INVITED COMMENTARY

"Prediction is Difficult, Especially if it is About The Future" — Old Danish Proverb

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The increasing number of fit and frail older persons and diminishing invasiveness of treatment methods force us almost daily to face difficult ethical decisions on whether or not to treat a patient and a condition, even if it were technically possible. The Finnish archiater (national honorary title awarded by the president to one physician at a time) Risto Pelkonen has stated that "prioritisation is too difficult a decision to be left to politicians." We doctors must make these decisions daily, patient by patient, but the tools to support our decisions are often insufficient. When obtaining "informed" consent we protect ourselves against legal consequences in case of a suboptimal outcome and probably scare some patients by stating everything that might go wrong. How informed these consents truly are may be questioned. The most likely outcomes and general outcomes for larger groups of patients may be documented, but it is impossible to estimate what will happen in a rare situation for a specific patient. In order to improve the level of science around these questions, systematic assessments of the individual risks are most welcome. It would be valuable to know how the general frailty of a patient should be taken into account.

Frailty is quite obviously a more important risk factor than age. There is no optimal measure of frailty or its consequences on vascular surgical patients, although many have been suggested and evaluated (51 in a recent systematic review).[1] The Groningen Frailty Indicator (GFI) has been tested in Dutch, Romanian, Brazil, German, and Chinese settings,[1,2] and has been shown to be able to predict delirium specifically in vascular surgical patients.[3] GFI includes 15 questions in four domains, with yes/no answers and the questions seem simple enough to be used at a larger scale, for example in registry data. However, the questions are specific and therefore the GFI cannot be used in retrospective analysis of cohorts. With four or more points in the questionnaire, the patient may be defined as frail, giving a dichotomous scale.

Visser *et al.* have conducted a prospective study of 825 vascular surgery patients electively operated on and evaluated with the GFI.[4] From a consecutive cohort of 1 201 patients, younger patients (< 60 years) and patients undergoing access surgery, percutaneous angioplasties, or minor amputations were excluded. They found that GFI has a strong association with surgical complications, 30 day mortality, and the likelihood of being at least temporarily discharged to a care facility after vascular surgery. Maybe not unsurprisingly, pre-operative mobility, nutrition, cognition, and psychological impairment were the most important elements predicting negative outcome and determining the presence and degree of frailty. The non-frail patients were slightly younger, more often male, had a lower Charlson Comorbidity Index, American Society of Anaesthesiologists' class, less diabetes, chronic obstructive pulmonary disease, and cerebrovascular disease. Frail patients more often underwent amputation surgery, but the proportion of less invasive endovascular procedures was higher in the non-frail patient group.

Using a frailty index in individual decision making may be hazardous but should probably be included when the results of different centres are compared. By operating only on non-frail patients, a unit may be able to show excellent results, but another unit with worse results but with more patients truly in need of effective invasive treatment, may be doing more good for society.

So far, the GFI has not been shown to be the best frailty indicator and future studies might still consider comparing some of the other ones available. The Edmonton Frail Scale and Addenbrooke's frailty score seem plausible for vascular surgical patients.[5–7] It seems that the one that will be tested most has an opportunity to become standard, but we still need to know our tools better before we select only one indicator. In the meantime our best tool seems to be a consensus made by different experts, also called a multidisciplinary decision, hopefully supported by a frailty indicator.

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