

**Tyrosine Screening**  
**Differential Diagnosis:** Tyrosinemia Type I, Tyrosinemia Type II, Tyrosinemia Type III  
 Oklahoma State Department of Health Newborn Screening Program – Tyrosinemia

**Tyrosine Screen**  
**Out-of-Range (abnormal)**  
 Tyrosine  $\geq 400 \mu\text{mol/L}$

Not consistent with Tyrosinemia  
 No further action needed.

**NO**

**YES**

**Infant < 14 days old at time of screening**  
**Primary Analyte (Tyrosine)**  
 Tyrosine  $\geq 400 \mu\text{mol/L}$

**Infant  $\geq 14$  days old at time of screening**  
**Primary Analyte (Tyrosine)**  
 Tyrosine  $\geq 400 \mu\text{mol/L}$

Contact family within 24 hours to assess infant's clinical status.  
**Repeat Filter Paper at 14 days of age**

From time of report, the contacted provider will:

1. Contact family by COB (close of business),
2. Immediately consult with metabolic specialist.
3. Refer for a diagnostic work-up by Metabolic Specialist if older than 14 days.

**In-Range**

**Out-of-Range**

Not consistent with Tyrosinemia.  
 No further follow-up indicated.

Appointment with metabolic specialist for diagnostic testing (testing must be coordinated by the specialist or newborn screening program):

1. Plasma Amino Acids – (increased tyrosine)
2. Urine Organic Acids – (succinylacetone)
3. Other lab and/or DNA may be indicated

**Table 1. In-range Tyrosine Screen Results<sup>1</sup>:**

Primary Analyte:  
 Tyrosine < 400  $\mu\text{mol/L}$

<sup>1</sup>These values are utilized for newborns less than 60 days old.

**Diagnostic Testing Inconclusive:** Monitoring and medical management as advised by metabolic specialist.

**Diagnostic Testing Consistent with:** Refer to metabolic specialist for medical management.

**Diagnostic Testing Within Normal Limits:** Not consistent with Tyrosinemia. No further follow-up indicated.

**From the time the screen is reported to the provider, the Metabolic Nurse Specialist will monitor follow-up by:**

1. Confirming the provider contacts family before COB.
2. Facilitating clinical evaluation by a metabolic specialist.
3. Facilitating and confirming infant presents for a diagnostic workup with a metabolic specialist within 48 hours.
4. Coordinating collection and processing of diagnostic tests and communicating test results to provider and short-term follow-up program (STFU).
5. Communicating with STFU if the above timelines are not met.