Some babies are at higher risk to have certain genetic conditions because of their ethnicity. Ethnicity is determined by the countries and ethnic groups a person’s ancestors came from. Prenatal screening is available for some genetic conditions that occur more often in certain ethnic groups. Please read the following and answer the questions to determine what tests your provider will order for you.

BACKGROUND INFORMATION:
A baby will only have the genetic conditions listed below if both parents are “carriers.” If both parents are carriers, their baby has a 25% (1 in 4) chance to have the condition. Carriers do not usually have a family history or symptoms of the disease.

Testing starts with you, the pregnant woman. If you are found to be a carrier, the father of your baby will be offered testing. If he is a carrier, an optional procedure will be offered to test the baby before birth (CVS or amniocentesis). If prenatal testing diagnoses the condition, your options will be to continue or terminate the pregnancy (there are no prenatal treatments). Genetic testing does not determine the exact symptoms an individual baby will have, and the conditions cannot be cured. Please see the back of page 2 for more detailed information about the conditions, including carrier rates in at-risk ethnic groups, and screening limitations.

- These prenatal screening tests are optional and they require a blood sample.
- If the ethnicity of you or your partner is not listed below, you are at lower risk to be a carrier for the conditions listed, so you will not be screened.
- All babies born in California have newborn screening for cystic fibrosis, sickle cell disease, and hemoglobin E/beta thalassemia.
- If you have a family history of the conditions listed below, contact your local Genetics Department for appropriate testing (phone numbers on back).

QUESTIONNAIRE (to be filled out by the pregnant woman):

1. If you have any Southeast Asian ancestry (Cambodian, Thai, Laotian, Vietnamese, Hmong), you can have screening for hemoglobin E/beta thalassemia disease.
   Do you want screening for hemoglobin E/beta thalassemia disease? □ YES (211427) □ No

2. If you OR the father of the baby have any African American ancestry, you can have screening for sickle cell disease.
   Do you want screening for sickle cell disease? □ YES (211427) □ No

3. If you OR the father of the baby have any Caucasian (White/not hispanic) ancestry, you can have screening for cystic fibrosis.
   Do you want screening for cystic fibrosis? □ YES (200432) □ No

4. If you AND the father of the baby have any Eastern European Jewish ancestry (i.e., if you are BOTH Ashkenazi Jewish), you can have screening for Tay-Sachs disease, Canavan disease, and familial dysautonomia (FD).
   Do you want screening for Tay-Sachs, Canavan, and FD? □ YES (200452) (207307) (207313) □ No

Please write the ethnic groups/countries your ancestors came from (for example: African American, European Caucasian, Asian, Asian Indian, Native American, SE Asian, Ashkenazi Jewish, etc.)

Yourself: ___________________________________ Father of the baby: ___________________________________
Some babies are at higher risk to have certain genetic conditions because of their ethnicity. Ethnicity is determined by the countries and ethnic groups a person’s ancestors came from. Prenatal screening is available for some genetic conditions that occur more often in certain ethnic groups. Please read the following and answer the questions to determine what tests your provider will order for you.

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A baby will only have the genetic conditions listed below if both parents are "carriers." If both parents are carriers, their baby has a 25% (1 in 4) chance to have the condition. Carriers do not usually have a family history or symptoms of the disease.

Testing starts with you, the pregnant woman. If you are found to be a carrier, the father of your baby will be offered testing. If he is a carrier, an optional procedure will be offered to test the baby before birth (CVS or amniocentesis). If prenatal testing diagnoses the condition, your options will be to continue or terminate the pregnancy (there are no prenatal treatments). Genetic testing does not determine the exact symptoms an individual baby will have, and the conditions cannot be cured. Please see the back of page 2 for more detailed information about the conditions, including carrier rates in at-risk ethnic groups, and screening limitations.

