

## The First Trimester Screening module UPDATE 2008 to 2009 algorithm – short information

The Fetal Medicine Foundation has released an improved 1<sup>st</sup> Trimester algorithm (FMF 2009). There are no changes to risk calculation by nuchal translucency and other ultrasound markers.

The new software has incorporated the latest research publications to allow calculation of risks for preeclampsia and gestational hypertension based on first trimester assessment. The previous version included risk calculation by maternal history, PAPP-A and uterine artery mean PI only. This has been extended to include all combinations of maternal history, uterine artery Doppler (lowest PI), mean arterial pressure (MAP), PAPP-A and PIGF (placental growth factor). Risks are calculated for early preeclampsia, early + late preeclampsia and all hypertensive orders (preeclampsia and gestational hypertension). The detection rates and false positive rates for each combination are available in the program help pages.

There has also been an improvement in the algorithm for the calculation of risks for chromosomal abnormalities. In the previous version the biochemical parameters for pregnancies before 11 weeks were derived from the extrapolation of available data from 11-13 weeks. Data comprising tens of thousands of patients examined before 11 weeks have now been made available to the FMF and on the basis of such data it was possible to now produce new algorithms that describe well the distribution of measurements from 8 to 14 weeks.

Another important function of the new software is the ability of individual centres to monitor their median values of free beta hCG and PAPP-A and adjust the values themselves. An adjustment of between 0.85 to 1.15 on individual MoMs can be made; this can be calculated from the past year's data, provided at least 1000 cases have been analysed in the last six months.

A new FMF license format has been created, which will be common to all software manufacturers. Licenses will be user- rather than centre-based, allowing users to add their personal license to all installations where they work. To make life easier, this license can be directly downloaded from the FMF web site into the program. Users without internet access at the program site can download the license file from the website and import it as a file.

Individual risks (ultrasound-only and biochemistry-only) have been dropped because they sometimes lead to confusion, and because the FMF software description does not specify how they should be calculated.

The calculation of gestational age from CRL has been modified to agree with the UK National Screening Program guidelines (this is very small change, resulting in at most one day difference in gestational age).

More languages have been added and existing translations have been improved.

The default risk cut-off for trisomy 21 is now 1 in 100 (or 1 in 150 at term), as recommended by the FMF and the UK National Screening Program guidelines. Existing users are recommended to change their setting to reflect this, as otherwise an increased false-positive rate will result.

The export file (used when submitting data for audit, and for analysis of screening data) has been extended to include values and MoMs for uterine artery Doppler, mean arterial pressure and PIGF, and biochemistry adjustment factors used in MoM calculations.

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### New risk calculation license

**Important:** Your current risk license will not be valid for the new risk module.

The FMF 2009 update does not support Centre licenses anymore. Each certified sonographer has to import her/his own license into the risk calculation program she/he is using either by downloading it in the program directly (Options – FMF risks – **Download license**) or by downloading a file from her/his individual FMF user site and importing this license file into the software (Options – FMF risks – **Import license**).

→ **Download license** option: Provided you have internet access, you can download your license from the FMF website directly in the screen **OPTIONS - FMF RISKS - Download license**. You will need

- Your FMF user ID
- Your login name
- Your FMF password

The downloaded license will be **added** to the user list, it will not overwrite the existing FMF user information.

→ **Import license** option: Alternatively, you can download your license file from your personal FMF site and copy it to the computer where FTS is installed; you can then import the license into the FTS program. By clicking on **Import license**, you will be able to search for your license file.

If you have problems with your new FMF license please contact [fmflicense@fetalmedicine.com](mailto:fmflicense@fetalmedicine.com). If you have any more questions regarding the First Trimester Risk module please contact

[fmfcertification@fetalmedicine.com](mailto:fmfcertification@fetalmedicine.com).

### What happens to examinations which were calculated with the previous risk algorithm FMF 2008 or earlier?

If you open an old examination where the risks have been already calculated with the FMF 2008 algorithm the software recognizes this and will not re-calculate the risks with the new algorithm. These risks will remain and the respective data fields are set to read only.

This is to ensure that you can always see the risks as they were given in the original examination with the original settings at that time.

This is important for data security to avoid misleading changes in the database and to ensure correct handling of old data in your statistics and 1<sup>st</sup> trimester audit.