual acuity of better than 20/140, with or without correction.		Visual acuity with or without correction, of less than 20/140.	<i>Vision correction is not available at the clinics</i>
<b>General Eye Conditions</b>	Chalazion, corneal abrasion or ulcer, resolved.		Chalazion, corneal abrasion or ulcer, active.	<i>Slit lamp at McMurdo only.</i>
<b>Cataract</b>	Cataract, asymptomatic	Cataract, post surgery > 6 weeks, no complications.	Cataract, post surgery < 6 weeks prior to deployment.	<i>Surgical convalescence period of 6 weeks.</i>
<b>Corneal transplant</b>		Corneal transplant, > 1 year, vision stable.	Corneal transplant < 1 year prior to deployment.	<i>Ophthalmology expertise unavailable during winter.</i>
<b>Enucleation</b>	Enucleation, traumatic, > 6 weeks prior to deployment.		Enucleation, traumatic, < 6 weeks prior to deployment.	
<b>Malignancy</b>	Malignancy of eye, with no recurrence > 5 years prior to deployment.		Malignancy of eye, with recurrence or < 5 years prior to deployment.	<i>Risk of recurrence, no diagnostics or therapeutics</i>
<b>Glaucoma</b>	Glaucoma, treated, with intra-ocular pressure < 22 mm/Hg	Glaucoma, treated, with intra-ocular pressure > 23 - 30 mm/Hg	Glaucoma, treated, with intra-ocular pressure > 30 mm/Hg	<i>Limited expertise, limited pharmaceutical resources.</i>
<b>Herpes Keratitis</b>	Herpetic keratitis, single episode, duration > 5 years prior to deployment.	Herpetic keratitis, single episode, duration > 2 but < 5 years prior to deployment.	Herpetic keratitis, multiple episodes, or duration < 2 years prior to deployment.	<i>Risk of recurrence, can require specialty intervention.</i>
<b>Optic Neuritis</b>	Optic neuritis, single episode, etiology identified, resolved > 6 months prior to deployment.		Optic neuritis, single or multiple episodes, etiology unidentified, active or resolved < 6 months prior to deployment.	<i>Etiology requires evaluation</i>
<b>Papilledema</b>	Papilledema, single episode, etiology identified, resolved > 6 months prior to deployment.		Papilledema, multiple episodes, etiology unidentified, active or resolved < 6 months prior to deployment.	<i>Etiology requires evaluation</i>

## Ophthalmology

	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Retinal Detachment</b>	Traumatic retinal detachment, traumatic, resolved > 6 months prior to deployment.	Nontraumatic retinal detachment, traumatic, resolved > 6 months prior to deployment.	Retinal detachment, resolved < 6 months prior to deployment.	<i>Risk of recurrence.</i>  <i>No ophthalmology expertise available in winter.</i>
<b>Uveitis</b>	Uveitis, single episode, resolved > 1 year prior to deployment, with no associated systemic disease	Uveitis, single episode, resolved > 6 months but < 1 year prior to deployment, with no associated systemic disease.	Uveitis, single episode, resolved < 6 months prior to deployment, or with associated systemic disease.	<i>Risk of recurrence</i>  <i>No ophthalmology expertise available in winter.</i>

