Tear breakup time (TBUT)

Category(ies): Cornea
Contributor: Jesse Vislisel, MD
Photographer: Cindy Montague, CRA

Tear breakup time (TBUT) is a clinical test used to assess for evaporative dry eye disease. To measure TBUT, fluorescein is instilled into the patient’s tear film and the patient is asked not to blink while the tear film is observed under a broad beam of cobalt blue illumination. The TBUT is recorded as the number of seconds that elapse between the last blink and the appearance of the first dry spot in the tear film, as seen in this progression of these slit lamps photos over time. A TBUT under 10 seconds is considered abnormal. This patient also has punctate epithelial erosions (PEE) that stain positively with fluorescein, another sign of ocular surface dryness.