

Completing the Multiple Marker Screening Requisition

This guide is for Ontario NT-certified sonographers completing the Multiple Marker Screening (MMS) requisition when a prenatal screening test requiring a nuchal translucency (NT) measurement is requested.

Which screening tests incorporate NT measurements?

- enhanced First Trimester Screening (eFTS) for singletons.
- Nuchal Translucency + Second Trimester Screening (NT+STS), generally done for vanishing twin/co-twin demise pregnancies.



You must have your own Ontario NT ID number to be authorized to perform NT ultrasounds for MMS without supervision. Protect the accuracy of screening by not sharing your Ontario NT ID number with others.

Obtaining an NT measurement

- Use the CRL cut-off (between 45 mm and 84 mm) when determining if a pregnant individual is eligible for eFTS or NT + STS. Do not use gestational age cut-offs.
- Use the CRL cut-off (between 45 mm and 84 mm) when determining if a pregnant individual is eligible for eFTS or NT + STS. Do not use gestational age cut-offs.

If you cannot obtain an NT measurement and:

- **the CRL is <45 mm:** Rebook the patient according to the guidelines of your place of practice.
- **the CRL is 45-84mm (correct time window for NT):** Rebook the patient according to the guidelines of your place of practice. To avoid delay in screening, if you are unable to review the case with a physician and rebook your patient, please perform a dating ultrasound, record all required information on the requisition (i.e., CRL, ultrasound date, all practitioner information) except for the NT measurement (write "N/A, cannot obtain NT, needs rebook"), and send the pregnant individual for blood draw.
- **the CRL is ≥84mm:** Perform a dating ultrasound, record all required information on the requisition (i.e., CRL, BPD, ultrasound date, all practitioner information) except for the NT measurement (write "N/A, patient too late for eFTS"), and send the patient for bloodwork if eFTS was ordered.



NT Ultrasound following Non-invasive Prenatal Testing (NIPT)

A pregnant individual who has undergone NIPT may not present with an MMS requisition at the time of their NT ultrasound, and there is no need to follow up with their health-care practitioner for one.

Instructions for Completing the MMS Requisition

Below are the steps required to complete the Ultrasound (U/S) Information section on the MMS requisition in various scenarios for singleton and twin pregnancies. Providing incorrect or missing information can delay the patient's risk assessment or affect the accuracy of the calculation.

Once the requisition is completed, scan a copy into the patient file for your records. This provides back up should the requisition be misplaced.

Singleton Pregnancies

Ultrasound (U/S) Information Sonographer or ordering provider to complete. Identify U/S operator code only if doing NT Scan.			
<input type="checkbox"/> Viable twin pregnancy identified on this U/S (no U/S information needed on this requisition)	<input type="checkbox"/> Confirmed or suspected vanishing twin/co-twin demise identified on this U/S (provide U/S information for viable fetus)		
U/S Date: <u>1</u> (YYYY/MM/DD)	CRL: <u>2</u> Crown-Rump Length	<input type="checkbox"/> cm <input type="checkbox"/> mm BPD: <u>3</u> Bi-Parietal Diameter	<input type="checkbox"/> cm <input type="checkbox"/> mm NT: <u>4</u> Nuchal Translucency CRL 45.0-84.0 mm
Sonographer's information:			
Operator Code: <u>5</u>	Site: <u>6</u>	Site phone #: (<u>7</u>) -	
Name: <u>8</u>		Signature: <u>9</u>	

- U/S Date:** Record the day that you performed the NT ultrasound.
- CRL:** Record the best CRL measurement, or the average of several satisfactory CRL measurements, obtained on the day of the NT ultrasound. Pay close attention to the unit of measurement that you select (mm/cm).
- BPD:** Record the BPD if the CRL measurement is >84mm. Pay close attention to the unit of measurement that you select (mm/cm).
- NT:** Record the widest NT measurement that meets the FMF/UK criteria, obtained on the day of the NT ultrasound.
- Operator code:** Record your Ontario NT ID number.
- Site:** Record the name of the hospital/clinic where you performed the NT ultrasound.
- Site phone:** Record a contact number including the direct extension of your department.
- Name:** Print your name.
- Signature:** Sign the form.

Once the requisition is completed, the patient can proceed with the blood draw, which is usually on the same day of the NT ultrasound but this is not required. The blood draw can be done anytime after the NT ultrasound as long as the pregnant individual is within the eFTS window based on CRL measurements.

Singleton Pregnancies With Vanishing Twin/Co-Twin Demise

Pregnancies with a suspected or confirmed vanishing twin/co-twin demise can have an NT measurement, followed by Second Trimester Screening (14w0d to 20w6d). The Second Trimester Screening blood draw can be done 8 weeks after demise. Enhanced First Trimester Screening (eFTS) is not recommended for these pregnancies.

Scenario 1: Patient appropriately presents with an MMS requisition for NT + Second Trimester Screening (NT + STS)

- You can complete the MMS requisition as indicated above for the viable fetus. The patient is then to proceed with the STS blood draw after the date indicated by their ordering health-care practitioner within the "test requested" section.
- Instruct the patient to contact their health-care practitioner if they are unsure of when to go for the blood draw. You are not required to provide this information.

