Duke Clinical Research Institute

HFrEF: Ivabradine: Why, who, when and how?

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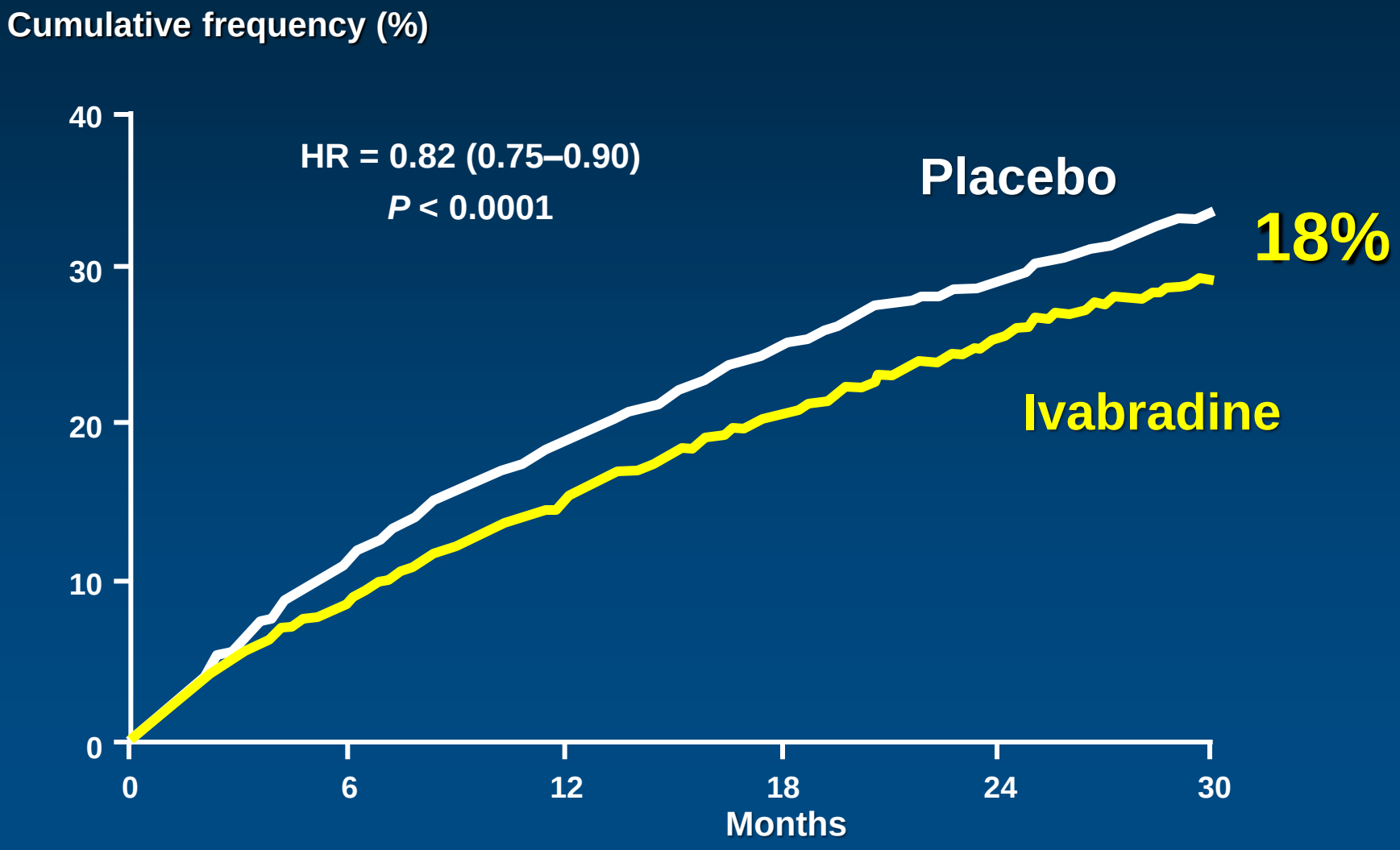
Why?

