Title: Comparison of exhaled nitric oxide values measured by two offline methods or NO breath

Dr. Ito 9036 Jun moisture@juntendo.ac.jp MD 1,2, Dr. Tsubrai 9037 Takahiro t-tsuburai@sagamihara-hosp.gr.jp MD 1, Dr. Atsuta 9038 Ryo atsuta@juntendo.ac.jp MD 2, Dr. Watai 9039 Kentaro k-watai@sagamihara-hosp.gr.jp MD 1, Dr. Minami 9040 Takashi t-minami@sagamihara-hosp.gr.jp MD 1, Dr. Hayashi 9050 Hiroaki h-hayashi@sagamihara-hosp.gr.jp MD 1, Dr. Sekiya 9060 Kiyoshi k-sekiya@sagamihara-hosp.gr.jp MD 1, Dr. Oshikata 9067 Chiyako c-oshikata@sagamihara-hosp.gr.jp MD 1, Dr. Tsurikizawa 9068 Naomi n-tsurikizawa@sagamihara-hosp.gr.jp MD 1, Dr. Harada 9070 Norihiro nor@juntendo.ac. MD 2, Dr. Mori 9071 Akio a-morii@sagamihara-hosp.gr.jp MD 1, Dr. Hasegawa 9073 Maki m-hasegawa@sagamihara-hosp-gr.jp MD 1, Dr. Taniguchi 9075 Masami m-taniguchi@sagamihara-hosp.gr.jp MD 1, Prof. Takahashi 9081 Kazuhisa kztakaha@juntendo.ac.jp MD 2 and Dr. Akiyama 9117 Kazuo k-akiyama@sagamihara-hosp-gr.jp MD 1. 1 Clinical Research Center for Allergy and Rheumatology, National Hospital Organization, Sagamihara National Hospital, Sagamihara, Japan, 252-0392 and 2 Department of Respiratory Medicine, Juntendo University School of Medicine, Tokyo, Japan, 252-0392.

Body: BACKGROUND The fraction of exhaled nitric oxide (FeNO) is a useful marker of eosinophilic airway inflammation in asthmatics. The FeNO measurement with two offline methods and NO breath may be more affordable, small number of studies have examining the differences in FeNO values measured with various methods in adult Japanese. METHODS The study population comprised 44 patients (male/female: 14/30; mean age: 51.8±15.0 years; bronchial asthma/other respiratory disorders: 27/17) at our hospital. FeNO value were measured by two offline methods (Sievers and CEIS), NO breath. RESULTS FeNO NO breath value were significantly correlated with those FeNO Sievers (r=0.87) and FeNO CEIS (r=0.89). FeNO NO breath values were nearly equal FeNO NO breath (FeNO NO breath=1.1 x FeNO Sievers), however these values were low compared with FeNO CEIS (FeNO NO breath=0.75 x FeNO CEIS)(p=0.02). CONCLUSION Difference exist in the values of FeNO measured by various methods: conversion equations are needed to compare the FeNO values among these three methods.