O papel actual da biblioteca na construção de sistemas avançados de suporte à decisão clínica

- O exemplo da BC/CDI da FMUL -

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FACULDADE DE MEDICINA DA UNIVERSIDADE DE LISBOA

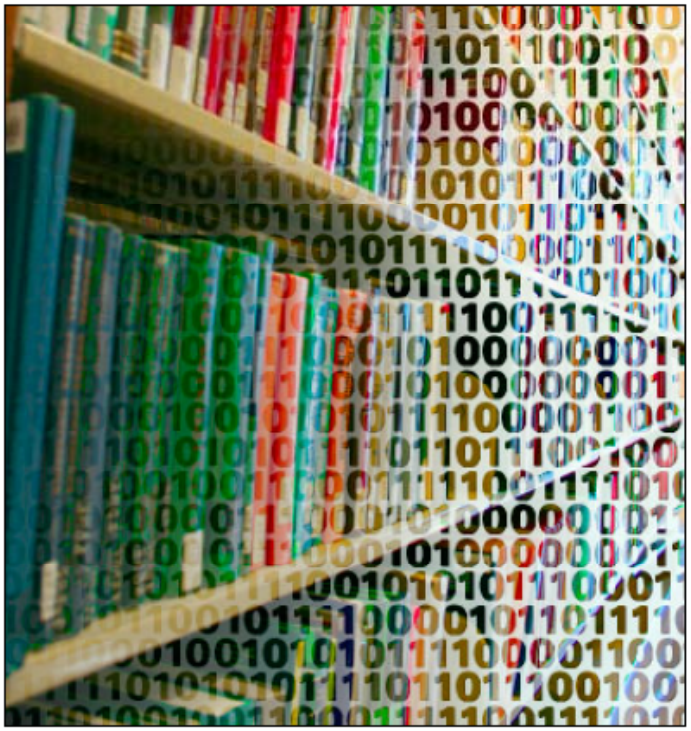
CENTRO ACADÉMICO DE MEDICINA DE LISBOA

N ENGL J MED 352;11 WWW.NEJM.ORG MARCH 17, 2005

2015 — The Future of Medical Libraries

Donald A.B. Lindberg, M.D., and Betsy L. Humphreys, M.L.S.

The past 20 years have witnessed computer and communications revolutions, rapid progress in genetics research, increasing public interest in personal health decisions, and corresponding expansions in the services provided by the National Library of Medicine. These concomitant and linked developments have upset the information marketplace and inspired policy debates about telecommunications, intellectual property, and access to the results of government-funded research. The Internet and the World Wide Web have transformed the way libraries deliver information services and have created perceived alternatives to libraries. What will happen to medical libraries in the post-Google world?



Today, most medical libraries and many portable devices support easy teleconferencing and distance education. Everyone craves access to more electronic information, no matter how much is available, but people treasure efficient methods for extracting pertinent information from the fire-hose effect of undifferentiated electronic text (and unwanted commercial offers). Most clinicians, patients, and healthy people use electronic health records. Like basic researchers, clinical researchers depend on electronic data systems. When using such systems, practitioners and researchers expect instant connection to related knowledge, including guidelines, protocols, clinical alerts, and relevant published s and families e same information that is

Esquema da comunicação

1. Para que serve uma biblioteca médica no séc. XXI?
2. Contextos em que é necessária informação científica
3. As necessidades em informação para uma prática clínica baseada na evidência
4. Temos problemas de translação do conhecimento?
5. Onde se encontra a melhor evidência disponível que necessitamos (“puxar”)?
6. Como é que a melhor evidência científica vem ao nosso encontro (“empurrar”)?
7. Um exemplo de um sistema de apoio à decisão clínica

Contextos em que é necessária informação científica

- **Assistência directa aos doentes**
- **Actualização dos conhecimentos médicos**
- Ensino (pré, pós-graduado e continuado)
- Investigação clínica
- Gestão/administração
- Políticas de saúde.

Algumas bases de dados…

- Medline
- EMBASE
- CINAHL
- Web of Science
- B&On
- Psycholit
- Aidsline
- Scopus
- Google
- …….

- Cochrane Library
- Health Technology Assessment UK
- NHS Evidence
- EBM digests
- …..

As necessidades em informação na prática clínica

- tratamento e prevenção
- diagnóstico
- prognóstico e predição clínica
- causalidade
- melhoria da qualidade
- custo-efectividade

Brian Haynes
McMaster University
Canada

Temos problemas de translação do conhecimento?

