In this respect, therefore, malignant lymphocytes of the particular type used resemble normal lymphocytes. In most of the experiments tumor cells contained more antibody per unit of nitrogen than did the normal lymphocytes. Also, the malignant cells were able to obtain significant quantities of antibody protein from normal lymphocytes.

The high degree of titer in tumors growing from transplanted, antibody-containing malignant lymphocytes indicates that labelled globulin is carried into the daughter cells. As the growth of the tumor proceeds, increasing numbers of antibody-containing lymphocytes are formed. Thus, the total quantity of available antibody in lymphoid structures is dependent upon the number of antibody-containing lymphocytes present. This type of antibody production, *i.e.*, multiplication of pre-existing cells containing immune globulin, may be a prominent mechanism of antibody production in the normal organism.

The data also show that antibody may be transferred from malignant to normal lymphocytes. This transfer may have occurred as a result of the liberation of immune globulin by degenerating, malignant lymphocytes. It is also possible that although evidence of metastases was not observed, some tumor cells may have infiltrated the normal lymphoid structures. This latter possibility is unlikely, however, since in the absence of gross metastases, it would be difficult to assume the presence of enough tumor cells in the normal lymphoid tissues to account for their antibody titers.

Summary. Staphylococcus antitoxin titers have been obtained from extracts of lymphocytes secured from a rapidly growing mouse lymphosarcoma. Comparison of these titers with those of the sera and normal lymphocytes of the same animals suggested that tumor tissue had a slightly higher antibody content. Tumor cells were capable of obtaining antibody from some other source in the body, presumably normal lymphocytes. The growth of an antibody-containing tumor transplant in normal mice was accompanied by the development of antibody-containing malignant cells. The normal lymphocytes of the host animal receiving this transplant contained antibody. There is a reversible exchange of antibody protein between normal and malignant lymphocytes.

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Sulfonamide Blood Levels Following Deposition Under the Bladder Peritoneal Reflection.

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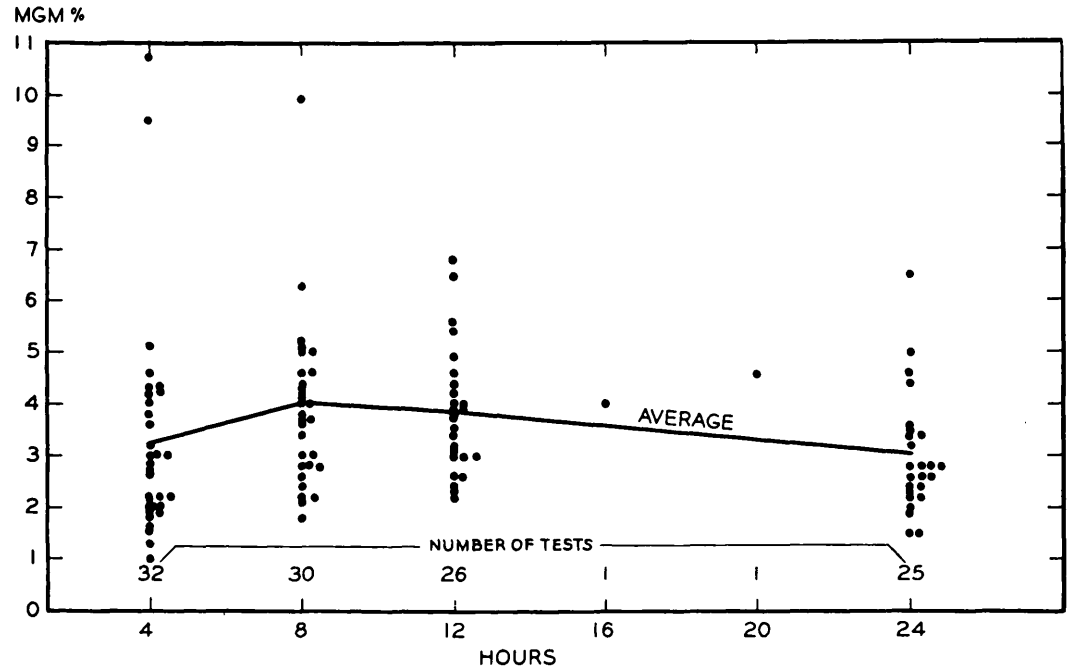
Numerous reports on the rate of sulfonamide absorptions from various portions of the body have been published but information was not found on the blood levels following deposition under the bladder peritoneal reflection at the time of cesarean section operation.

In an effort to reduce the morbidity incidence, 5 g of a sulfonamide were placed above the uterine fascia just before the incised area was covered by suturing the bladder peritoneal reflection to the uterus. This tissue is essentially a loose areolar type. Blood levels were taken at 4-hour intervals from the fourth to the twenty-fourth hour basis following the cesarean section. Because of limited personnel and because the sixteenth and twentieth hours came late at night, only 2 tests for these times were made on the 32 patients.

Every patient had a test at the fourth hour while 30 had at the eighth and 26 at the twelfth hour, only 25 tests were completed at the twenty-fourth hour interval. Marshall's[1] method was used for these determinations.

[1] Marshall, E. K., Jr., *J. Biol. Chem.*, 1937, **122**, 263; Marshall, E. K., Jr., Emerson, K., Jr., and Cutting, W. C., *J. A. M. A.*, 1937, **108**, 953.

BLOOD LEVELS OF SULFONAMIDE - FOR 24 HOURS AFTER DEPOSIT UNDER THE BLADDER PERITONEAL REFLECTION AT CESAREAN SECTION



The graph reveals the varied readings. Since there was no typical type of curve a mean average did not seem representative. The highest reading at the fourth hour dropped to 5.0 mg in 4 hours and to 4.4 by the twelfth hour, whereas one patient had a level of 9.5 in 4 hours and had a 9.9 at 8 hours.

Thirty of the 32 patients had 5 g of sulfanilamide placed under the peritoneal reflection. The remaining 2 had 5 g sulfathiazole. The readings of this latter drug were:

Hr	4th	8th	12th	16th	20th	24th
Mg	3.0	3.0	2.6	—	—	1.9
Mg	1.0	—	—	—	—	—

The blood levels of sulfanilamide and sulfathiazole were no doubt influenced by the variable fluid intake, the amount of tissue exudate, and other factors.

Conclusions. Blood levels following the placement of 5 g of sulfanilamide in 30 patients and 5 g sulfathiazole in 2 under the bladder peritoneal reflection did not exceed tolerance ranges. Ordinarily, good absorption can be expected from this site but the erratic and unpredicted rates make this an unsatisfactory route for establishing effective blood levels.