



DEPARTMENT OF THE NAVY  
BUREAU OF MEDICINE AND SURGERY  
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BUMEDNOTE 6470  
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BUMED NOTICE 6470

From: Chief, Bureau of Medicine and Surgery

Subj: LABORATORY UNITS FOR RADIATION MEDICAL EXAMINATIONS

Ref: (a) NAVMED P-5055  
(b) Urological Society of Australia and New Zealand ltr of 30 April 2024 (NOTAL)

1. Purpose. To modify policy for urinalysis reporting criteria, allowing unspun automated flow cytometry analytic methods performed by Australian laboratories to be used in radiation medical examinations (RME). Current analytic methods performed by U.S. Navy laboratories use a centrifuge-spun microscopy method, and is the only method currently supported by reference (a) and the NAVMED 6470/13 Medical Record – Ionizing Radiation Medical Examination form.

2. Scope and Applicability. This notice applies to all entities that perform or review RMEs for Australian sailors and civilian workers entering, or already a part of, U.S. Navy radiation health programs.

3. Background

a. RMEs are performed to identify cancerous or pre-cancerous conditions, which include laboratory analysis of blood and urine samples. U.S. laboratories, in line with American Urological Association guidelines, normally use a centrifuge-spun microscopy method to analyze urine samples to identify the number of red blood cells (RBC) present and report their results in units of RBC per high power field (RBC/hpf).

b. Australian laboratories perform urinalysis using a different method (non-centrifuged automated flow cytometry) supported by the Royal Australian College of Pathologists, reporting results in cells per microliter (or units of  $10^6$  cells/L). Per reference (b), both methods are appropriate to determine the presence or absence of hematuria. A value of  $10 \times 10^6$  RBC/L (10 RBC/ $\mu$ L) is approximately equivalent to 3 RBC/hpf identified in reference (a), Navy Medicine Publication (NAVMED P)-5055, Radiation Health Protection Manual, article 2-4, subparagraph 2g(1). Values greater than or equal to  $10 \times 10^6$  RBC/L (10 RBC/ $\mu$ L) are considered to be greater than or equal to 3 RBC/hpf.

4. Action

a. Providers performing RMEs for Australian sailors or civilian workers must transcribe the urinalysis laboratory results to the NAVMED 6470/13 form, including the applicable units, with additional corrections being made as identified in subparagraphs 4a(1) through 4a(4):

(1) Urinalysis results with RBC counts using automated flow cytometry which are greater than or equal to  $10 \times 10^6$  RBC/L, or greater than or equal to 10 RBC/ $\mu$ l, must be repeated. Document repeat urinalysis results in the Summary of Abnormal Findings block. In each case, the local or attending physician must perform further clinical evaluations to determine the reason for the hematuria (if present) and record this reason. The physician's evaluation of the hematuria and his or her requests for other studies or consultations must be directed toward ruling out cancer. If the repeat study shows fewer than  $10 \times 10^6$  RBC/L or 10 RBC/ $\mu$ l, a comment will be made in the Summary of Abnormal Findings block with an annotation of not considered disqualifying (NCD). If the repeat urinalysis shows equal to or greater than  $10 \times 10^6$  RBC/L or 10 RBC/ $\mu$ l, a definitive evaluation according to the most recent Urological Society of Australia and New Zealand Guidelines for evaluation of microhematuria by a physician certified as a Fellow of the Royal Australasian College of Surgeons in Urology with appropriate expertise will be performed. If definitive evaluation results in a finding of cancer, the Summary of Abnormal Findings comment will include an annotation of considered disqualifying (CD). If the hematuria is chronic, has been evaluated during a previous physical examination and determined not to be due to cancer, and laboratory results do not indicate a change in patient status, the condition is not disqualifying and does not need to be reevaluated unless clinically indicated. If repeat test results continue to persist at or higher than the limit, follow the protocol identified within article 2-4, subparagraph 2g of reference (a) to properly document and repeat the study, with board-certified urologist evaluation as specified.

(2) If cancer is the suspected cause of the hematuria, the case must be submitted to the Radiation Effects Advisory Board. Otherwise, the responsible physician can medically qualify the individual for radiation work. The basis for a determination of CD or NCD must be given by the responsible physician as a comment in the Summary of Abnormal Findings and Recommendations block of NAVMED 6470/13.

(3) The urinalysis evaluation method specified in block 12b of NAVMED 6470/13 must be corrected from "Urine Microscopy" to read "Urine Flow Cytometry," with the correction made per article 2-6, paragraph 2 of reference (a).

(4) An entry must be made in block 14 of NAVMED 6470/13 annotating that an automated flow cytometry evaluation method was utilized for urinalysis performed in block 12b, per BUMEDNOTE 6470 of DD MMM YYYY.

b. U.S. Navy personnel reviewing RMEs performed for Australian personnel should review associated laboratory reports to ensure proper transcription of results, and ensure any other applicable documentation (e.g., repeated study results, board-certified urologist evaluation, etc.), supporting the RME is present within the health record.

5. Point of Contact. Questions regarding the use of automated flow cytometry laboratory values to complete NAVMED 6470/13 forms for Australian military and civilian personnel should be referred to the Bureau of Medicine and Surgery Head, Radiation Health (BUMED-N10F5).

6. Records Management

a. Records created as a result of this notice, regardless of format and media, must be maintained and dispositioned per the records disposition schedules located on the Department of the Navy Assistant for Administration, Directives and Records Management Division portal page at <https://portal.secnav.navy.mil/orgs/DUSNM/DONAA/DRM/Records-and-InformationManagement/Approved%20Record5%Schedules/Forms/AllItems.aspx>.

b. For questions concerning the management of records related to this notice or records disposition schedules, please contact the local records manager or the OPNAV Records Management Program (DNS-16).

7. Forms and Information Management Control

a. Forms. NAVMED 6470/13 Medical Record – Ionizing Radiation Medical Examination is available at: <https://forms.documentservices.dla.mil/nfol/NONSN00003219.PDF>.

b. Information Management Control. Reports required in subparagraphs 3a, 3b, and 4b of this instruction are exempt from reports control per Secretary of the Navy Manual 5214.1 of December 2005, part IV, subparagraph 7k.



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Releasability and distribution:

This instruction is cleared for public release and is available electronically only via the Navy Medicine Web site, <https://www.med.navy.mil/Directives/>