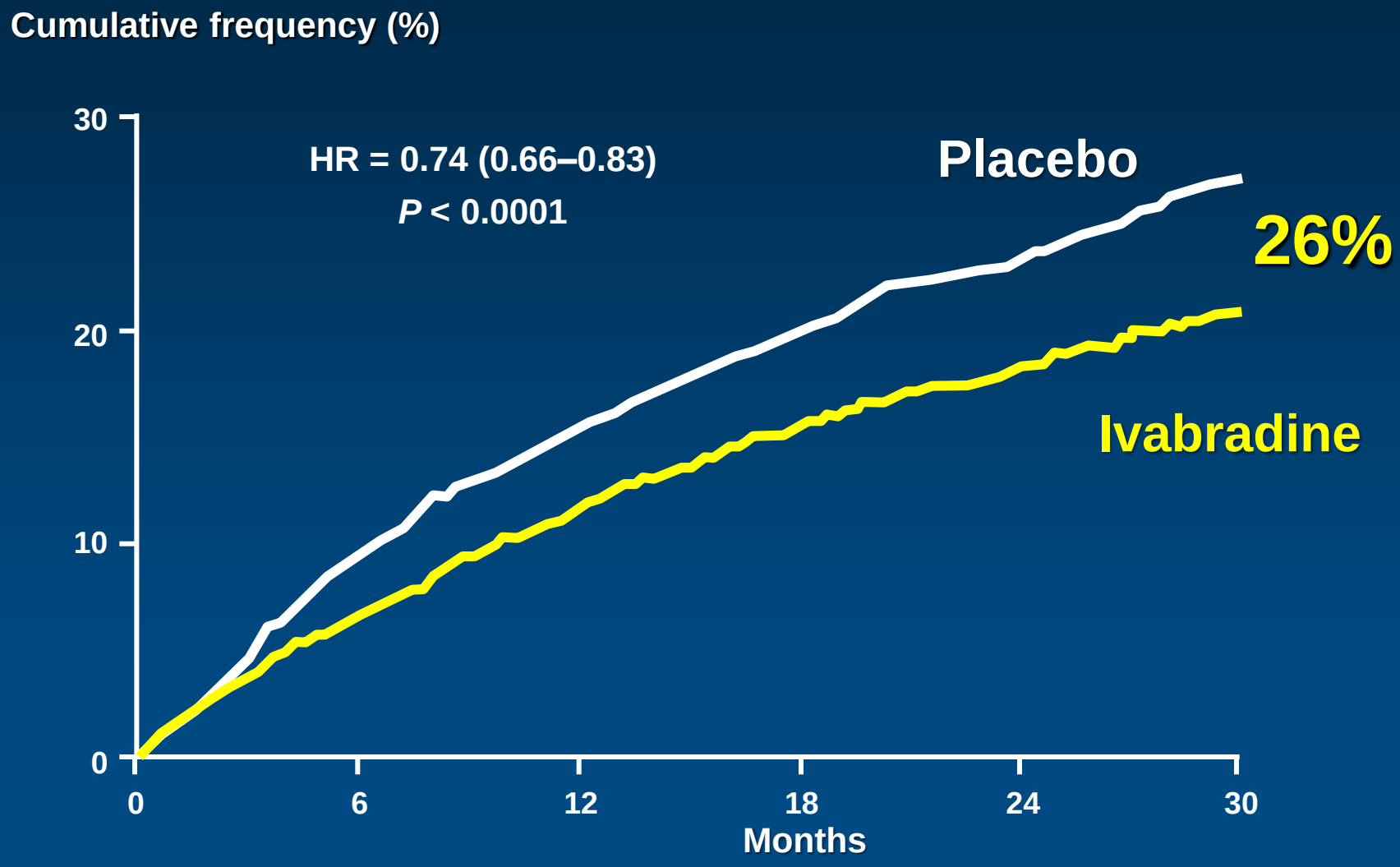
Primary composite endpoint

(CV death or hospital admission for worsening HF)



Swedberg K, et al. *Lancet*. 2010;376(9744):875-885

Hospitalization for HF



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Effect of ivabradine on outcomes

Endpoints	Hazard ratio	95% CI	*p* value
Primary composite endpoint (CV death or hospital admission for worsening HF)	0.82	[0.75;0.90]	*p*<0.0001
All-cause mortality	0.90	[0.80;1.02]	*p*=0.092
Death from heart failure	0.74	[0.58;0.94]	*p*=0.014
All-cause hospital admission	0.89	[0.82;0.96]	*p*=0.003
Any CV hospital admission	0.85	[0.78;0.92]	*p*=0.0002
CV death/hospital admission for HF or non-fatal MI	0.82	[0.74;0.89]	*p*<0.0001

