The American College of Obstetricians and Gynecologists recommends that “A strategy that incorporates both first- and second-trimester screening should be offered to women who seek prenatal care in the first trimester.” Integrated Screening (IS) has been demonstrated by several major studies to be the most effective prenatal screening approach available for Down syndrome. Integrated Screening utilizes the best of the first and second trimester markers, resulting in unsurpassed prenatal screening performance for Down syndrome, trisomy 18, and open neural tube defects. It provides the highest detection rate of any screening test at a fixed screen positive rate. Integrated Screening has the lowest screen positive rate for Down syndrome, which means less anxiety for your patients.

### Integrated Screening using first and second trimester markers

<table>
<thead>
<tr>
<th></th>
<th>Down syndrome</th>
<th>Trisomy 18</th>
<th>Open neural tube defects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection Rate*</td>
<td>90%</td>
<td>80%</td>
<td>83%</td>
</tr>
<tr>
<td>Screen Positive*</td>
<td>3%</td>
<td>0.5%</td>
<td>3%</td>
</tr>
</tbody>
</table>

*Actual Down syndrome detection and screen positive rates will depend on maternal and gestational age distribution.

### Comparing Screening Methods for Down syndrome

<table>
<thead>
<tr>
<th></th>
<th>Quad Marker Screen</th>
<th>First Trimester Screen</th>
<th>Integrated Screen</th>
<th>Serum Integrated Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection Rate</td>
<td>81%</td>
<td>84%</td>
<td>90%</td>
<td>85%</td>
</tr>
<tr>
<td>Screen Positive</td>
<td>5%</td>
<td>5%</td>
<td>3%</td>
<td>3%</td>
</tr>
</tbody>
</table>

**Limitations**

- No interpretation is available until after the second trimester sample is analyzed.
- Integrated Screening is dependent upon careful timing of both the first and second trimester serum samples. Both samples must be sent to and analyzed by the same laboratory.
- Integrated Screening requires an NT-certified sonographer to perform the nuchal translucency measurement.
**Serum Integrated Screening**

If the NT measurement is not obtainable, Serum Integrated Screening is available. Serum Integrated Screening is the most effective method of screening using serum markers only. While Serum Integrated Screening is less effective than a full integrated screen with NT, it has a higher detection rate and lower screen positive rate than a quad marker screen.

**Reimbursement**

Most insurers should cover Integrated Screening to the extent that they cover prenatal ultrasound and serum screening procedures. Patients are encouraged to check with their insurance carriers if in doubt.

**Foundation for Blood Research**

The Foundation for Blood Research (FBR) has extensive experience with antenatal and integrated screening. FBR’s role as a pioneer of improvements and refinements in prenatal screening for Down syndrome continues with the introduction of Integrated Screening.

**If you would like us to provide Integrated Screening to your patients:**

**Part 1**
- Fetal CRL must be between 45 and 84 mm as determined by Dartmouth-Hitchcock sonographers.
- If NT cannot be measured accurately, we will take the responsibility of rescheduling the ultrasound or ordering a Serum Integrated Screen.
- The first serum sample is drawn following the NT measurement. You will receive a letter confirming receipt of the first sample along with a lab slip to use for the second serum sample.
- Patients referred because of increased risk, e.g. advanced maternal age or family history, will be offered genetic counseling by Dartmouth-Hitchcock counselors.

**Part 2**
- Patients may have their blood drawn at the Dartmouth-Hitchcock sites in Lebanon, Manchester, or Nashua. If blood is drawn elsewhere, that facility will need to make arrangements to have the sample sent to Foundation for Blood Research.
- Results are available in approximately 3-5 days after receipt of the second sample.
- Screen positive results will be called to your office and your patient by a Dartmouth-Hitchcock genetic counselor.
- Screen negative results will be faxed to your office from FBR. You will need to inform your patients of these results.

**Refer a patient:**

If you would like to refer a patient, please call the Physician Connection Line at 866-DHMC DOC (866-346-2362) or download referral forms and lab requisition: www.dhmc.org/goto/referralforms

When making a referral, fax a completed referral and lab requisition form to:
- Lebanon: (603) 653-3545
- Manchester: (603) 623-7216
- Nashua: (603) 577-3497

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