- só 12-15% dos doentes hipertensivos têm a sua tensão arterial controlada
- a grande maioria dos doentes geriátricos não se tratam para a depressão em ambulatório
- só uma percentagem menor de doentes com ICC fazem beta-bloqueantes
- os diabéticos têm a TA mal controlada e a glicémia também

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Tipos de fontes de informação

- as que servem como base de apoio à decisão clínica *real-time*, na presença do doente, que permitem respostas imediatas às questões colocadas no contacto com o doente (“o clínico vai PUXAR a evidência…”)
- as que servem para a actualização e manutenção da informação clínica considerada relevante para a área de prática clínica (“a evidência vai ser EMPURRADA em direcção do clínico…”)

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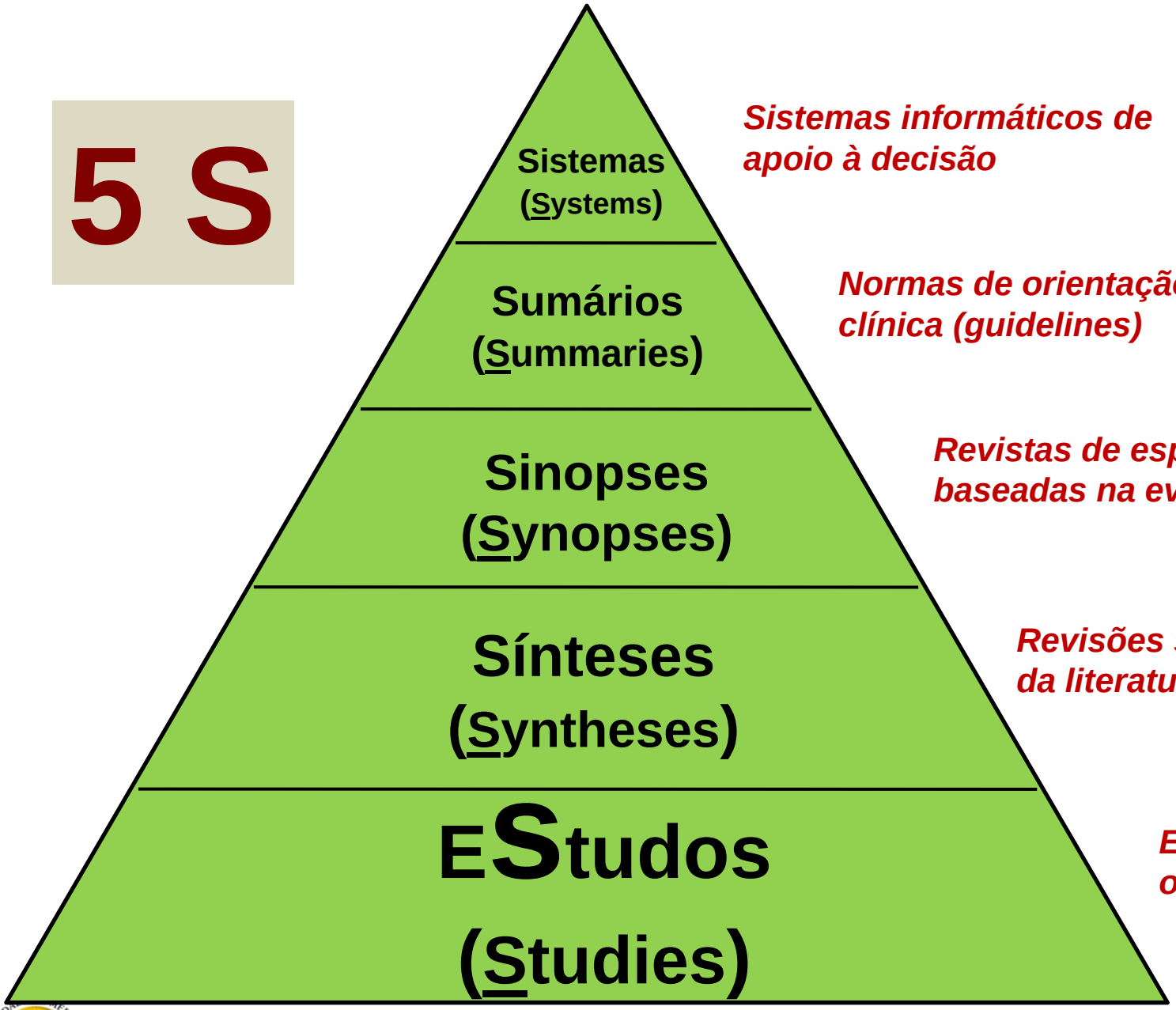


Sistemas informáticos de apoio à decisão

Normas de orientação clínica (guidelines)

