meatal colonization and no effect on bacteria that are already present in the distal urethra. Further studies are clearly needed to define the methods of meatal preparation and catheter insertion, as well as daily care, that might prevent bacteria from entering the catheterized bladder by the extraluminal route.

RICHARD A. GARIBALDI, M.D.
JOHN P. BURKE, M.D.
MICHAEL R. BRITT, M.D.
CHARLES B. SMITH, M.D.
Salt Lake City, UT 84132 University of Utah

1. Stamey TA. Pathogenesis and treatment of urinary tract infections. Baltimore: Williams & Wilkins, 1980:6-7.
2. Garibaldi RA, Burke JP, Dickman ML, Smith CB. Factors predisposing to bacteriuria during indwelling urethral catheterization. N Engl J Med. 1974; 291:215-9.
3. Warren JW, Platt R, Thomas RJ, Rosner B, Kass EH. Antibiotic irrigation and catheter-associated urinary tract infections. N Engl J Med. 1978; 299:570-3.
4. Burke JP, Garibaldi RA, Britt MR, Jacobson JA, Conti M, Alling DW. Prevention of catheter-associated urinary tract infections: efficacy of daily meatal care regimens. Am J Med. (in press).

IMMUNOLOGIC PHENOTYPE IN LARGE-CELL LYMPHOMA

To the Editor: According to surface-marker criteria, large-cell non-Hodgkin's lymphomas are heterogeneous with respect to cell lineage. A sizable proportion, ranging from 20 to 60 per cent in several reports,[1-3] lack surface receptors associated with differentiated lymphoid cells and have the phenotype $E^-SmIg^-C_3F^-$. Some authors have referred to these cells as "null," although we prefer the designation "nonexpressive."

In the August 7 issue, Warnke and his colleagues make the important observation that many nonexpressive phenotypes have Ia or Ia-like antigens, presumably on the cell surface. The authors conclude that the presence of this antigen indicates a B-cell lineage for this subset of large-cell tumors. Since $SmIg^+$ phenotypes constitute the other major subset in large-cell lymphoma, the implication of this finding is that the vast majority of large-cell lymphomas are in fact derived from B cells. We generally agree with the latter conclusion on the basis of certain other lines of evidence. We would emphasize, however, that Ia or Ia-like antigens are clearly not found exclusively on B cells, and therefore the authors' conclusion is a cause of some concern. In fact, it is well known that certain subsets of T cells, both normal and neoplastic, express Ia antigens.[4,5]

The common denominators for Ia expression seem to be immaturity and a high proliferative rate. Thus, cultures of normal and neoplastic T cells stimulated by lectin or growth factor regularly express Ia antigens.[6] Since large-cell lymphomas generally have a high proliferative rate, it could be argued that the expression of Ia antigens could well indicate a T-cell lineage or could merely correlate with cell proliferation. The fact that certain T-cell-differentiation antigens were not found on these Ia^+ cells is irrelevant, since B-cell markers were also not found. In our view, the evidence indicating that nonexpressive large-cell lymphoma is derived from B cells remains speculative and inferential.

Another cause for concern is the composition of patients in the Stanford study. Although the authors characterize the study group as "unselected," six of their patients had longstanding nodular (follicular) lymphoma, one had "Lennert's lymphoma," and three had received transplants. One wonders how representative of patients with large-cell (histiocytic) lymphoma this group is. It is well known that the composition of patients in a study markedly influences the results. The patient population described above is weighted heavily toward certain unusual large-cell subsets. Survival differences between groups in this series should be viewed as tentative and preliminary, particularly when one compares the survival characteristics of the two small groups of patients (11 and eight subjects).