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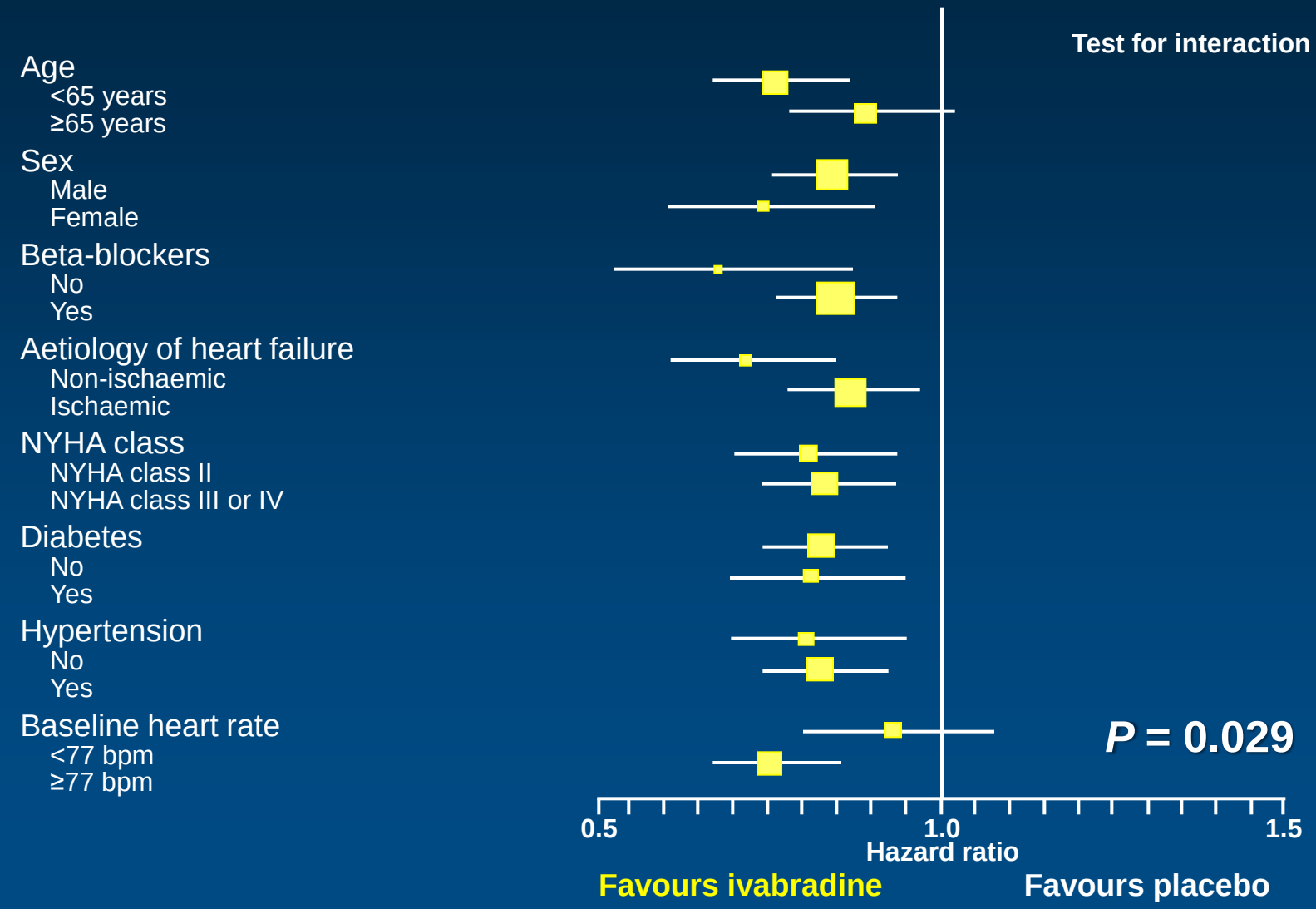
Who?