Revistas de especialidade baseadas na evidência

Revisões sistemáticas da literatura

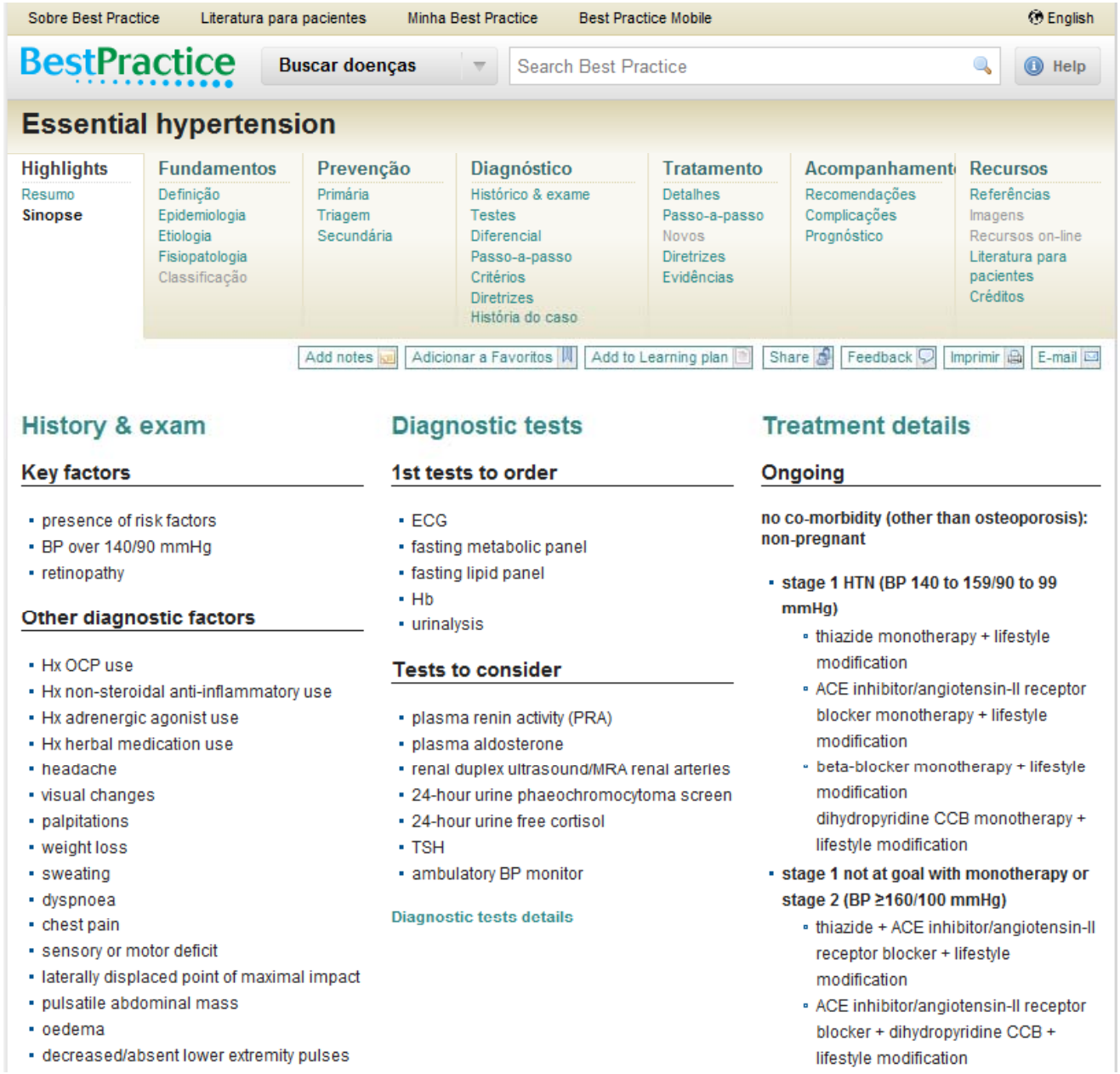
Estudos originais

Adaptado de Haynes RB, ACP Nov-Dec 2006, 145:A8-A9

Onde se encontra a melhor evidência disponível (“puxar”)?

