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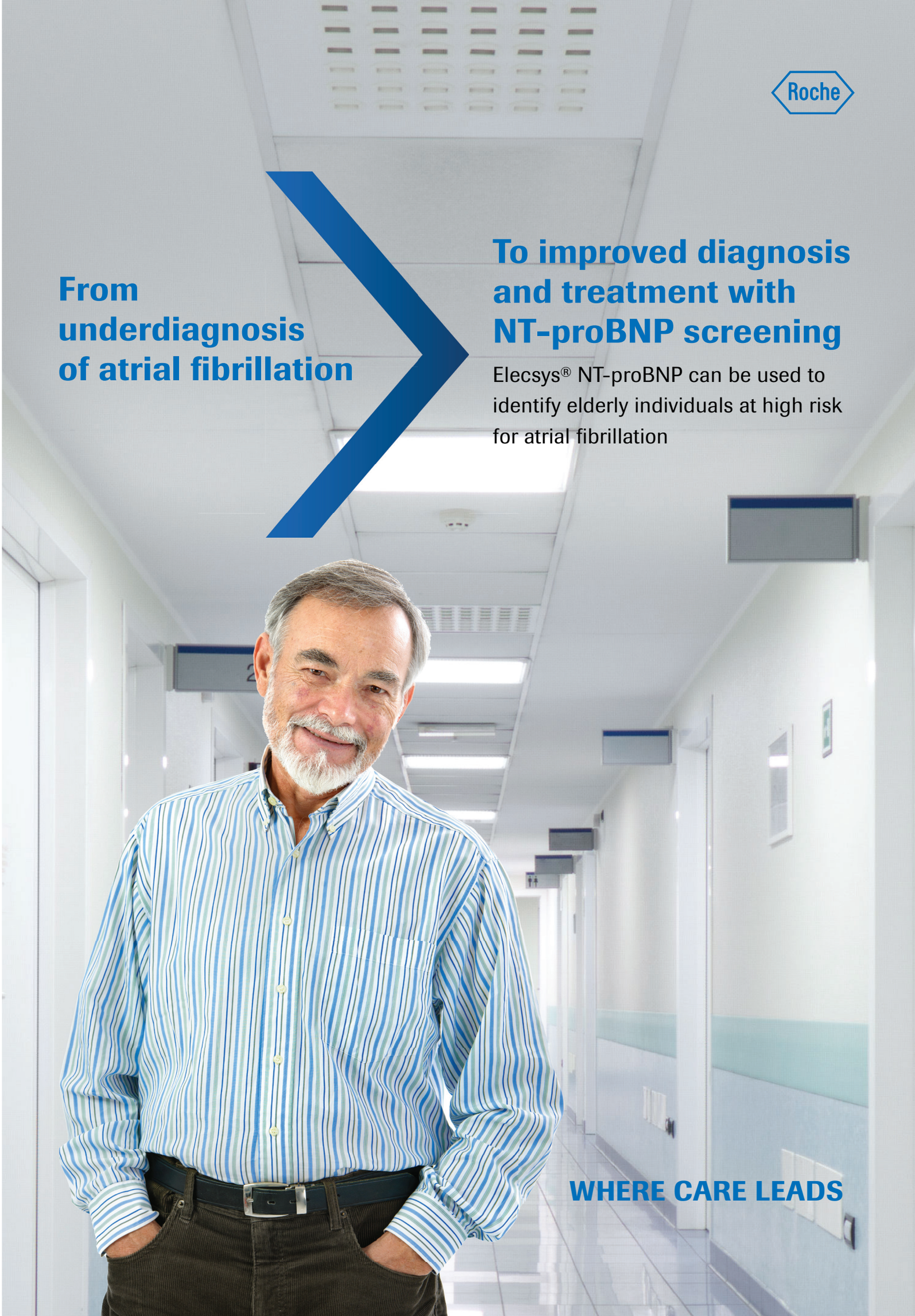

Roche
From underdiagnosis of atrial fibrillation
To improved diagnosis and treatment with NT-proBNP screening
Elecsys® NT-proBNP can be used to identify elderly individuals at high risk for atrial fibrillation
WHERE CARE LEADS

Opportunistic and systematic screening are valuable strategies for detecting previously undiagnosed atrial fibrillation

Early detection of atrial fibrillation is vital for reducing the risk of associated health implications, such as atrial fibrillation-related stroke.[1-3] Early treatment with oral anticoagulation (OAC) therapy reduces the risk of ischemic stroke by two thirds in patients with atrial fibrillation.[3-5]

The ESC guidelines recognizes that atrial fibrillation screening prevents/reduces atrial fibrillation-related symptoms, morbidity, hospitalization and mortality, and also prevents stroke and systemic embolism.[2]