<b>Orthopedics</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Bursitis</b>	Bursitis, single episode, or last treated > 6 months prior to deployment.	Bursitis, multiple episodes, or last treated > 3 but < 6 months prior to deployment.	Bursitis, chronic, or last treated < 3 months prior to deployment.	<i>High morbidity, can be painful and require surgical intervention that is not available in the winter season.</i>
<b>Fractures</b>	Fractures, resolved > 6 months, or < 6 months prior to deployment with orthopedic clearance.	Fractures, resolved, < 6 months prior to deployment with orthopedic clearance.	Fractures, unresolved.	<i>Fractures require specialty follow-up and must patient must be released without restrictions prior to deployment.</i>
<b>Tendinitis</b>	Tendinitis, asymptomatic for 1 month.	Tendinitis, recurrent, last episode > 1 month prior to deployment.	Tendinitis, chronic or current.	<i>Physical therapy is available during the summer season.</i>
<b>Carpal Tunnel Syndrome</b>	Carpal tunnel syndrome, resolved.	Carpal tunnel syndrome, intermittent or recurrent, mild symptoms, controlled with splints or chronic NSAID therapy.	Carpal tunnel syndrome, moderate to severe symptoms, not well controlled by splinting or requiring more than chronic NSAID therapy	<i>High morbidity, physical therapy available during summer season only, cannot perform EMG/NCV or surgery in Antarctica.</i>
<b>Osteoarthritis</b>	Osteoarthritis, episodic, controlled with prn OTC medication.	Osteoarthritis, chronic, controlled with NSAID therapy..	Osteoarthritis, chronic, requiring pain control other than NSAID therapy.	<i>Limited supply of narcotics in the pharmacy. No physical therapy available in winter.</i>
<b>Chondromalacia</b>	Chondromalacia patella, mild, controlled with prn OTC medication.	Chondromalacia patella, moderate, controlled with NSAID therapy.	Chondromalacia patella, moderate to severe, requiring more than NSAID to control pain.	<i>Limited supply of narcotics in the pharmacy. No physical therapy available in winter.</i>
<b>Arthroscopic Surgery</b>	Arthroscopic surgery, > 3 mo prior to deployment, or, Arthroscopic surgery, > 6 wk but < 3 mo duration prior to deployment, with note of clearance from surgeon.	Arthroscopic surgery, > 2 but < 6 week duration prior to deployment., with note of clearance from surgeon.	Arthroscopic surgery, < 2 week duration prior to deployment.	<i>Full surgical release is typically issued 6 weeks after surgery.</i>

<b>Orthopedics</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Shoulder Dislocation</b>	Dislocation of shoulder, single occurrence or last occurring > 2 years prior to deployment, or surgically fixated > 6 months prior to deployment.	Dislocation of shoulder, single occurrence > 6 months or multiple occurrences > 1 year prior to deployment.	Dislocation of shoulder, single occurrence < 6 months or multiple occurrences < 1 year prior to deployment, or surgically fixated < 6 months prior to deployment.	<i>Risk of chronic morbidity, unstable shoulder joints require surgical intervention not available in Antarctica</i>
<b>Rotator Cuff</b>	Rotator cuff tear, episodic symptoms controlled with OTC medication.	Rotator cuff tear, chronic symptoms controlled with NSAID therapy.	Rotator cuff tear, persistent symptoms requiring more than chronic NSAID or other pain medication.	<i>High morbidity, arthroscopic surgery not available in Antarctica/</i>
<b>Herniated Nucleus Pulposus</b>	Herniated nucleus pulposus, with no symptoms > 2 years prior to deployment.	Herniated nucleus pulposus, with no symptoms > 1 year post surgical.	Herniated nucleus pulposus, with symptoms < 2 years prior to deployment.	<i>Risk of recurrence, surgical intervention and MRI not available in Antarctica.</i>
<b>Lumbosacral Strain</b>	Recurrent episodic lumbosacral strain, with no sciatica, controlled with OTC medications.	Recurrent episodic lumbosacral strain, with no sciatica, controlled with chronic NSAID therapy.	Lumbosacral strain, chronic, or with sciatica, requiring more than chronic NSAID therapy.	<i>High morbidity, MRI and surgical intervention not available in Antarctica.</i>
<b>Bone Cancer</b>	Bone cancer, > 5 years prior to deployment, with no recurrence, no amputations and no prosthesis.		Bone cancer, < 5 years prior to deployment, with no recurrence, or with amputations or prosthesis.	<i>Risk of recurrence  Limited disability access, nuclear medicine not available on ice.</i>
<b>Paget's Disease</b>		Paget's disease, mild symptoms, no fractures.	Paget's disease, symptomatic, or with history of associated fracture.	<i>Increased incidence of fracture</i>
<b>Joint Replacement</b>		History of hip, knee or shoulder replacement, duration > 1 year prior to deployment.	History of hip, knee or shoulder replacement, duration > 1 year prior to deployment.	<i>Lack of expertise available during winter season.</i>

