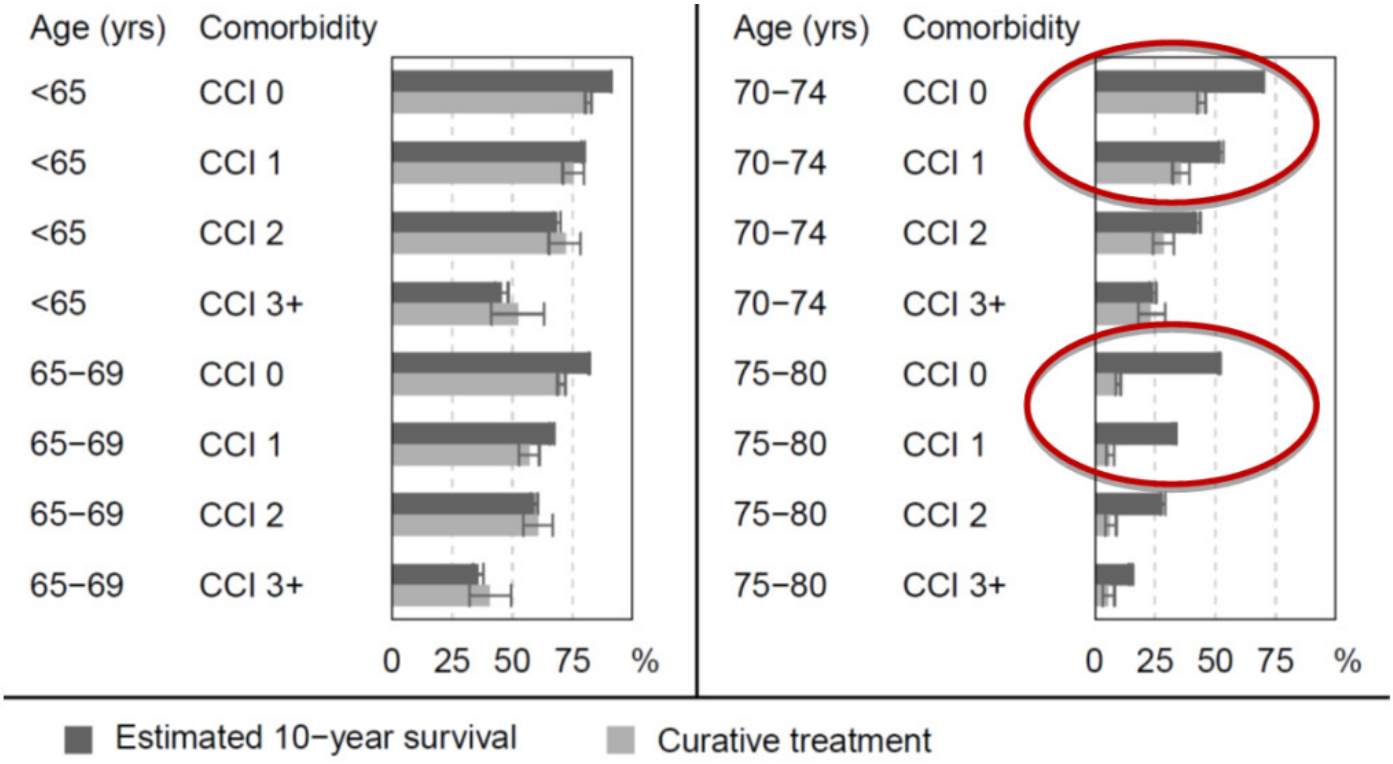
Undertreatment of men in their seventies with aggressive prostate cancer

Prostate cancer may be cured by either surgery or radiation treatment, but these “radical treatments” often cause permanent side effects that negatively affect the quality of life. Small prostate cancers usually grow very slowly, so more elderly men die *with* than *of* their prostate cancer, even without treatment. There is, however, also an aggressive type of prostate cancer called ”high risk, non-metastatic prostate cancer”. This type may be lethal within five to ten years, if not successfully treated. Experts agree that men with a high risk, non-metastatic prostate cancer should be recommended surgery or radiation treatment – unless they are expected to die from old age or some other illness within five to ten years.

Our clinical experiences made us suspect that many elderly men with a high risk, non-metastatic prostate cancer do not receive radical treatment, despite a long life expectancy. We therefore wanted to find answers to these questions:

1) How is a man’s life expectancy affected by age and health issues?

2) How well is the use of radical treatment of high risk, non-metastatic prostate cancer adapted to the patients' life expectancy?



We used the National Prostate Cancer Register, which captures 98% of the Swedish prostate cancer cases, and identified 19,190 men diagnosed with high risk, non-metastatic prostate cancer before 80 years of age. We also selected 95,948 men of similar age without prostate cancer in the population register. The men's medical problems were obtained from heath care registers and categorised according to the Charlson Comorbidity Index (CCI). A CCI of 0 means no medical problems. CCI 1 means mild, CCI 2 moderate, and CCI 3 severe medical problems.

We grouped the men according to their age and their medical problems. Within these groups, we compared the proportion of men with high risk, non-metastatic prostate cancer who received radical treatment with the proportion of men *without* prostate cancer who were still alive after ten years (a measure of the life expectancy).

The figure shows that the length of the paired bars, one of which represents the proportion receiving radical treatment and the other the life expectancy, were similar within groups of men younger than 70 years. This means that the longer the life expectancy, the more likely the men were to receive radical treatment – just as it should be. For otherwise healthy men in their seventies, however, the use of radical treatment did not match their long life expectancy (red circles). For example, only 10% of otherwise healthy men aged 75-80 years received radical treatment, despite a 52% 10-year life expectancy – compared with half of the men younger than 70 years with similar life expectancy. The use of radical treatment increased over time, but for otherwise healthy men in their seventies a threefold difference between counties remained in 2009 to 2012.

Most otherwise healthy Swedish men in their seventies with a high risk, non-metastatic prostate cancer will live for at least another 10 years if the are cured from their cancer. Despite this, few of them are treated with surgery or radiation treatment. Probably, many doctors wrongly believe that otherwise healthy men in their seventies with a high risk, non-metastatic prostate cancer are likely to die from other causes, before their cancer becomes life threatening. Our study suggests that the process for making treatment decisions for men with prostate cancer needs be improved. The decision to treat or not to treat should rely on the patient's general health and life expectancy, not on his age.

***Ola Bratt**, Associate Professor*
Urological Cancer Research Unit
Department of Translational Medicine, Lund University
Sweden

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Bratt O, Folkvaljon Y, Hjälm Eriksson M, Akre O, Carlsson S, Drevin L, Franck Lissbrant I, Makarov D, Loeb S, Stattin P.

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