- **UpToDate**
  (http://www.uptodate.com)
- **DynaMed**
  (http://www.ebscohost.com/dynamed)
- **Best Practice**
  (http://bestpractice.bmj.com)

Só 12-15% dos doentes hipertensivos têm a sua tensão arterial controlada



Sobre Best Practice | Literatura para pacientes | Minha Best Practice | Best Practice Mobile | English

BestPractice | Buscar doenças | Search Best Practice | Help

Essential hypertension

Highlights
Resumo
Sinopse

Fundamentos
Definição
Epidemiologia
Etiologia
Fisiopatologia
Classificação

Prevenção
Primária
Triagem
Secundária

Diagnóstico
Histórico & exame
Testes
Diferencial
Passo-a-passo
Critérios
Diretrizes
História do caso

Tratamento
Detalhes
Passo-a-passo
Novos
Diretrizes
Evidências

Acompanhament
Recomendações
Complicações
Prognóstico

Recursos
Referências
Imagens
Recursos on-line
Literatura para pacientes
Créditos

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History & exam

Key factors

- presence of risk factors
- BP over 140/90 mmHg
- retinopathy

Other diagnostic factors

- Hx OCP use
- Hx non-steroidal anti-inflammatory use
- Hx adrenergic agonist use
- Hx herbal medication use
- headache
- visual changes
- palpitations
- weight loss
- sweating
- dyspnoea
- chest pain
- sensory or motor deficit
- laterally displaced point of maximal impact
- pulsatile abdominal mass
- oedema
- decreased/absent lower extremity pulses

Diagnostic tests

1st tests to order

- ECG
- fasting metabolic panel
- fasting lipid panel
- Hb
- urinalysis

Tests to consider

- plasma renin activity (PRA)
- plasma aldosterone
- renal duplex ultrasound/MRA renal arteries
- 24-hour urine phaeochromocytoma screen
- 24-hour urine free cortisol
- TSH
- ambulatory BP monitor