Scenario 2: Patient presents with an MMS requisition for eFTS, but a suspected or confirmed vanishing twin/co-twin demise is identified at the time of the NT ultrasound.

- Although the patient cannot have eFTS based on the finding of vanishing twin, we still recommend completing the MMS requisition if it was provided by the ordering practitioner, and instructing the patient to go for the blood draw. We do not recommend relaying to the patient that eFTS cannot be done. This is because providing advice regarding prenatal genetic screening is outside of sonographers' scope of practice.
- Upon receipt of the blood sample, the MMS lab will notify the ordering practitioner of the next steps, which would usually be to arrange an STS blood draw between 13w0d-20w6, and 8 weeks after the estimated date of demise.

Completing requisition in scenario 2:

Ultrasound (U/S) Information Sonographer or ordering provider to complete. Identify U/S operator code only if doing NT Scan.			
<input type="checkbox"/> Viable twin pregnancy identified on this U/S (no U/S information needed on this requisition)	<input checked="" type="checkbox"/> Confirmed or suspected vanishing twin/co-twin demise identified on this U/S (provide U/S information for viable fetus)		
U/S Date: <input type="text"/> 1 (YYYY/MM/DD)	CRL: <input type="text"/> 2 Crown-Rump Length	<input type="checkbox"/> cm <input type="checkbox"/> mm BPD: <input type="text"/> 3 Bi-Parietal Diameter	<input type="checkbox"/> cm <input type="checkbox"/> mm NT: <input type="text"/> 4 mm Nuchal Translucency CRL 45.0-84.0 mm
Sonographer's information:			
Operator Code: <input type="text"/> 5	Site: <input type="text"/> 6	Site phone #: (<input type="text"/> 7) - <input type="text"/>	
Name: <input type="text"/> 8	Signature: <input type="text"/> 9		

- Check the "confirmed or suspected vanishing twin/co-twin demise" box. Checking this box will alert the MMS lab that this is a vanishing twin pregnancy. If an old requisition is used, handwritten "IUFD/vanishing twin detected on this ultrasound".
- Complete steps 1-8 for the viable fetus as indicated above in the singleton section.

Twin Pregnancies

Non-Invasive Prenatal Testing (NIPT) is now funded by the Ministry of Health (MOH) for all twin pregnancies. Concurrently, **First Trimester Screening (FTS) for twin pregnancies has been discontinued in Ontario**. A stand-alone nuchal translucency (NT) ultrasound is still recommended for twin pregnancies, where available.

If a twin pregnancy was identified prior to the NT ultrasound and the pregnant individual appropriately does not present with an MMS requisition, **you can proceed with the stand-alone NT ultrasound, and do not need to record the NT measurement on the requisition or send the patient for FTS blood draw.**

What if an individual pregnant with twins still presents with the MMS requisition?

Even though FTS has been discontinued for twin pregnancies, there might be times when the patient presents with the MMS requisition. This could be because the twin pregnancy is only identified at the time of the NT ultrasound or their health-care practitioner is not aware that FTS has been discontinued for twin pregnancies.

Although the patient cannot have FTS, we still recommend completing the MMS requisition if provided by the ordering practitioner, and instructing the patient to go for the blood draw. We do not recommend relaying to the patient that FTS is in fact not needed. This is because providing advice regarding prenatal genetic screening is outside of sonographers' scope of practice. Upon receipt of the blood sample, the MMS lab will notify the ordering practitioner that FTS for twins has been discontinued and OHIP-funded NIPT is available.

Ultrasound (U/S) Information	
Sonographer or ordering provider to complete. Identify U/S operator code only if doing NT Scan.	
<input checked="" type="checkbox"/> Viable twin pregnancy identified on this U/S (no U/S information needed on this requisition)	<input type="checkbox"/> Confirmed or suspected vanishing twin/co-twin demise identified on this U/S (provide U/S information for viable fetus)
U/S Date: _____ (YYYY/MM/DD)	CRL: _____ Crown-Rump Length
<input type="checkbox"/> cm	<input type="checkbox"/> mm
<input type="checkbox"/> mm	BPD: _____ Bi-Parietal Diameter
<input type="checkbox"/> cm	<input type="checkbox"/> mm
NT: _____ mm	Nuchal Translucency CRL 45.0-84.0 mm
Sonographer's information:	
Operator Code: _____ 1	Site: _____ 2
Name: _____ 4	Signature: _____ 5
Site phone #: (____) _____ 3	

Only check the "viable twin pregnancy identified on this U/S" box if there is a viable twin pregnancy and the pregnant individual presents with a MMS requisition completed by their health-care provider requesting FTS. Checking this box will alert the MMS lab that this is a twin pregnancy.

- 1. Operator code:** Record your Ontario NT ID number.
- 2. Site:** Record the name of the hospital/clinic where you performed the NT ultrasound.
- 3. Site phone:** Record a contact number including the direct extension of your department.
- 4. Name:** Print your name.
- 5. Signature:** Sign the form.