In this issue of the journal Hoogwegt et al. describes the results of smoking cessation on quality of life (QoL) after vascular surgery. This is an ambition they should be applauded for; smoking cessation is most often recommended but seldom evaluated. In their cohort of patients they report QoL five years after surgery related to patients smoking status at three years after surgery. In summary they found that smoking cessation did not impair QoL among patients undergoing vascular surgery, (in contrast to what many smokers state as an argument to continue smoking). They also found that current smokers have worse QoL than the combined group of ex-smokers and never smokers. This is important since they all have advanced vascular disease, but despite this it is possible to improve QoL among smokers.

The authors did not find any QoL-improvement in those defined as quitters (those who stopped smoking between baseline and three years after surgery) when compared to current smokers. So is this a finding to be disappointed about? I would say maybe not, the presented data gives a more optimistic picture. Although there was no statistically significant improvement, all Odds ratios from multivariate analysis were less than 1.0 — indicating that there might be insufficient power to prove such an effect. The number of quitters (n = 55, 14%) tell us two things, a type II error can not be excluded and also — the smoking cessation therapy can be improved. There is no similar study after vascular surgery but previous results from Mulder et al. showed that ex-smokers had better QoL irrespective of time since they quit.¹

To Study the Effects of Smoking and Smoking Cessation

When studying tobacco exposure the exposure needs to be properly categorised. At least data have to allow categorisation as active smoker, former smoker and never smoked. When the term former smoker is used it should be used with a definition. There is no universal definition on what a former smoker is but looking at perioperative risks, an interval of 4–8 weeks of abstinence is probably sufficient.² Using longer periods of abstinence (3–6 months) for a definition of a former smoker will increase likelihood of underestimating the risks with smoking since some of those categorised as smokers will in fact be non-smokers at the time of surgery. For longer follow-up periods, repeat smoking status should be assessed since smoking unfortunately sometimes is a dynamic variable. Smoking cessation is also recommended to be reported as prolonged abstinence which helps sorting out some definition problems.³

Prolonged (or continuous) abstinence simply means that
an individual did not smoke at all between baseline and the point of follow-up. Also, as Hoogwegt et al. point out, the dose of smoking may sometimes be important. When looking at the development of vascular disease over time, such as asymptomatic carotid stenosis or abdominal aortic aneurysms, it would help to collect the dose of exposure to estimate the contribution of smoking. Pack-years is the simplest and most common tool for estimating dose. One pack-year is defined as 20 cigarettes smoked per day for one year ((number of cigarettes smoked per day × number of years smoked)/20).

Do We Need More Information or More Action?

Although smoking is a known predictor of poor prognosis for most vascular diseases the effect of smoking cessation is poorly studied. As the authors correctly point out, the knowledge of QoL in relation to smoking cessation is even poorer. When designing trials of medically controlled arms for intermittent claudication for example, smoking cessation should be an integral part of the intervention and the protocols must be designed to evaluate the effect of abstinence from smoking. Also the effect of smoking cessation on progression of asymptomatic carotid stenosis and small abdominal aortic aneurysms remains to be elucidated. Without evidence it is difficult to inform patients and to adequately allocate resources. Maybe vascular surgeons and interventionalists cannot only sharpen their knives and improve stents. They also have to improve the evidence-based care of smoking addiction. Written protocols and nurses and physicians professionally trained will increase smoking cessation standards substantially. Smoking cessation is evidence-based medicine and not a lottery. Although we all remember those patients that fail to succeed in smoking cessation, this must not lead to poor treatment of all those who can succeed.

References