Diagnostic tests details

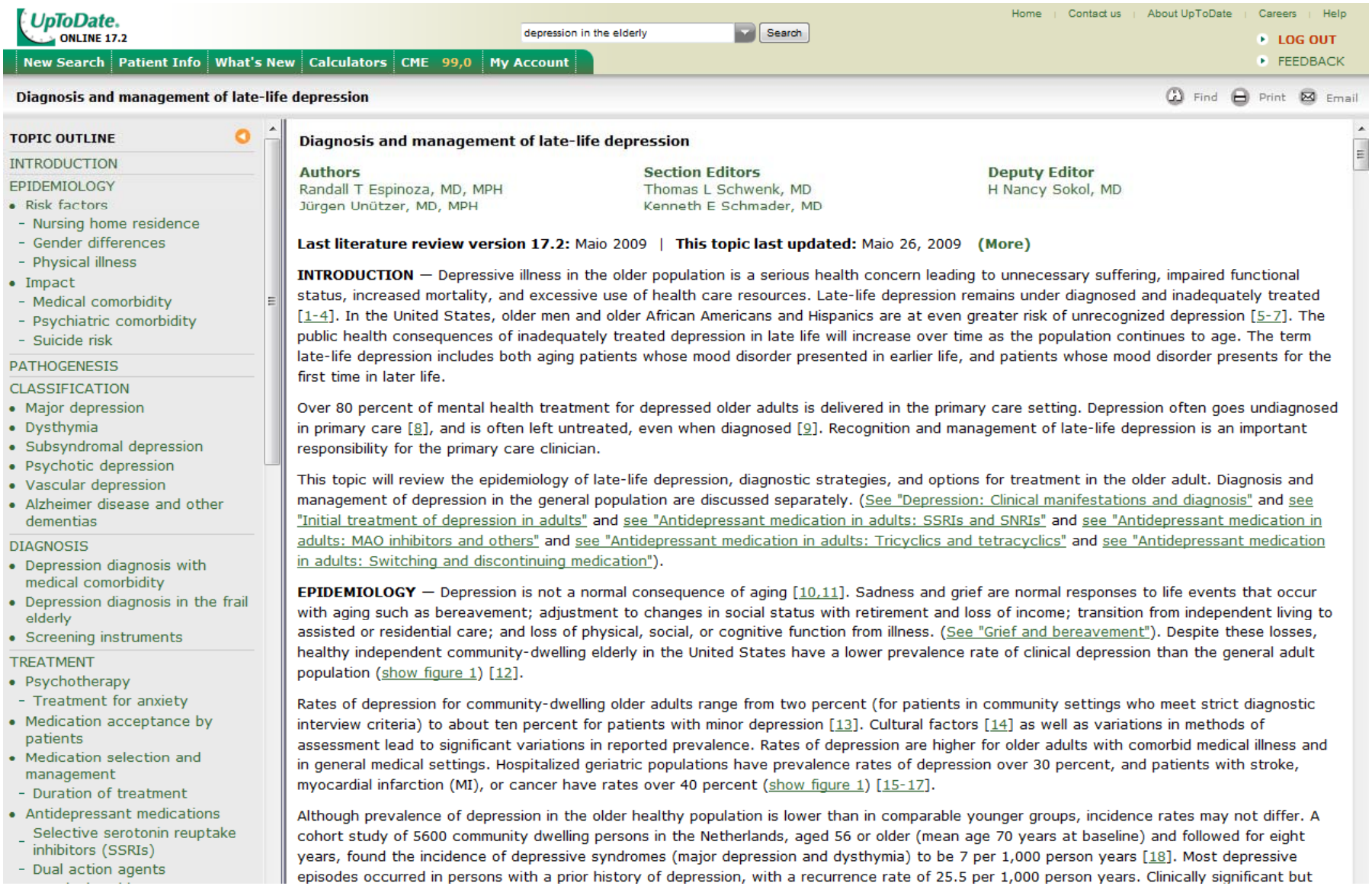
Treatment details

Ongoing

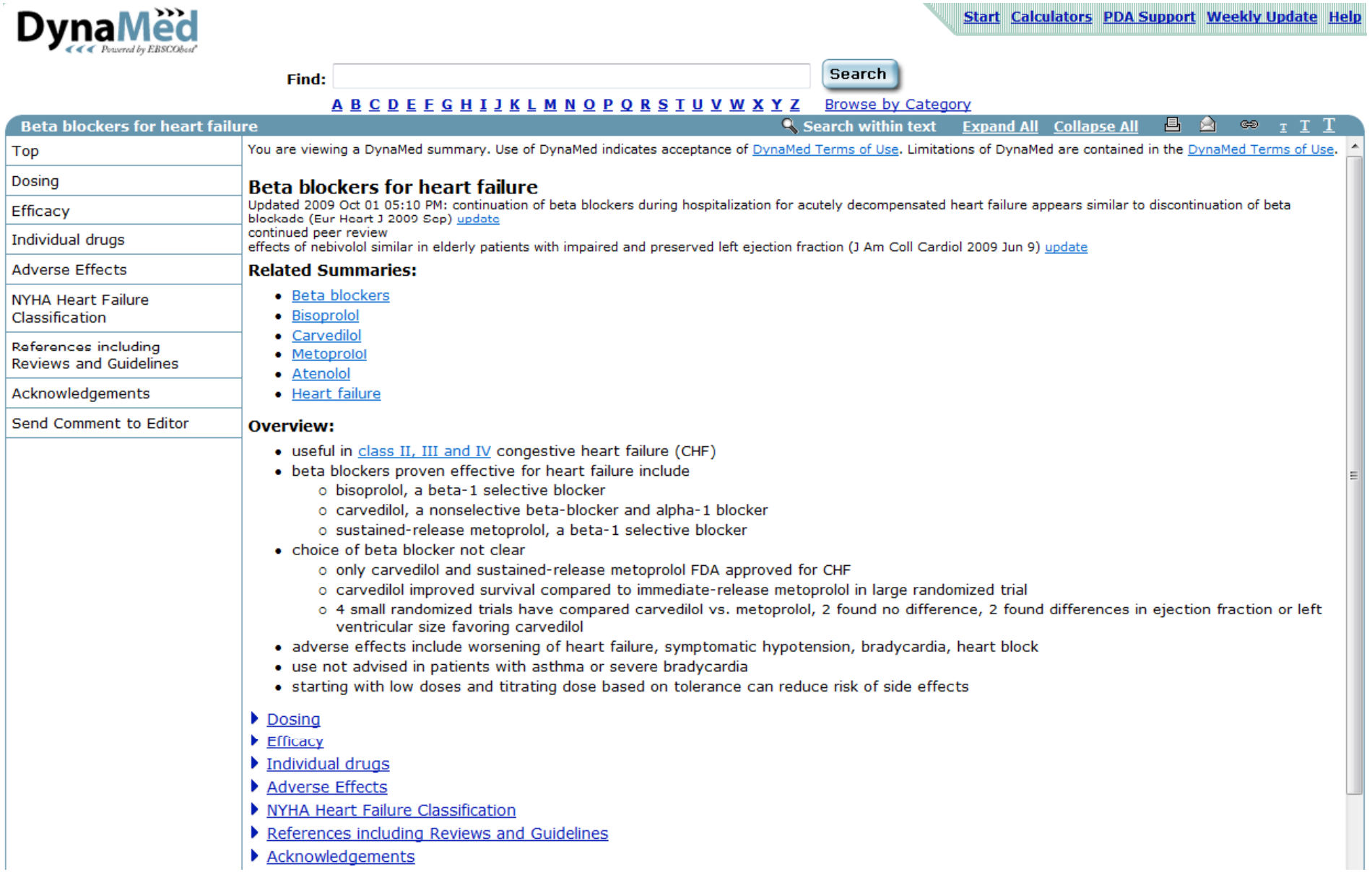
no co-morbidity (other than osteoporosis): non-pregnant