Effect of ivabradine in prespecified subgroups



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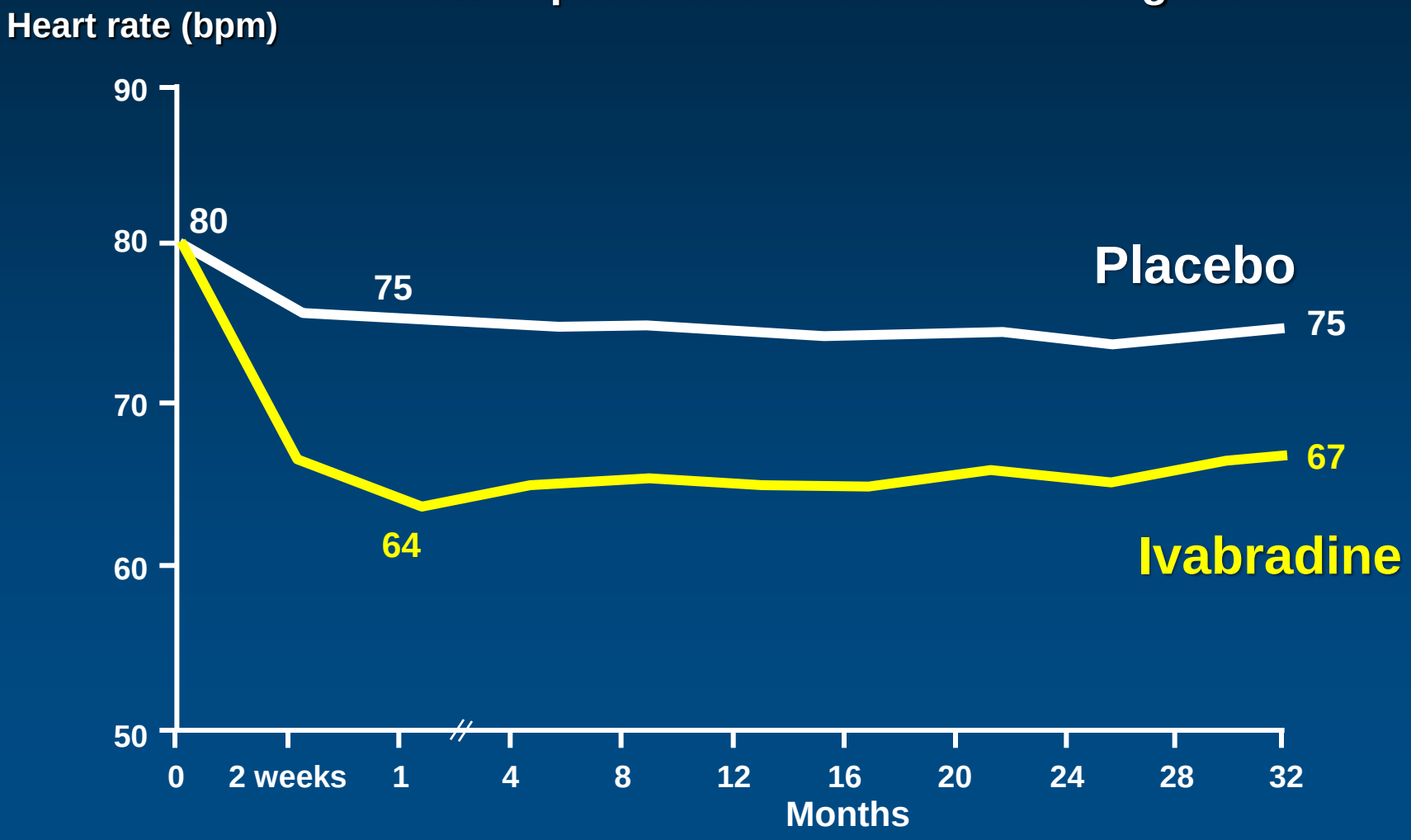
Mean heart rate reduction

