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Title: Asthma control test administered by web-based text messaging (short message service-SMS): Is it comparable with paper form?

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Body: The Turkish version of Asthma Control Test (ACT) has been validated to determine asthma control. The use of web-based ACT via text messaging (Short Message Service-SMS) might be beneficial in the evaluation of control level of asthmatic patients without outpatient clinic visits. We aimed to compare the paper form of Turkish version of ACT and web-based ACT via text messaging and to evaluate their

correlations with The Global Initiative for Asthma (GINA) based-physician's assessment of asthma control. In this multicenter prospective observational study, 431 asthma patients were randomized into two groups either to fill in the paper form (n:220) or to reply text messages directed from a website to a mobile phone(n:211). Both ACTs (paper and text message) were completed by the patients at first admission, after 10 ± 2 days and 5 ± 1 weeks and asthma control was also assessed by the physicians according to GINA criteria at the outpatients clinics. The reliability of the Turkish version of ACT was found 0.84 and 0.82 (Cronbach's alpha) and test-retest reliability was 0.85 and 0.80 in the paper and the text messaging groups, respectively. In both groups, ACTs well correlated with the physician's assessment at admission ($r=0.70, p<0.001$ and $r=0.60, p<0.001$ for paper and text messaging groups, respectively). Both self-administered paper and web-based ACT via text messaging were closely associated with physician's assessment of asthma control. Our study suggest that ACT may reliably be administered through text messaging and provides evaluating of asthma control on a mobile phone but it should also be further tested for using out of outpatient clinic.