- **stage 1 HTN (BP 140 to 159/90 to 99 mmHg)**
  - thiazide monotherapy + lifestyle modification
  - ACE inhibitor/angiotensin-II receptor blocker monotherapy + lifestyle modification
  - beta-blocker monotherapy + lifestyle modification
  dihydropyridine CCB monotherapy + lifestyle modification
- **stage 1 not at goal with monotherapy or stage 2 (BP ≥160/100 mmHg)**
  - thiazide + ACE inhibitor/angiotensin-II receptor blocker + lifestyle modification
  - ACE inhibitor/angiotensin-II receptor blocker + dihydropyridine CCB + lifestyle modification

A grande maioria dos doentes geriátricos não se tratam para a depressão em ambulatório



Só uma percentagem menor de doentes com ICC fazem beta-bloqueantes



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Beta blockers for heart failure — Search within text Expand All Collapse All

Top
Dosing
Efficacy
Individual drugs
Adverse Effects
NYHA Heart Failure Classification
References including Reviews and Guidelines
Acknowledgements
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Beta blockers for heart failure

Updated 2009 Oct 01 05:10 PM: continuation of beta blockers during hospitalization for acutely decompensated heart failure appears similar to discontinuation of beta blockade (Eur Heart J 2009 Sep) update
continued peer review
effects of nebivolol similar in elderly patients with impaired and preserved left ejection fraction (J Am Coll Cardiol 2009 Jun 9) update

Related Summaries:

- Beta blockers
- Bisoprolol
- Carvedilol
- Metoprolol
- Atenolol
- Heart failure

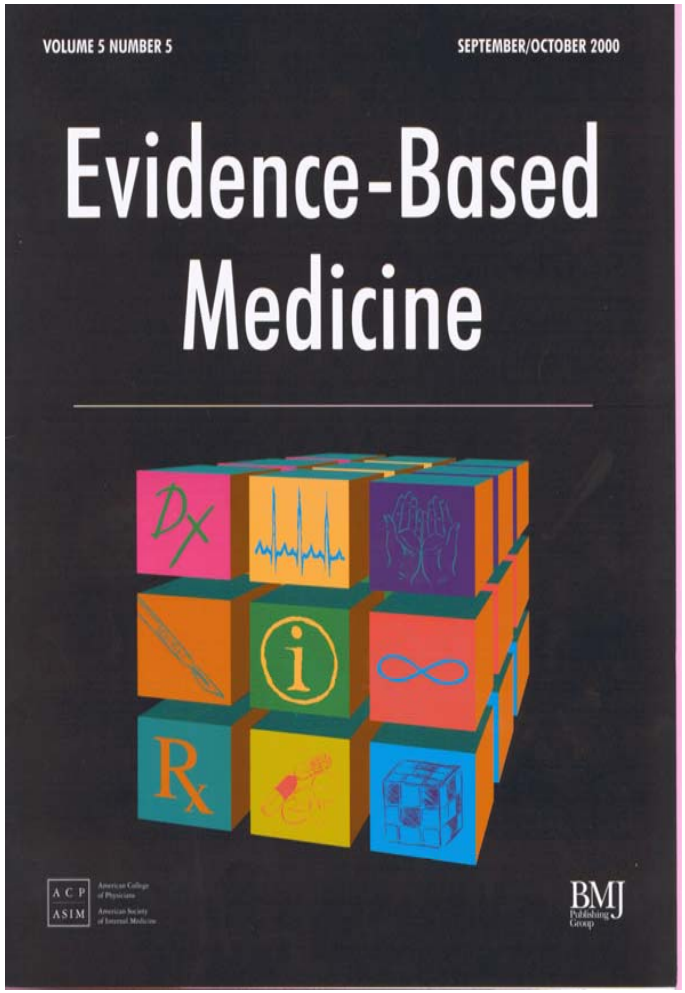
Overview:

