

**High-tech parameters for the evaluation of signs and symptoms of dry eye disease: identification of clinical cut-offs and agreement with low-tech tests**

**Supplementary Materials**

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	<b>T-BUT</b>	<b>NIKBUT-I</b>	<b>p-value</b>
Baseline (N=144)	4.4 ( $\pm$ 1.6)	5.5 ( $\pm$ 4.2)	0.004
15 days (N=144)	5.5 ( $\pm$ 2.4)	6.0 ( $\pm$ 3.8)	0.137
45 days (N=145)	6.3 ( $\pm$ 2.6)	6.7 ( $\pm$ 3.6)	0.289

Multiple regression analysis**Model #1: multiple regression analysis, stepwise method, total population, Baseline ODSI, N=118**Dependent variable: Baseline ODSIIndependent variables: Baseline Tbut, Nikbut a, Nikbut i, Nikbut class, hyperemia, meniscus, Efron, Schirmer, Conjunctivo calasis, meibography, corneal stainingVariables retained in the model:

- Baseline Tbut, coeff. -2.7, SE 0.8, **p<0.001**
- Baseline Schirmer test, coeff. 0.7, SE 0.2, **p<0.001**

**Model #2: multiple regression analysis, stepwise method, total population, 15-days ODSI, N=118**Dependent variable: 15 days BaselineIndependent variables: 15 days Tbut, Nikbut a, Nikbut i, Nikbut class, hyperemia, meniscus, Efron, Schirmer, Conjunctivo calasis, meibography, corneal stainingVariables retained in the model:

- 15 days Tbut, coeff. -0.7, SE 0.3, **p=0.033**

**Model #3: multiple regression analysis, stepwise method, total population, 45-days ODSI, N=118**

Dependent variable: 45 days Baseline

Independent variables: 45 days Tbut, Nikbut a, Nikbut i, Nikbut class, hyperemia, meniscus, Efron, Schirmer, Conjunctivo calasis, meibography, corneal staining

Variables retained in the model:

- 45-days Nikbut i, coeff. -0.5, SE 0.2, **p=0.017**
- 45-days Schirmer test, coeff. -0.3, SE 0.1, **p=0.014**

**Model #4: multiple regression analysis, stepwise method, patients with allergy, Baseline ODSI, N=34**

Dependent variable: Baseline OSDI

Independent variables: Baseline Tbut, Nikbut a, Nikbut i, Nikbut class, hyperemia, meniscus, Efron, Schirmer, Conjunctivo calasis, meibography, corneal staining

Variables retained in the model:

- Baseline Schirmer test, coeff. 0.7, SE 0.3, **p=0.016**

**Model #5: multiple regression analysis, stepwise method, patients with allergy, 15 days ODSI, N=34**

Dependent variable: 15 days OSDI

Independent variables: 15 days Tbut, Nikbut a, Nikbut i, Nikbut class, hyperemia, meniscus, Efron, Schirmer, Conjunctivo calasis, meibography, corneal staining

Variables retained in the model:

- no variables

**Model #6: multiple regression analysis, stepwise method, patients with allergy, 45 days ODSI, N=34**

Dependent variable: 45 days OSDI

Independent variables: 45 days Tbut, Nikbut a, Nikbut i, Nikbut class, hyperemia, meniscus, Efron, Schirmer, Conjunctivo calasis, meibography, corneal staining

Variables retained in the model:

- no variables

**Model #7: multiple regression analysis, stepwise method, patients with blefaritis,**

Baseline OSDI, N=28

Dependent variable: Baseline OSDI

Independent variables: Baseline Tbut, Nikbut a, Nikbut i, Nikbut class, hyperemia, meniscus, Efron, Schirmer, Conjunctivo calasis, meibography, corneal staining

Variables retained in the model:

- Baseline corneal staining, coeff. -9.0, SE 3.8, **p=0.027**

Model #8: multiple regression analysis, stepwise method, patients with blefaritis, 15-days OSDI, N=28

Dependent variable: 15 days OSDI

Independent variables: 15 days Tbut, Nikbut a, Nikbut i, Nikbut class, hyperemia, meniscus, Efron, Schirmer, Conjunctivo calasis, meibography, corneal staining

Variables retained in the model:

- 15 days EFRON, coeff. -6.8, SE 3.1, **p=0.038**

Model #9: multiple regression analysis, stepwise method, patients with blefaritis, 45 days OSDI, N=28

Dependent variable: 45 days OSDI

Independent variables: 45 days Tbut, Nikbut a, Nikbut i, Nikbut class, hyperemia, meniscus, Efron, Schirmer, Conjunctivo calasis, meibography, corneal staining

Variables retained in the model:

45-days meibography, coeff. -7.2, SE 3.2, **p=0.035**

Model #10: multiple regression analysis, stepwise method, patients with post cataract surgery, Baseline OSDI, N=49

Dependent variable: Baseline OSDI

Independent variables: Baseline Tbut, Nikbut a, Nikbut i, Nikbut class, hyperemia, meniscus, Efron, Schirmer, Conjunctivo calasis, meibography, corneal staining

Variables retained in the model:

- Baseline Schirmer, coeff. -1.2, SE 0.4, **p=0.005**

Model #11: multiple regression analysis, stepwise method, patients with post cataract, 15 days OSDI, N=49

Dependent variable: 15 days OSDI

Independent variables: 15 days Tbut, Nikbut a, Nikbut i, Nikbut class, hyperemia, meniscus, Efron,

Schirmer, Conjunctivo calasis, meibography, corneal staining

Variables retained in the model:

- 15-days Tbut, coeff. -0.7, SE 0.3, **p=0.030**

Model #12: multiple regression analysis, stepwise method, patients with post cataract, 45 days OSDI, N=49

Dependent variable: 45 days OSDI

Independent variables: 45 days Tbut, Nikbut a, Nikbut i, Nikbut class, hyperemia, meniscus, Efron, Schirmer, Conjunctivo calasis, meibography, corneal staining

Variables retained in the model:

45-days Nikbut a, coeff. -0.7, SE 0.2, **p=0.003**

Variation of NIKBUT i, NIKBUT a and TBUT compared with baseline

Delta (NIKBUT-I visit 3 – NIKBUT-I baseline), patients ameliorated by 7+ or not = 0.8 ( $\pm 5.6$ )

Delta (NIKBUT-a visit 3 – NIKBUT-a baseline), patients ameliorated by 7+ or not = -0.3 ( $\pm 6.0$ )

Comparison between delta NIKBUT-I and delta NIKBUT-a, paired Student's test, p=0.097

Delta (NIKBUT-I visit 3 – NIKBUT-I baseline), patients ameliorated by 7+ or not = 0.8 ( $\pm 5.6$ )

Delta (T-BUT visit 3 – T-BUT baseline), patients ameliorated by 7+ or not = 0.5 ( $\pm 3.3$ )

Comparison between delta NIKBUT-I and delta T-BUT, paired Student's test, p=0.619

Delta (NIKBUT-a visit 3 – NIKBUT-a baseline), patients ameliorated by 7+ or not = -0.3 ( $\pm 6.0$ )

Delta (T-BUT visit 3 – T-BUT baseline), patients ameliorated by 7+ or not = 0.5 ( $\pm 3.3$ )

Comparison between delta NIKBUT-a and delta T-BUT, paired Student's test, p=0.338