Background
Interventions for preoperative smoking cessation can reduce perioperative complications and increase abstinence. It is not routinely provided due to various barriers such as a lack of time or training. In the general population, computer-based smoking cessation interventions have been utilized, but in the surgical population, evidence is limited on the use of patient e-learning programs. The objective of this study was to develop and implement a patient e-learning program as part of a preoperative smoking cessation program in the surgical population.

Methods
REB approval and informed consent was obtained from all participants. In a prospective multicenter observational study, 459 adult patients undergoing elective, non-cardiac surgery were recruited in the preadmission clinic. The preoperative smoking cessation program consisted of a patient e-learning module, brief advice from a research assistant, referral to a tobacco quit-line, pamphlet, and/or pharmacotherapy. The patient e-learning program explained the importance of smoking cessation before surgery, benefits of quitting smoking, how to quit smoking and how to cope with quitting. Smoking status was assessed on the day of surgery, 1 month, 3 months and 6 months post-surgery. Self-reported abstinence was biochemically confirmed with urinary cotinine. The primary outcome was the 7-day point prevalence abstinence rate 6 months after surgery. Secondary outcomes included the 7-day point prevalence abstinence on the day of surgery, 1 month and 3 months after surgery. Multivariable logistic regression was used to identify independent variables related to abstinence.

Results
The 7-day point prevalence abstinence at 6 months was 22%. On the day of surgery, 1 and 3 months post-surgery, the 7-day point prevalence abstinence was 28%, 25% and 22% respectively. The variables predicting abstinence at 6 months were body mass index (OR 0.98; 95% CI: 0.93-0.99; P = 0.034), average amount of money spent on cigarettes (OR 0.69; 95% CI: 0.58-0.82; P < 0.0001), presence of other smokers in the household (OR 0.46; 95% CI: 0.25-0.84; P < 0.012), use of pharmacotherapy (OR 6.8; 95% CI: 3.5-13.2; P = 0.0001) and contact with Smokers' Helpline (OR 4.03; 95% CI: 2.3-7.0; P < 0.0001).

Conclusion
Intervention for preoperative smoking cessation utilizing a patient e-learning program led to a high rate of abstinence 1, 3, and 6 months after elective surgery. In overburdened preadmission clinics during routine clinical practice, the patient e-learning program may be valuable in overcoming barriers that hinder the provision of smoking cessation interventions.

References:
Overall Quit Rate – Self-Reported vs. Cotinine Tested