RICHARD A. RUDDERS, M.D.
Boston, MA 02111 Tufts-New England Medical Center

1. Berard CW, Jaffe ES, Braylan RC, et al. Immunological markers of non-Hodgkins lymphoma. Recent Results Cancer Res. 1978; 64:138-45.
2. Brouet J-C, Preud'Homme JL, Flandrin G, et al. Membrane markers in histiocytic lymphoma (reticulum cell sarcoma). J Natl Cancer Inst. 1976; 56:631-3.
3. Aisenberg AC, Wilkes BM, Long JC, et al. Cell surface phenotype in lymphoproliferative disease. Am J Med. 1980; 68:206-13.
4. Fu SM, Chiorazzi N, Wang CY, et al. Ia-bearing T lymphocytes in man: their identification and role in the generation of allogeneic helper activity. J Exp Med. 1978; 148:1423-31.
5. Halper JP, Knowles DM, Wong CY. Ia antigen expression by human malignant lymphoma: correlation with conventional lymphoid markers. Blood. 1980; 55:373-82.
6. De Wolf WC, Schlossman SF, Yunis EJ. DRw antisera react with activated T cells. J Immunol. 1979; 122:1780-4.

The above letter was referred to the authors of the article in question, three of whom offer the following reply:

To the Editor: Dr. Rudders generally agrees with our statement that "neoplasms that stain for Ia but not for the T-cell antigens or for alpha-naphthylbutyrate esterase are probably derived from B cells."[1] Nevertheless, he emphasizes that Ia or Ia-like antigens have been described on a number of cell types, including certain normal and neoplastic T cells. We and others have identified Ia on certain normal T cells and have also identified Ia on a small number of T-cell lymphomas. However, in all the cases the Ia^+ T cells are easily identifiable by their coexpression of such T-cell markers as reactivity with our antibody L17F12. Since the submission of our manuscript, we have also identified several large-cell lymphomas that bear T-cell antigens. These particular cases did not stain for Ia antigens.

We agree that the composition of patients in our study is not ideal. For this reason, we were cautious in interpreting our findings and emphasized the importance of routine immunologic phenotyping and prospective studies. The patient with a prior biopsy showing "Lennert's lymphoma" and the three patients who had received transplants were of course not included in our clinical analysis. Of the six patients with a longstanding history of follicular lymphoma, three were in the Ig^+ group and three were in the Ig^+ group. We are in the process of analyzing a larger group of patients with diffuse large-cell lymphoma.

It is of interest that Dr. Rudders has also presented preliminary data suggesting that Ig^+ large-cell lymphomas have more aggressive clinical behavior.[2] Among his 35 patients with Stage III and IV large-cell lymphoma, 10 patients were in complete remission after extensive treatment. The cells of six of these 10 patients were "nonexpressive," and four of five long-term disease-free survivors also had "nonexpressive" cells. We eagerly await data from large prospective studies.

ROGER WARNKE, M.D.
RICHARD MILLER, M.D.
RONALD LEVY, M.D.
Stanford, CA 94305 Stanford University Medical Center

1. Warnke R, Miller R, Grogan T, Pederson M, Dilley J, Levy R. Immunologic phenotype in 30 patients with diffuse large-cell lymphoma. N Engl J Med. 1980; 303:293-300.
2. Rudders RA, Ahl ET Jr, Delellis RA. Surface marker and Lukes-Collins identity of long term disease free survivors with advanced large cell (histiocytic) lymphomas. Proc Am Assoc Cancer Res Am Soc Clin Oncol. 1980; 21:465, abstract.

MALIGNANT MESOTHELIOMA

To the Editor: The recent brief review of malignant mesothelioma in the July 24 issue contains some points that are disputable.

Dr. Antman states that "malignant mesotheliomas are classified with the soft-tissue sarcomas." By whom? The vast majority of malignant mesotheliomas, as Dr. Antman indicates, are epithelial. The designation of sarcomatous tumors of the pleura or peritoneum as true sarcomas or as sarcomatous mesotheliomas may be academic in terms of biologic behavior, but such tumors are unusual. The 20 per cent figure given for sarcomatous mesothelioma seems high.