

elements. Can Dr. Fribourg state with certainty that this was not selective eradication instead of "retroconversion"? The semantics do not disturb us.

2. We never meant to compare directly with DiSaia and co-workers. In fact, our opening paragraph clearly states that, "we have observed a *different* kind of conversion which we wish to report."

3. Perhaps our observation did not surprise Dr. Fribourg, but it was a new observation for us, and we had not found it described elsewhere. How many patients with endodermal sinus tumor has Dr. Fribourg or any therapist studied by second-look operation after apparently successful chemotherapy? Traditionally, endodermal sinus tumors are considered to be highly virulent, with poor survival, and the opportunity for such study has been limited until the recent advent of improved chemotherapy.

Finally, we make no claim for comparative significance. Instead, we offer this report to suggest that there might be stages in transforming usually lethal neoplasms into benign neoplasms, and that "retroconversion" or "conversion" or "selective cell kill" might all be elements in a complex continuum. Only by encouraging such reports from gynecologic oncologists can enough information be accumulated to justify the prospective in vitro studies which Dr. Fribourg prefers. Perhaps their significance will then be evaluable with perspective and precision.

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Cardiovascular complications of terbutaline for preterm labor

To the Editors:

It was with great interest that I read the article by Katz and colleagues (AM. J. OBSTET. GYNECOL. 139:605, 1981) on cardiovascular complications and terbutaline treatment. The authors found 5% incidence of severe cardiovascular complications in patients treated with infusion of terbutaline for preterm labor.

This figure is surprising. This drug was introduced in our clinic (3,200 deliveries per year) in 1971,^{1, 2} and has since been used routinely for treatment of preterm labor. During this period, manifest or suspected pulmonary edema has been recorded in only a few cases, and there have been very few reports about this complication,³ despite the fact that terbutaline is used in

most clinics in Sweden. Drugs with negative inotropic effect or drugs that cause water retention might, together with a beta-receptor agonist, cause cardiovascular problems. This type of complication is also associated with iatrogenic volume overload—and, according to the above-mentioned article, twin pregnancy, also.

However, the authors concluded that they administered terbutaline in a low dose (10 to 30 $\mu\text{g}/\text{min}$) and claimed that the range frequently used is 10 to 80 $\mu\text{g}/\text{min}$. It must be stressed that the maximum rate of infusion is 25 $\mu\text{g}/\text{min}$.^{1, 2} Rates of infusion that exceed this have been reported by Wallace and colleagues⁴ but cannot be recommended. It can be assumed that the risk of complications of this type is correlated to the maximum rate of infusion of the drug.

Finally, I do agree with the authors' recommendations. Terbutaline is a potent inhibitor of uterine activity but should be restricted to carefully selected patients. Mother and fetus should be carefully monitored during treatment, and immediate withdrawal of the treatment must be considered if pronounced side effects appear.

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3. Notices from the Swedish Adverse Drug Committee.
4. Wallace, R. L., Caldwell, D. L., Ansbacher, R., and Otterson, W. N.: Inhibition of premature labor by terbutaline, Obstet. Gynecol. **51**:387, 1978.

Reply to Dr. Ingemarsson

To the Editors:

The 5% incidence of severe cardiovascular complications that was shown by the recent review of our experience with terbutaline tocolysis¹ was initially met by us with the same surprise expressed by Dr. Ingemarsson. Since no other published review, except for a few anecdotal case reports, is available in the obstetric literature, the incidence in other institutions in the United States and Europe remains a matter of speculation. In a recent study by Speroff and associates,² an identical 5% incidence of pulmonary edema was found among 99 patients undergoing terbutaline tocolysis. If, indeed, the actual incidence in Sweden is lower, we have no obvious explanation to settle this disparity.

Dr. Ingemarsson's comment about the role of the infusion rate as an etiologic factor in patients with cardiovascular complications deserves clarification. Although our treatment protocol, as well as that of