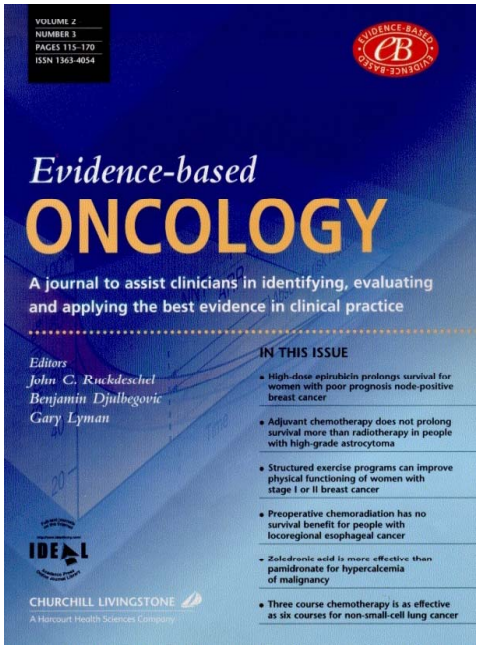
- useful in class II, III and IV congestive heart failure (CHF)
- beta blockers proven effective for heart failure include
  - bisoprolol, a beta-1 selective blocker
  - carvedilol, a nonselective beta-blocker and alpha-1 blocker
  - sustained-release metoprolol, a beta-1 selective blocker
- choice of beta blocker not clear
  - only carvedilol and sustained-release metoprolol FDA approved for CHF
  - carvedilol improved survival compared to immediate-release metoprolol in large randomized trial
  - 4 small randomized trials have compared carvedilol vs. metoprolol, 2 found no difference, 2 found differences in ejection fraction or left ventricular size favoring carvedilol
- adverse effects include worsening of heart failure, symptomatic hypotension, bradycardia, heart block
- use not advised in patients with asthma or severe bradycardia
- starting with low doses and titrating dose based on tolerance can reduce risk of side effects

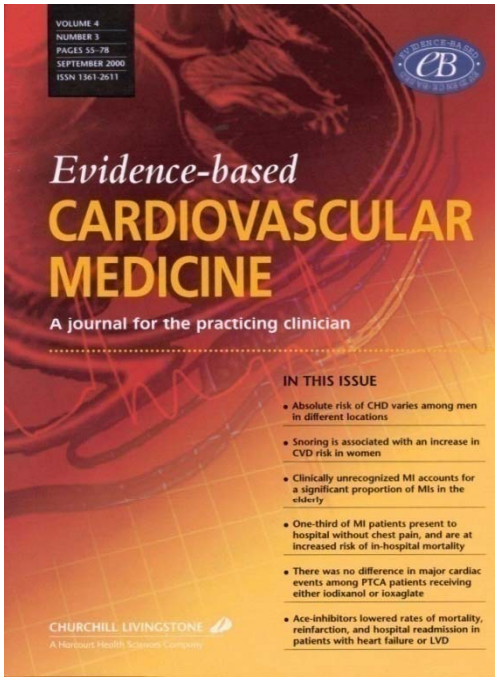
- Dosing
- Efficacy
- Individual drugs
- Adverse Effects
- NYHA Heart Failure Classification
- References including Reviews and Guidelines
- Acknowledgements

Como é que a melhor evidência científica vem ao nosso encontro ("empurrar")?

- **Evidence Based Medicine** (http://ebm.bmj.com)
- **Essential Evidence Plus** (www.essentialevidenceplus.com)
- **Evidence Updates** (http://plus.mcmaster.ca/EvidenceUpdates)







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Revista EBM

- são analisados 60.000 artigos por ano de 120 revistas
- aplicados filtros de avaliação crítica
- são seleccionados ± 3.000 artigos/ano (>95% de redução de “ruído”)
- aplicação de filtros de relevância clínica (MORE)
- restam ± 150 artigos/ano para o clínico individual (99,95% de redução de “ruído”)

Evidence Based Medicine
for Primary Care and Internal Medicine

Antihypertensive therapy with indapamide and perindopril reduced mortality in patients ⩾80 years

STUDY DESIGN

Design: randomised placebo controlled trial (Hypertension in the Very Elderly Trial [HYVET]).
Allocation concealment: (concealed)*.†
Blinding: blinded (patients, clinicians, and outcome adjudication committee).†

STUDY QUESTION

Setting: 195 centres in Europe, China, Australasia, and Tunisia.
Patients: 3845 patients ⩾80 years of age (mean age 84 y, 60% women) with persistent hypertension (mean sitting blood pressure [BP] 173/91 mm Hg). Exclusion criteria included accelerated or secondary hypertension, haemorrhagic stroke in the past 6 months, heart failure, gout, and dementia.
Intervention: sustained-release indapamide, 1.5 mg/day, with perindopril, 2 or 4 mg/day, added if needed to reach targets of systolic BP <150 mm Hg and diastolic BP <80 mm Hg (n = 1933) or placebo (n = 1912).
Outcomes: stroke, heart failure, any cardiovascular event, and death from any cause, cardiovascular cause, cardiac cause, or stroke.
Follow-up period: median 1.8 years.
Patient follow-up: 99.6% (intention-to-treat analysis).

MAIN RESULTS

Antihypertensive treatment reduced risks of heart failure, any cardiovascular event, and death from stroke or any cause (table). At 2 years, target BP was achieved by 48% of the antihypertensive treatment group and 20% of the placebo group.

CONCLUSION

In patients ⩾80 years of age with persistent hypertension, antihypertensive therapy with indapamide and perindopril reduced all-cause mortality.

