

ACNE, ROSACEA, AND RELATED DISORDERS (INCLUDING HIDRADENITIS SUPPURATIVA)

## TIMING OF LABORATORY ABNORMALITIES ASSOCIATED WITH ISOTRETINOIN THERAPY FOR ACNE VULGARIS

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**Background:** The optimal frequency of laboratory monitoring during isotretinoin treatment remains controversial.

**Objective:** Collect data on frequency and timing of laboratory abnormalities (CBC, AST, ALT, lipids) in relation to initiation of isotretinoin therapy to provide an understanding of risk and timing of common laboratory abnormalities to support the development of better laboratory monitoring guidelines for isotretinoin therapy

**Materials and Methods:** We analyzed laboratory data from 1,302 patients (age 12-64 years; 55.2% women) treated with isotretinoin (1,552 treatment courses) for acne vulgaris at Boston Medical Center in 2004-2017. The frequency, severity, and time course of abnormalities on blood counts, aspartate aminotransferase (AST), alanine aminotransferase (ALT), and lipid panels were examined.

**Results:** At baseline, the prevalence of abnormal results was 15.4% for triglyceride (n=65/423), 14.3% for total cholesterol (n=28/196), 18.5% for hemoglobin (n=34/184), and <6% for AST, ALT, and other tests. Among patients with normal baseline results, new-onset abnormalities were found during treatment in 28.0% of patients for triglycerides (n=61/218), 20.5% for total cholesterol (n=18/88), and 10.5% for AST (n=17/162). Only one third of the abnormalities occurred within the first 2 months of treatment initiation. For patients with normal labs after two months of treatment, the frequency of moderate or severe abnormalities requiring treatment modification was 1.01% for triglycerides (n=2/199), <0.63% for other tests, and occurred after month five to seven. Among patients with abnormal baseline results, more than 50% had persistent abnormalities.

**Conclusions:** Abnormalities significant enough to impact patient health are rare among patients whose labs remain normal for the first two months. Based on the incidence and timing of abnormalities that require treatment modification, we do not recommend regular monitoring of triglycerides and liver enzymes beyond baseline and two monthly follow-ups.



Patients with abnormal baselines may require more monitoring.