2020 European Society of Cardiology (ESC) guidelines recommend screening for atrial fibrillation in the elderly[2]

	Class*	Level†
Opportunistic screening of atrial fibrillation by pulse taking or ECG rhythm strip is recommended in patients ≥ 65 years of age	I	B
Systematic ECG screening should be considered to detect atrial fibrillation in individuals aged ≥ 75 years, or those at high risk of stroke	II	B

Opportunistic and systematic screening are proven to increase the known prevalence of atrial fibrillation[1-3,6,7]

	No screening	Opportunistic screening	Systematic screening	Systematic screening with NT-proBNP + ECG
Absolute change in known AF prevalence	0%	0.5[1]-1.6%[3]	1.6[3]-3.0%	2.4%[7]
Relative change in known AF prevalence	Baseline	Increase of 19-22% over baseline	Increase of 23-32% over baseline	Increase of 30% over baseline

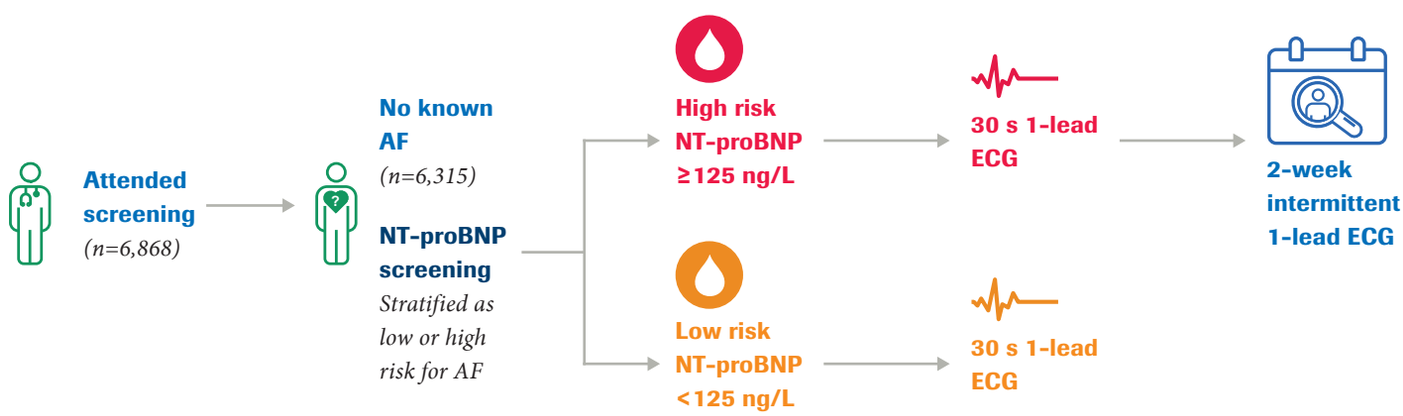
*Class of recommendation; † Level of evidence.
AF: atrial fibrillation.
NT-proBNP: N-terminal pro-brain natriuretic peptide

Opportunistic screening: Organized program systematically performed as part of a clinical evaluation for some other health condition[8]
Systematic screening: Continuously conducted screening program[8]

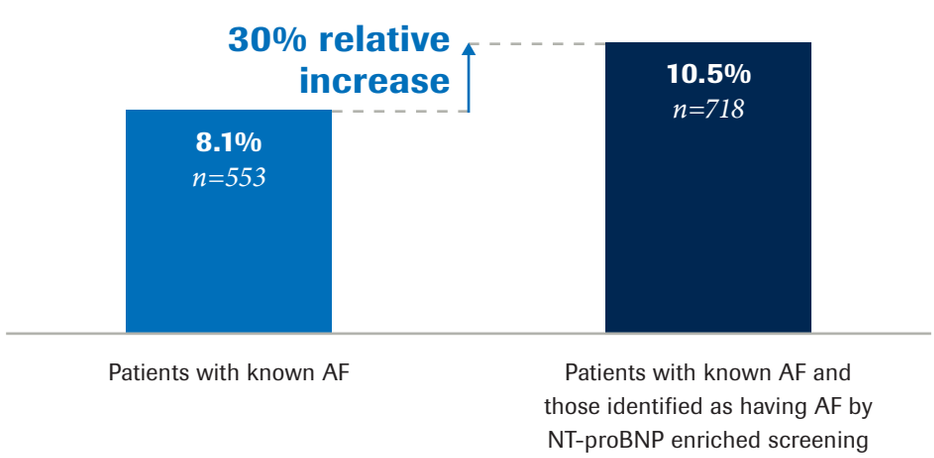
Using NT-proBNP enriched screening increases the known prevalence of atrial fibrillation in an elderly population

NT-proBNP is significantly elevated in individuals with atrial fibrillation and can therefore be used to identify individuals at high or low risk for atrial fibrillation.[9-12]

STROKESTOP II is a population-based trial aimed to study the prevalence of unknown atrial fibrillation in an elderly (75–76 years old) population using NT-proBNP and handheld ECG recordings in a stepwise screening procedure[7]