70% of patients on ivabradine 7.5 mg bid



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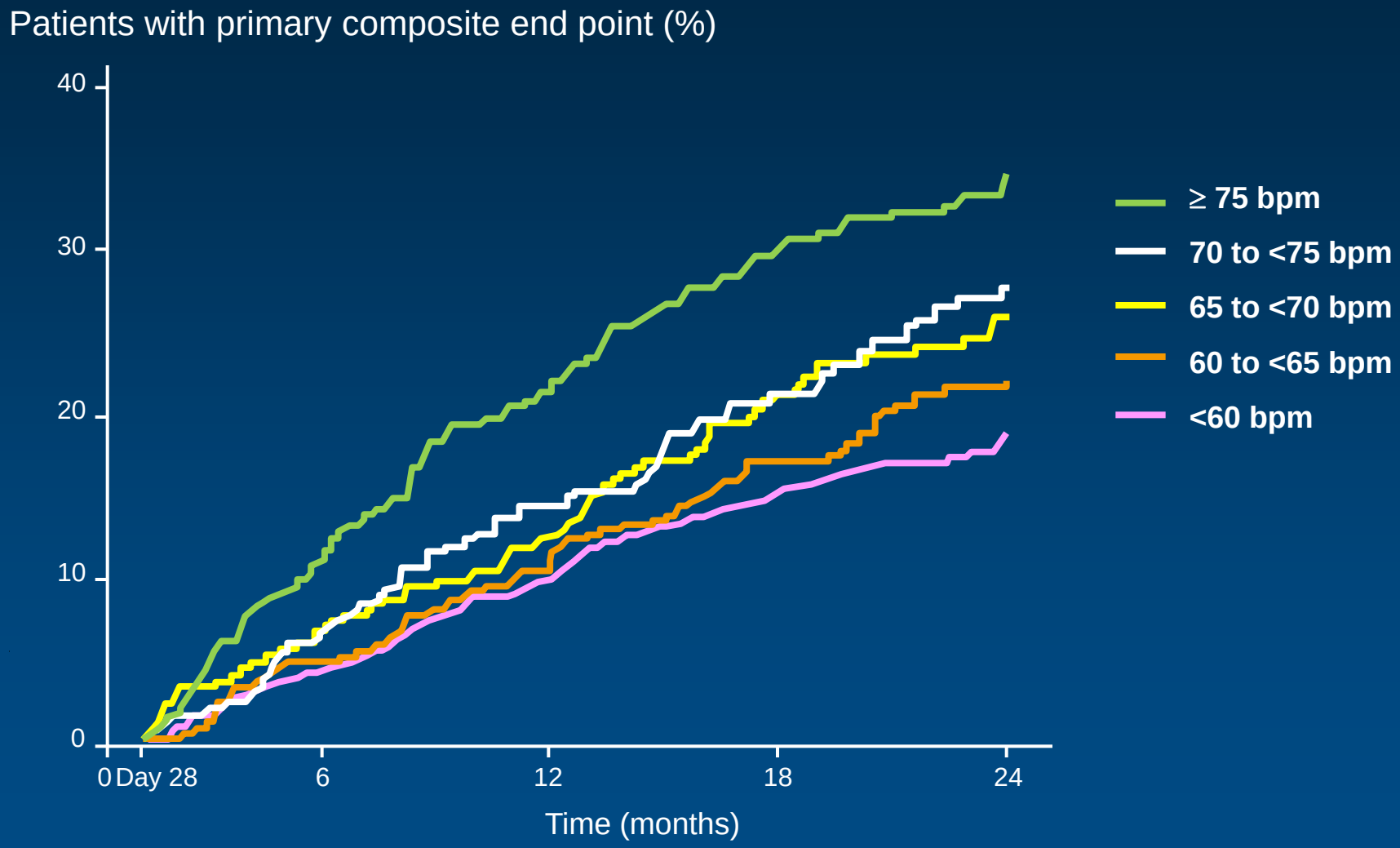
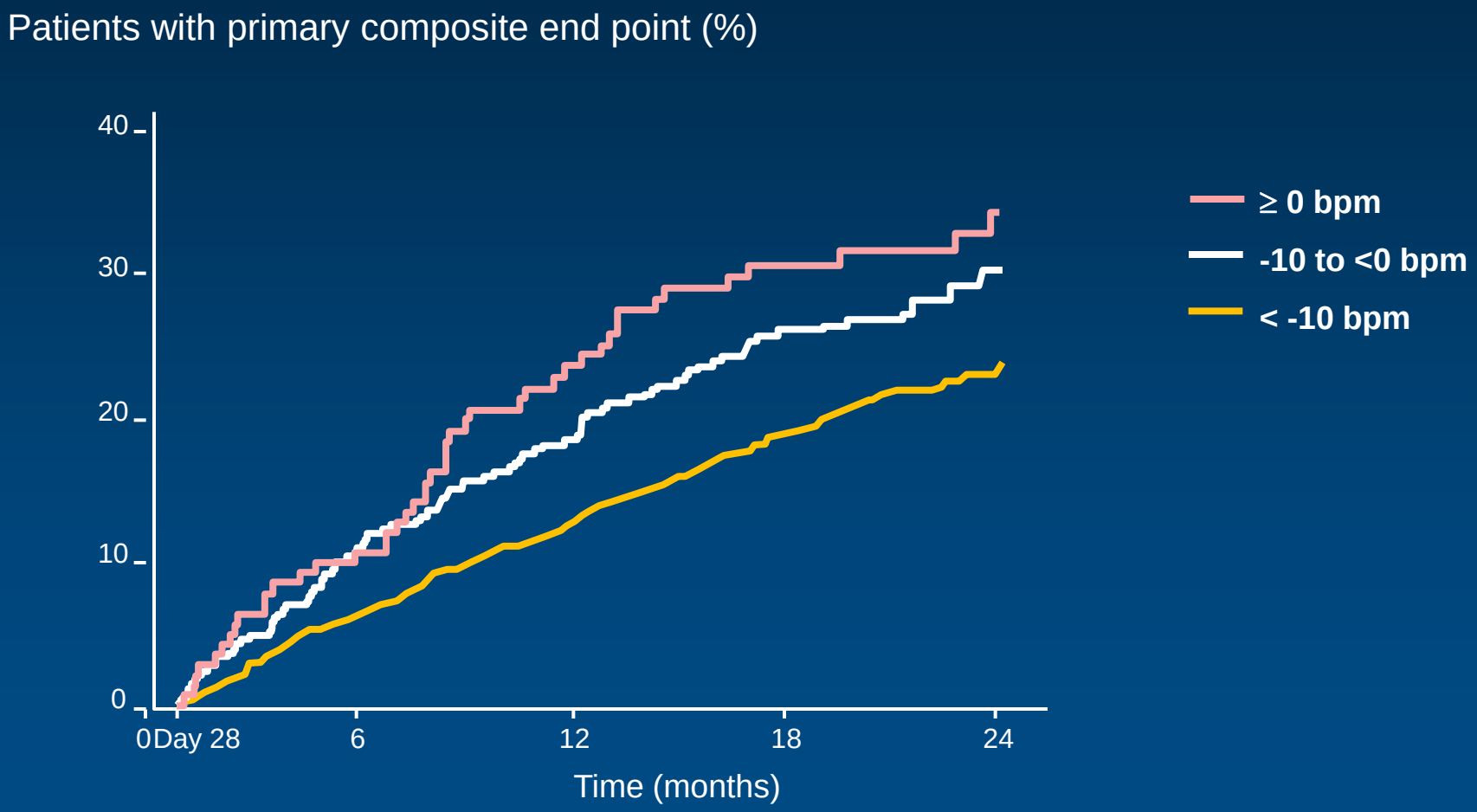
Effect of ivabradine on outcomes according to HR achieved at 28 days



Böhm M, Borer J, Ford I, et al. *Clin Res Cardiol*. 2013;102(1):11-22

Effect of ivabradine on outcomes according to magnitude of HR reduction



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When?

2016 ACC/AHA/HFSA Focused Update on the Management of Heart Failure

- Ivabradine can be beneficial to reduce HF hospitalization for patients with (IIA/B-R)
  - *symptomatic (NYHA class II-III) stable chronic HF**r**EF (LVEF ≤35%) who*
  - *are receiving GDEM, including a beta blocker at maximum tolerated dose,*
  - *and who are in sinus rhythm with a heart rate of 70 bpm or greater at rest*

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How?

Consider for patients with HFrEF

- NYHA class II-IV
- Sinus rhythm with a resting heart rate of ≥70 BPM
- A few notes:
  - *Patients w/myocardial infarction within the preceding 2 months were excluded.*
  - *Patients were stable for 4 weeks prior to initiation of ivabradine*
  - *Only 25% of patients studied were on optimal doses of beta-blocker therapy (so its important to maximize beta-blocker therapy before assessing resting heart rate*