<b>Otorhinolaryngology</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Hearing</b>	Hearing deficit, stable with or without hearing aid.		Progressive hearing loss, etiology undetermined.	<i>Requires evaluation prior to deployment.</i>
<b>Cholesteatoma</b>		Cholesteatoma, surgically removed > 1 year prior to deployment, with no evidence of recurrence as documented by recent CT scan.	Cholesteatoma, surgically removed < 1 year prior to deployment, or with evidence of recurrence as documented by recent <b>CT</b> scan.	<i>High risk of recurrence, surgical intervention and consultation not available during the winter season.</i>
<b>ENT Malignancy</b>	Any <b>ENT</b> malignancy, < 2 cm in diameter occurring at one site, excised > 5 years prior to deployment, no evidence of recurrence.	Any <b>ENT</b> malignancy, > 2 cm but < 4 cm, or with more than one site, excised > 5 years prior to deployment, no evidence of recurrence.	Any <b>ENT</b> malignancy, > 4 cm in diameter or with more than one site, or excised < 5 years prior to deployment, or with evidence of recurrence.	<i>Limited diagnostic and therapeutics, cannot do laryngoscopy in Antarctica.</i>
<b>Mastoiditis</b>	Mastoiditis, resolved with surgical or medical therapy, duration > 6 mo. prior to deployment.	Mastoiditis, resolved with surgical or medical therapy, duration > 6 but < 12 mo. predeployment.	Mastoiditis, resolved with surgical or medical therapy, duration < 6 mo. prior to deployment.	<i>Risk of recurrence, limited pharmaceutical resources during the winter season.</i>
<b>Meniere's Disease</b>	Meniere's disease, last episode > 1 year prior to deployment, easily controlled with prn medication.	Meniere's disease, last episode < 1 year prior to deployment, easily controlled with prn medication.	Meniere's disease, last episode < 1 yr. prior to deployment, or requiring systemic therapy to prevent exacerbations.	<i>Potential of prolonged exacerbations, no surgical options in winter.</i>
<b>Chronic Otitis Media</b>	Chronic otitis media, with last exacerbation > 1 year prior to deployment.	Chronic otitis media, with last exacerbation > 6 mo .but < 1 yr. prior to deployment.	Chronic otitis media, with last exacerbation < 6 mo prior to deployment.	<i>Limited pharmaceutical resources, cannot do sophisticated microbial analysis during winter.</i>
<b>Tympanoplasty Myringotomy</b>	Tympanoplasty or myringotomy, duration greater than three months prior to deployment, with stable hearing.		Tympanoplasty or myringotomy, duration < 3 months prior to deployment, or with progressive hearing loss.	<i>Follow-up limited to clinical evaluation and sophisticated audiometric testing during the winter season.</i>

## Otorhinolaryngology

	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Tinnitus</b>	Tinnitus, single episode, resolved > 1 year prior to deployment, or continuous, with normal ENT evaluation, requiring no medical therapy.	Tinnitus, single episode, resolved > 6 months but < 1 year prior to deployment, or continuous, with normal ENT evaluation, requiring no medical therapy.	Tinnitus, multiple episodes, or resolved < 6 months prior to deployment, or continuous, with abnormal ENT evaluation, or requiring medical therapy.	<i>Limited diagnostics, treatment of progressive tinnitus with hearing loss often requires surgical intervention not available during the winter season.</i>
<b>Labyrinthitis</b>	Labyrinthitis, determined etiology, resolved for duration of > 6 months prior to deployment.		Labyrinthitis, undetermined etiology, or resolved for duration of < 6 months prior to deployment.	<i>Potential CNS etiology, no access to MRI or ENG testing during the winter season.</i>
<b>ENT surgery</b>	Any minor ENT surgery including T&A, nasal polyps, nasal septal revision, benign nodules or cosmetic repairs, duration > 6 weeks prior to deployment.		Any minor ENT surgery including T&A, nasal polyps, nasal septal revision, benign nodules or cosmetic repairs, duration < 6 weeks prior to deployment.	<i>Surgical procedures require a six week convalescence period prior to full release.</i>
<b>Sinus surgery</b>	Sinus surgery, duration greater than six months prior to deployment.		Sinus surgery, duration < 6 months prior to deployment.	<i>Potential recurrence or complications, limited pharmaceuticals.</i>
<b>Sinusitis</b>	Acute or recurrent sinusitis, < 4 exacerbations per year, responsive to antimicrobial therapy.		Chronic sinusitis.	<i>Limited pharmaceutical supplies, cannot do sophisticated cultures during winter season.</i>
<b>Sialolithiasis</b>	Sialolithiasis, resolved surgically or spontaneously, duration > 1 month prior to deployment.		Sialolithiasis, recurrent, or resolved < 1 month prior to deployment.	<i>Potential surgical intervention is often required, not available in Antarctica.</i>