NT-proBNP enriched screening increased the prevalence of atrial fibrillation by 30% and identified individuals who would have otherwise gone undiagnosed and untreated (STROKESTOP II study)[7]



AF: atrial fibrillation
NT-proBNP: N-terminal pro-brain natriuretic peptide

NT-proBNP enriched screening may reduce the incidence of ischemic stroke, systemic embolism or mortality

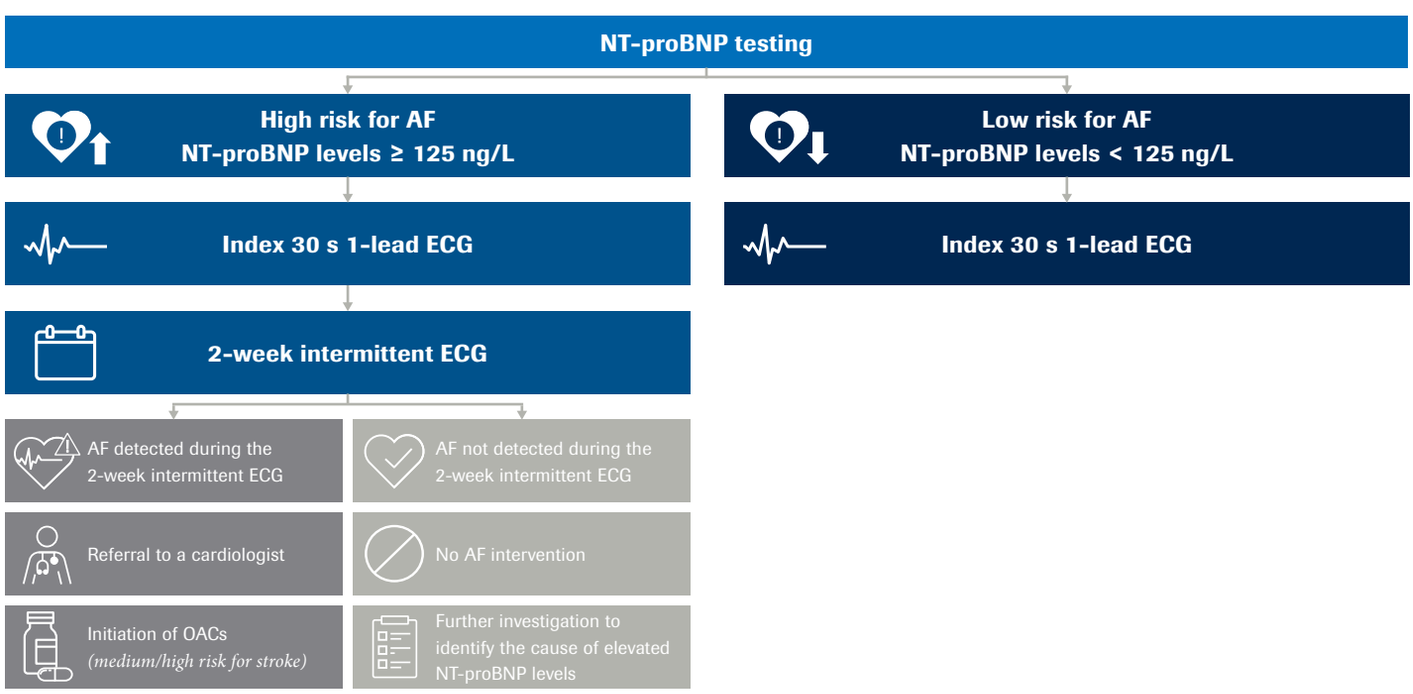
NT-proBNP enriched screening facilitates the early initiation of OAC therapy in patients with atrial fibrillation who would have otherwise gone undiagnosed (STROKESTOP II study)[7]

6,315 individuals screened using NT-proBNP enriched screening

165 individuals identified by NT-proBNP enriched screening, who would have gone undiagnosed

156 (95%) individuals initiated on OAC therapy, who would have gone untreated

NT-proBNP enriched screening may therefore reduce the incidence of ischemic stroke, systemic embolism, and atrial fibrillation-related death, which may reduce future atrial fibrillation related stroke and hospitalization costs[5,7]



NT-proBNP enriched screening reduces the use of 2-week intermittent ECG

Short ECG only detects paroxysmal atrial fibrillation if an episode occurs during the ECG recording, therefore some cases of atrial fibrillation can be missed; NT-proBNP remains elevated in patients with paroxysmal atrial fibrillation.[13]

NT-proBNP enriched screening detects a similar proportion of atrial fibrillation as systematic screening with 2-week intermittent ECG, while reducing the use of 2-week intermittent ECG by 41%[6,7]. This can potentially reduce the related ECG costs in the same proportion.