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QUESTIONNAIRE (to be filled out by the pregnant woman):

1. If you have **any** Southeast Asian ancestry (Cambodian, Thai, Laotian, Vietnamese, Hmong), you can have screening for hemoglobin E/beta thalassemia disease.  
   **Do you want screening for hemoglobin E/beta thalassemia disease?**  
   - ☐ YES (211427)  
   - ☐ No

2. If you **OR** the father of the baby have **any** African American ancestry, you can have screening for sickle cell disease.  
   **Do you want screening for sickle cell disease?**  
   - ☐ YES (211427)  
   - ☐ No

3. If you **OR** the father of the baby have **any** Caucasian (White/not hispanic) ancestry, you can have screening for cystic fibrosis.  
   **Do you want screening for cystic fibrosis?**  
   - ☐ YES (200432)  
   - ☐ No

4. If you **AND** the father of the baby have **any** Eastern European Jewish ancestry (i.e., if you are BOTH Ashkenazi Jewish), you can have screening for Tay-Sachs disease, Canavan disease, and familial dysautonomia (FD).  
   **Do you want screening for Tay-Sachs, Canavan, and FD?**  
   - ☐ YES (200452)  
   - ☐ No

   - ☐ (207307)  
   - ☐ (207313)

Please write the ethnic groups/countries your ancestors came from (for example: African American, European Caucasian, Asian, Asian Indian, Native American, SE Asian, Ashkenazi Jewish, etc.)

Yourself: ___________________________  Father of the baby: ___________________________
<table>
<thead>
<tr>
<th>DISEASE</th>
<th>SYMPTOMS AND TREATMENT</th>
<th>CARRIER SCREENING</th>
</tr>
</thead>
</table>
| Hemoglobin E/Beta Thalassemia    | • Hemoglobin E/beta thalassemia disease is a variable condition that causes moderate to severe anemia.  
• Lifelong blood transfusions may be required.  
• Generally cannot be cured.                                                                                                                               | • 2% to 25% of Southeast Asians are carriers  
• Detects most but not all carriers                                                                                                                         |
| Sickle Cell Diseases             | • Blood disorders beginning in infancy/early childhood that cause anemia, bone pain, and frequent serious infections. Life span may be shortened.  
• Treatment may include frequent hospital stays, medications, and blood transfusions.  
• Severity varies. Some live without serious illness.  
• Generally cannot be cured.                                                                                                                               | • Around 8% of African Americans are carriers  
• Detects most but not all carriers                                                                                                                         |
| Cystic Fibrosis                  | • Disease of the lungs and digestive system beginning in infancy.  
• Thick mucus clogs the lungs, causing difficulty breathing and frequent lung infections. Lung disease worsens over time. Problems digesting food leads to poor weight gain.  
• Average life span is 35 years.  
• Treatment may include daily chest physical therapy, medications, and frequent hospital stays.  
• Severity varies. Some live without serious illness.  
• Currently no cure.                                                                                                                                           | • Around 4% of Caucasians and Ashkenazi Jews are carriers  
• Detects about 90% of Caucasian carriers and about 98% of Ashkenazi Jewish carriers                                                                 |
| Tay-Sachs Disease                | • Disease of the brain and nerves beginning in infancy.  
• Causes muscle weakness, mental retardation, and blindness. Greatly worsens over time.  
• Death occurs by about 3 to 5 years of age.  
• No treatment or cure.                                                                                                                                         | • Around 3% of Ashkenazi Jews are carriers  
• Detects about 95% of Ashkenazi Jewish carriers                                                                                                               |
| Canavan Disease                  | • Disease of the brain and nerves beginning in infancy.  
• Causes muscle weakness, mental retardation, and seizures. Greatly worsens over time.  
• Death usually occurs by 10 years of age.  
• No treatment or cure.                                                                                                                                         | • Around 2.5% of Ashkenazi Jews are carriers  
• Detects about 97% of Ashkenazi Jewish carriers                                                                                                              |
| Familial Dysautonomia            | • Disease of the nervous system beginning in infancy.  
• Can lead to pain insensitivity, unstable blood pressure and/or temperature, problems with speech and movement, and difficulty swallowing.  
• Average life span is 30 years.  
• Currently no cure.                                                                                                                                            | • Around 3% of Ashkenazi Jews are carriers  
• Detects about 99% of Ashkenazi Jewish carriers                                                                                                              |

For additional information, contact your local Genetics Department:

Fresno: (559) 324-5330  
San Francisco: (415) 833-2998  
Oakland: (510) 752-6298  
San Jose: (408) 972-3300  
Sacramento: (916) 614-4075