<b>Peripheral Vascular Disease</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance –</b>	<b>Not Physically Qualified</b>	
<b>General</b>	No clinical symptoms of transient ischemic attacks or claudication of the extremities.	Clinical signs or symptoms of peripheral vascular disease, with normal testing as documented by vascular ultrasound, doppler plethysmography or arteriography.	Absent peripheral pulses.  Skin ulcers, past or present, due to arterial or venous insufficiency.  Warfarin or heparin therapy in past six months.	<i>Limited diagnostic capacity and therapeutic intervention. Cannot do vascular imaging, ultrasound or sophisticated doppler studies. High risk of embolic disease.</i>
<b>Arteriosclerosis</b>	No clinical signs of previous cerebrovascular accident, arteriosclerosis on fundoscopic examination, diminished peripheral pulses, arterial bruits, abdominal aortic aneurysm, or venous stasis	History of transient ischemic attacks, with normal vascular testing, and consultation from a cardiovascular surgeon and neurologist rendering opinions for the likely etiology of the condition	Evidence of arteriosclerosis on vascular testing.  History of cerebrovascular accident.  Unexplained transient ischemic attacks.  Recurrent claudication.	<i>Limited diagnostic capacity and therapeutic intervention. Cannot do vascular imaging, ultrasound or sophisticated doppler studies. High risk of embolic disease. MRI and CT not available in Antarctica.</i>
<b>Raynaud's Disease</b>			Raynaud's disease.	<i>Cold weather exacerbates.</i>
<b>Deep Venous Thrombosis</b>	No prior history of deep venous thrombosis	History of single episode of deep venous thrombosis, with no recurrence, > 1 year, requiring no anticoagulation > 6 months, and no demonstrated systemic illness suggesting hypercoagulability	Deep venous thrombosis, > 1 episodes.  Deep venous thrombosis < 1 year prior to deployment	<i>Diagnostic procedures unavailable, high risk of recurrence with history of multiple episodes. PT/PTT can be followed at South Pole and McMurdo.</i>

## Peripheral Vascular Disease

	<b>Unrestricted Clearance</b>	<b>Restricted Clearance –</b>	<b>Not Physically Qualified</b>	
<b>Vascular Surgery</b>		History of angioplasty or vascular surgery, > 6 months prior to deployment, with a normal cardiovascular stress test, LDL < 100 mg/dl and a cholesterol/HDL ratio < 5, no diabetes, hypertension or history of smoking within the last five years.	History of arterial surgery or angioplasty < 6 months, or with current diabetes mellitus, LDL cholesterol >140, Chol/HDL >5, hypertension or smoking cessation < 5 years.	<p><i>High risk of recurrent disease, exacerbated by known risk factors.</i></p> <p><i>No ultrasound or vascular imaging available.</i></p> <p><i>No invasive radiology or surgical option available in Antarctica.</i></p>
<b>Abdominal Aortic Aneurysm</b>		Abdominal aortic aneurysm, < 5 cm diameter.	Abdominal aortic aneurysm, > 5 cm diameter.	<i>Requires monitoring not available</i>

