

Lab Focus

December 2002—monthly insert to 'Scope from Fairview Clinical Laboratories

Sound bites. . . .

Cytology and Biopsy Results Now in FCIS.

Anatomic Pathology and Special Diagnostic testing transitioned to the CoPath computer system Dec. 3 at the three metro hospitals.

CA 125 Method Changes

On Nov. 15, the Endocrine Laboratory began reporting results from a new CA 125 assay in the comment field when reporting results from our current method. Starting on Monday, Dec. 16, all results reported will be from the new method. At that time, we will also begin doing CA 125 daily, Monday through Friday.

Although the new method (Bayer Centaur chemiluminescent immunoassay) correlates well with the current one, all patients with previous results that were assayed by the old method, will have their most recent sample (if available) repeated by the new method. Results from both the current and previous sample will be reported for a two month period.

The new reference range for CA 125 is 0-30 U/mL.

Direct questions to the Endocrine Laboratory at 612-273-3454.

Linda Bailey, CLS

Cytology Reporting Moves to Bethesda 2001 Terminology

Several changes in cytology reporting terminology were implemented Dec. 3. These are based on the Bethesda 2001 system for reporting of Papanicolaou tests that provides evidence-based consensus guidelines for the management of women with cervical cytological abnormalities and cervical cancer precursors. The consensus conference was sponsored by the American Society for Colposcopy and Cervical Pathology (ASCCP).

The consensus conference concluded that management of women with atypical squamous cells (ASC) depends on whether the Papanicolaou test is subcategorized as of undetermined significance (ASC-US) or as cannot exclude high-grade squamous intraepithelial lesion (HSIL) (ASC-H). Women with ASC-US should be managed using a program of two repeat cytology tests, immediate colposcopy, or DNA testing for high-risk types of human papillomavirus (HPV). Testing for HPV DNA is the preferred approach when liquid-based cytology is used for screening. In most instances, women with ASC-H, low-grade squamous intraepithelial lesion, HSIL, and atypical glandular cells should be referred for immediate colposcopic evaluation.

The specific changes recommended by the Bethesda 2001 Workshop, held April 30 to May 2, 2001, are published in the April 24, 2002 issue of the *Journal of the American Medical Association* and at www.bethesda2001.cancer.gov.

You also may be interested in the consensus guidelines on management of women with cytological abnormalities, also published in *JAMA* (2002;287:2120-2129). These recommendations may be found at

the American Society for Colposcopy and Cervical Pathology's web site, www.asccp.org/consensus/cytological.shtml.

The cytology department is preparing an article about the specific changes we have made in applying the recommendations of Bethesda 2001. This article will be published in the Jan. 2003 *Lab Focus*.

*Klint Kjeldahl
Cytology Supervisor*

Fairview's Blood Supply Very Good Compared to U.S. Blood Supply

Fairview-University Medical Center was among only three hospitals of 26 nationally reporting no serious shortages of blood or related delayed surgery since Aug. 15, 2001. Fairview-University is one of 29 "sentinel sites" identified by the U.S. Department of Health and Human Services (DHHS) program to monitor the nation's blood supply. Because identity of the other sites is restricted, it's difficult to conclude reasons behind their blood shortages. Nevertheless, Fairview medical staff has much to celebrate because of ample blood supply for surgery compared with some other sites nationally.

Why did DHHS chose to monitor the blood supply?

In the United States blood is collected by many different organizations. Thus, there is no comprehensive data on the nations blood supply or use. Concern about the impact of donor deferral policies on blood availability in 1999 led to the development of the DHHS program to monitor the blood supply. The DHHS monitoring program consists of 29 sentinel sites, twenty-six hospitals (one of which is Fairview-University) and three community blood services.

What blood products are monitored?

