Appendix 4 Short summary of results of previous regional studies of epidemiology of CHF

Most comprehensive epidemiological studies on CHF were conducted in Western Europe and the United States. It has been estimated that the prevalence in these countries is 1-2%.

However, interpretation and comparisons of these results are difficult due to significant differences in their design and the fact that each of these studies was based on different guidelines.

The largest studies conducted in Western Europe include the Rotterdam Heart Study in the Netherlands and the EPICA Study in Portugal [1,2]. In 1989-1993, the Rotterdam study included 5500 individuals above 55 years of age, a representative population sample. The prevalence of heart failure according to the 2001 ESC guidelines was 1% among those 55-64 years of age, 3% among those 65-74 years of age, 7% among those 75-84 years of age, and more than 10% among those above 85 years of age. Participants were initially administered a questionnaire at their homes, and then invited to a study centre for echocardiography if reported symptoms of heart failure [1].

In Portugal, the EPICA study conducted in 1998 included 5434 patients who presented to a primary care physician. Those taking medications for heart failure and individuals with metabolic diseases were excluded. Symptoms and signs of heart failure were scored, and those with a score>3 underwent imaging (chest X-ray, ECG, echocardiography) and laboratory testing; NT-proBNP levels were not measured. The overall prevalence of heart failure was 4.36% and increased with age, up to 16.14% in those above 80 years of age. This study distinguished between heart failure with reduced or preserved ejection fraction, with the prevalence of 1.3% and 1.7%, respectively [2].

In 1997-2000, an analysis was performed that included 2042 individuals above 45 years of age in the Olmsted county, Minnesota. The study protocol included Doppler echocardiography and a retrospective analysis of the available medical records. The diagnosis of heart failure was made based on the modified Framingham criteria, and the prevalence was 2.2%.

A study protocol in accordance with the ESC guidelines was used in a Danish study conducted in 1998-1999 in patients above 40 years of age who presented to a hospital. Study procedures included NT-proBNP levels, echocardiography, and history and physical examination. The diagnosis of heart failure was made in 7.2% of patients [3].

In the early 1990s, a study conducted in Helsinki included a randomly selected sample of elderly subjects, with echocardiography performed in all participants (501 individuals aged 75-86 years). A guideline-based diagnosis of heart failure was made in one in every 12 subjects (8.1%) [4].

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