<b>Pulmonary Disease</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>General</b>	No clinical symptoms or signs of wheezing, chronic cough, nocturnal or paroxysmal dyspnea, orthopnea, chronic obstructive pulmonary disease or edema.  Benign CXR findings	Current upper respiratory infection.  Chest x-ray abnormality, undiagnosed, stable, with letter from attending physician.	Abnormal chest radiograph suggesting possibility of current or chronic active pulmonary condition.  Recurrent pneumonia occurring within one year prior to deployment.	<i>Etiology of any potentially current or chronic pulmonary abnormality requires evaluation prior to deployment.</i>
<b>Pneumothorax</b>	Traumatic pneumothorax, resolved either spontaneously or with pleurodesis, with no recurrence for a duration greater than 6 months.	History of spontaneous pneumothorax, > 1 year duration, with no evidence of COPD on CXR or pulmonary function testing.	History of spontaneous pneumothorax < 1 year duration, or evidence of COPD on CXR or abnormal pulmonary function testing.	<i>Risk of recurrence with spontaneous pneumothorax due to blebs.  Chest tube, X-ray is available, expertise often lacking.</i>
<b>COPD</b>	A smoking history of < 15 pack years, or a history of current cigarette smoking of > 15 pack year duration, with normal radiographic chest findings and a predicted FEV1 greater than 80%.	History of chronic obstructive pulmonary disease, as suggested on CXR, with no evidence of acute exacerbations in the past two years, no chronic medical therapy, predicted FEV1>80% and no history of smoking > 2 years.	Chronic obstructive pulmonary disease, with FEV1 < 80% predicted, or has a smoking history < 2 years prior to deployment..	<i>High risk of exacerbation or infection, prolonged ventilatory support available only at McMurdo. Expertise in managing critically ill patients for prolonged time frames is often beyond the technical skill of the physician.</i>

<b>Pulmonary Disease</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Asthma</b>	A history of asthma, requiring no chronic medication, with use of bronchodilators on an as needed basis only, with no exacerbations requiring urgent care or nebulizers < 2 years.	History of asthma, requiring no chronic maintenance therapy, with one exacerbation requiring nebulizer treatment < 2 years, with normal radiographic findings and a predicted FEV1>80%.  History of asthma, requiring chronic maintenance therapy, with no exacerbations < 2 years requiring nebulizer treatment, with pre and post bronchodilator FEV1 >80% predicted.	Asthma, with two or more exacerbations requiring nebulizer treatment < 2 years.  Asthma, with one exacerbation requiring nebulizer therapy after initiation of chronic maintenance therapy, < 2 years	<i>Asthma is often induced by cold weather.</i>  <i>Winter evacuation is not possible.</i>  <i>Ample supply of nebulizer therapies available on the ice.</i>  <i>Limited therapeutic options for those patients having acute exacerbations while on chronic maintenance therapy.</i>
<b>Chronic Pulmonary Disease</b>	A history of sarcoidosis, tuberculosis or other infectious pulmonary disease, with no history of smoking < 5 years, evidence of resolution of symptoms > 1 year and normal pulmonary function testing.	A history of sarcoidosis, tuberculosis or other infectious pulmonary disease, with no history of smoking < 2 years, and with evidence of resolution of symptoms > 12 months and normal pulmonary function testing.	Chronic restrictive lung disease, with FVC < 80% predicted.  Current active pulmonary disease of any etiology, including autoimmune, infectious or neoplastic.	<i>Risk of recurrence.</i> <i>Low clinical margin of safety for decompensation in patients with existing pulmonary insufficiency. Winter physicians often lack expertise in critical care.</i>