Each sentinel site reports a daily count of red blood cells in inventory and available for transfusion, units transfused, units exported, and units outdated, each by ABO and Rh type. In addition, units of platelets in inventory, transfused, exported, and outdated, each by apheresis or random donor (whole blood derived) are reported. Autologous units are excluded and plasma components are not monitored. Each site also responds to nine questions that ask whether shortages of red cells or platelets have occurred or are threatened. Sites began providing daily reports Aug. 15, 2001 and have continued to the present. Thus the data contain a "baseline" beginning just prior to Sept. 11, 2001, and more than one year of subsequent data. Ellen Johnson, Blood Bank senior laboratory assistant submits Fairview-University data daily. Nancy Ward, Blood Bank technical supervisor coordinates the study.

What impact did Sept 11 have on the U.S. blood supply?

A large prolonged inventory increase (roughly 30 percent) was observed following Sept. 11, 2001. This was followed by an expected increase in outdating six weeks later. Interestingly, hospitals outdated more units than did blood centers, suggesting that blood suppliers pushed inventory into hospitals where it became outdated. This was not the case at Fairview-University, where outdating did not increase, but rather it increased dramatically at the American Red Cross in St. Paul.

How do red cell inventories compare to daily use?

While more detailed analysis of the data is expected, some "big picture" perspectives have emerged. Overall, red cell inventories seem to be adequate. The median total red cell inventories (expressed as units in inventory divided by those used) are approximately 6 to 12 times daily use; there is a variation during the week

with O negative inventories being somewhat lower at 5 to 10 times daily use. Since this would appear to be adequate, one might wonder why some sites have supply issues. The answer probably lies in following medians of 26 hospital sites so that individual shortage events are lost. A more detailed comparison of shortage events with inventories by site will be informative.

What is the frequency of shortage events?

As noted, above shortage events were monitored with a series of questions that were designed to identify real shortages (surgery delayed or canceled), threatened shortages (delay in receiving red cells or platelets), and possible shortages (transfusing Rh positive blood to Rh negative patients, inventory shortages requiring Blood Bank Medical Director consultation). Overall, the frequency of shortage events clearly increased once the inventories accumulated post Sept. 11 were depleted. Shortage events further increased during last summer (June through August). Serious shortage events triggering canceled or delayed surgery were more frequent when platelet supplies are examined. Five cancellations of surgeries due to red cell shortages and eight cancellations due to shortage of platelets occurred among the 26 hospitals for the one-year period through Aug. 2002.

How does Fairview-University (and our supplier – Red Cross) compare to the other sites?

The data are confidential by site, but our data are obvious to us. In this time period, Fairview-University reported no delays or cancellations of surgery for lack of red cells or platelets (that's good – but we've come to expect that!). In addition, there were no other shortage events due to red cells. Only two additional hospitals of the 26 similarly reported no shortage events involving red cells. (Maybe we shouldn't take our supply for granted.)

Platelets are clearly the most difficult component to supply. Not surprising, considering their five-day shelf life

with nearly two days used for nucleic acid testing. Safety has a price in terms of dollars and component availability. Fairview-University was not among the 1) ten hospital sites that had at least one event where surgery was delayed 24 hours or canceled due to platelet shortage, nor 2) two hospital sites with zero shortage events concerning platelets. In this nearly one-year time period, Fairview-University reported 12 shortage events due to delays in receiving platelets. This would fit in the "threatened shortage" category. That is, platelets were available but delayed. It is difficult to put these results into perspective since we don't know who the other sites are. They could be substantially different in terms of the amounts of components used and the complexity of the patients served. While delays in receiving platelets can be important, Fairview-University was among those with fewer, but not zero delays. Still pretty good, depending on the circumstances. Were the delays in a last minute order for HLA matched, O negative apheresis platelets? We'll work with Red Cross to see if there is room for improvement.

Our participation has been both interesting and useful. Because DHHS is very interested in the impact that additional tests and donor requirements will have on the national blood supply, this monitoring project is likely to continue for at least the next couple of years.

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