

UNIVERSITY OF  
**ROCHESTER**  
MEDICAL CENTER

Date: March 19, 2007

To: *OB/GYN Care Providers*

From: Rochester Regional Prenatal Screening Program  
Department of Pathology and Laboratory Medicine  
Reproductive Genetics, Department of OB/GYN

Re: ***Maternal Serum AFP Screening for Neural Tube Defects:  
\*\*\*Think Risk Level, Not MoM!\*\*\****

In our continuing effort to refine our Maternal Serum Screening Program, we are using new analytical software with improved methods to identify women at increased risk for open neural tube defects (NTD's). This change will not affect how the test is ordered or what follow up recommendations are made in cases of elevated AFP results. However it will result in a noticeable change in the AFP values of some of your "screen positive" versus "screen negative" patients.

Since the early days of our program, we have defined "elevated" AFP values in non-diabetics by a *single cutoff* of 2.0 Multiples of the Median (MoM), and in diabetics by a single cutoff of 1.5 MoM. This system assumed that at a given AFP MoM, all patients (except diabetics) would have approximately the same risk, and should be treated the same.

In fact, the AFP MoM is not the whole story! It is known that there is a difference in the NTD risk in different races, and we now know that the NTD risk can be quite *different for the same AFP MoM at different gestational ages*. For example, the risk for spina bifida in a non-diabetic Caucasian at an AFP value of 2.1 MoM at 15 weeks is ~1 in 275, while the risk for the same 2.1 MoM value at 18 weeks is only ~1 in 485. For a *Black woman at 18 weeks*, the spina bifida risk at 2.1 MoM would be close to 1 in 1000!

In order to level the playing field, the new analysis will base the interpretation of results not on MoM, but on the NTD risk given the race, gestational age and other specifics of each patient. As of March 15, women with open spina bifida risks *above 1 in 330 will be considered "screen positive"*, and follow up will be suggested. Women with risks of 1 in 330 or below will be "screen negative". Thus, in the example above, at the same 2.1 MoM value, one of the patients would be positive, while the other two would be negative.

The effect of this change will be to allow the Screening Program to more effectively identify patients who are truly at higher risk as "positive", reduce the number of "false positives", and maintain our high (>90%) detection rate for NTD's. If you have questions regarding this change, please feel free to contact us at (585)275-3304.

***\*\*\*Please share this information with your staff\*\*\****