<b>Substance Abuse**</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Alcohol abuse</b>	<p>No history of substance abuse.</p> <p>DUI or DWAI, &gt;5 years, isolated event.</p> <p>DUI or DWAI, single episode &gt; 5 years.</p>	<p>History of chronic alcohol abuse, &gt; 2 years duration of stable recovery, with completion of certified rehabilitation program and letter from counselor. (Appendix 2)</p> <p>DUI or DWAI, &gt; 1 but &lt;5 years, isolated event, with note from counselor.</p> <p>DUI or DWAI, &lt; 3 episodes, last &gt; 5 years.</p> <p>History of violence related to alcohol, single event, &gt; 5 yrs., no recurrence, with note from counselor.</p>	<p>History of chronic alcohol abuse, &lt; 2 years duration of stable recovery. (Appendix 2)</p> <p>DUI or DWAI, &lt; 1 year, or with pending litigation.</p> <p>More than 2 DUI or DWAI convictions.</p> <p>History of violence related to alcohol, &lt; 5 years prior to deployment.</p>	<p><i>Uncontrolled and essentially unrestricted access to alcohol in Antarctica.</i></p> <p><i>No professional law enforcement is present on the continent.</i></p> <p><i>No skilled alcohol treatment or counseling program is routinely available.</i></p> <p><i>Alcoholic Anonymous is present in Antarctica as a resource.</i></p>
<b>General Concerns</b>		<p>Unresolved but undocumented concerns by physician regarding substance abuse appropriate to the deployment destination.</p>		<p><i>No medical evacuation possible during winter</i></p>
<b>Marijuana</b>	<p>Cannabis use, age &lt; 30, occurring &gt; 1 year prior to deployment, with no unresolved medicolegal problems.</p>	<p>Cannabis use, age &gt; 30, occurring &gt; 1 year prior to deployment, with no unresolved medicolegal problems</p>	<p>Cannabis use, &lt; 1 year prior to deployment, or with unresolved medicolegal problems.</p>	<p><i>Individuals older than age 30 are more likely to be habitual rather than experimental users.</i></p>

<b>Substance Abuse</b>				
	<b>Unrestricted Clearance</b>	<b>Restricted Clearance</b>	<b>Not Physically Qualified</b>	
<b>Other Drugs of Abuse</b>	History of substance abuse, single episode, > 2 years prior to deployment, with completion of certified rehabilitation program and letter from attending physician.	History of substance abuse, age < 30, single episode, > 1 but < 2 years prior to deployment, with completion of certified rehabilitation program and letter from attending physician.  History of substance abuse, age > 30 with incident >3 years prior to deployment.	History of substance abuse, multiple episodes, or age < 30 with incident < 1 year prior to deployment, or without completion of certified rehabilitation program and letter from attending physician.  History of substance abuse, age > 30 with incident < 3 years prior to deployment.	<i>Individuals older than age 30 are more likely to be habitual rather than experimental users.</i>

\*\*Guidelines for applicants of designated NSF contractors only.

# Appendix 1

## Exercise Stress Testing

### Indications for screening cardiovascular stress test:

Cardiovascular stress tests are requested every three years from age 45-49, two years from 50-59 and yearly after the age of 60 and 5 at least risk factor points are present. Individual waivers may be considered based on the duration of deployment, the availability of procuring this test and other intangible factors.

<b>Risk Factor</b>	<b>Points</b>
Male gender	1
Age > 40	1
Age > 45	2
Age >50	3
Age > 60	4
Hypercholesterolemia (LDL>140 or Chol/HDL > 5)	2
Smoking (within last 5 years or greater than 15 pack years)	2
History of Arteriosclerosis	5
Hypertension	2
Hypertriglyceridemia	1
Famila History of MI Age < 65	2
Diabetes	3
Obesity	1
South Pole Deployment	1
No Regular Exercies	1

### Criteria for requesting cardiovascular stress tests

**(5 or more points required)**

### Criteria for successful completion of cardiovascular stress test:

- No chest pain, marked dyspnea or claudication
- Normal increase in BP response to exercise
- Normal cardiac rhythm
- No significant ST depression
- Completion of 7 mets for McMurdo or Palmer Station applicants
- Completion of 9 mets lor winter-over, South Pole or field camp applicants
- Physician interpretation of "negative"or "low probability" of ischemia

## Appendix 2

### Alcohol and Drug Clearance

1. Acknowledges and understands past abusive problem.
2. Understands the underlying issues or problems contributing to alcohol/drug abuse.
3. Can articulate the changes, either internal or external, that were made to resolve those issues.
4. If history of chronic abuse, must exhibit absence of symptoms of alcohol/drug abuse for one year including the following:
  - Exhibiting risk behavior with drugs or alcohol
  - Being intoxicated on drugs or alcohol
  - Legal problems
  - Others reporting alcohol or drug utilization
  - Behavioral changes associated with drugs/alcohol