*Bulpitt C, Fletcher A, Beckett N, et al. *Drugs Aging* 2001;18:151–64.
†See glossary.
Abstract and commentary also appear in "ACP Journal Club: The Best Evidence for Patient Care" in *Annals of Internal Medicine*.

ABSTRACTED FROM

Beckett NS, Peters R, Fletcher AE, *et al.* Treatment of hypertension in patients 80 years of age or older. *N Engl J Med* 2008;358:1887–98.

Correspondence to: Dr N S Beckett, Imperial College, London, UK; n.beckett@imperial.ac.uk

Source of funding: British Heart Foundation and Institut de Recherches Internationales Servier.

► **Clinical Impact Ratings:** Cardiology 7/7; GP/FP/Primary care 6/7; IM/Ambulatory care 6/7; Geriatrics 6/7

Antihypertensive therapy *v* placebo in patients ⩾80 years of age with persistent hypertension*

Outcomes at median 1.8 years	Rate per 1000 person-years		RRR (95% CI)	NNT (CI)
	Antihypertensive	Placebo		
Stroke	12	18	30% (−1 to 51)	Not significant
Heart failure	5.3	15	64% (42 to 78)	106 (87 to 162)
Cardiovascular event†	34	51	33% (18 to 46)	60 (43 to 113)
Death from all causes	47	60	20% (5 to 34)	82 (49 to 346)
Death from stroke	6.5	11	39% (1 to 62)	241 (151 to 9396)
Death from cardiovascular cause	24	31	23% (−1 to 40)	Not significant
Death from cardiac cause	6.0	8.4	29% (−19 to 58)	Not significant

*Abbreviations defined in glossary. RRR, NNT, and CI calculated from data in article.
†Stroke, myocardial infarction, heart failure, or death from cardiovascular cause.

COMMENTARY

HYVET found that antihypertensive treatment in the very old decreased mortality and the incidence of heart failure, with benefits seen within the first year. Although the reduction in some outcomes did not reach statistical significance, perhaps because the trial was stopped early, the results are impressive.

An earlier meta-analysis of randomised trials on the same topic found a decrease in stroke but not mortality.[1] The HYVET authors speculated that the discrepancy in mortality results may be related to differences in treatment regimens, particularly the use of an angiotensin-converting enzyme inhibitor rather than a β-blocker. The finding of a mortality benefit needs to be replicated.

Of note, the target BP in HYVET and the trials included in the INDANA meta-analysis[1] was higher than that recommended by current treatment guidelines.[2] This disparity raises the question of whether additional value would be provided in this age group by further lowering BP beyond the target pressure of 150/80 mm Hg, especially considering that this approach may increase adverse effects.

An important question about HYVET is whether the results are generalisable to most elderly people. The study sample was a relatively healthy group with low prevalence of diabetes mellitus and coronary artery disease. Patients with heart failure or dementia and those requiring nursing care were excluded. The relative benefits and risks of treating frail elderly people with multiple comorbid conditions were not addressed by this trial and may never be known. However, because heart failure is the most common reason for hospital admission in this population and strokes can be life-altering events even to the very frail, antihypertensive treatment in moderation may be the best way to prevent these outcomes. Being 80 years of age or older should not preclude antihypertensive treatment.

William W Hung, MD, MPH
Rosanne M Leipzig, MD, PhD
Mount Sinai Medical Center
New York, New York, USA

1. **Gueyffier F**, Bulpitt C, Boissel JP, *et al.* Antihypertensive drugs in very old people: a subgroup meta-analysis of randomised controlled trials. INDANA Group. *Lancet* 1999;353:793–6.
2. **Chobanian AV**, Bakris GL, Black HR, *et al.* Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *Hypertension* 2003;42:1206–52.

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Episode 60: *Diabetes and home monitoring*

Dr. Ebell and Dr. Wilkes discuss the POEM titled "Self-monitoring ineffective in patients with diabetes (ESMON)"

» MORE INFO

High dose statin reduces cardiac events in pts with high CRP (JUPITER)

Clinical Question:

In patients with normal LDL cholesterol but elevated C-reactive protein, is a high dose statin effective for primary cardiovascular prevention?

Bottom Line:

In this study of patients with normal LDL and elevated CRP, use of a high dose statin reduced the risk of death over a 2 year period (NNT = 180). At a cost of approximately $1200/year for rosuvastatin, the cost per life saved is about $216,000. This study raises many questions. What is the long term safety of lowering LDL cholesterol to 55 mg/dl in otherwise healthy persons? What is the impact of the apparent increase in diabetes on the long-term benefit of this drug? Can less expensive statin drugs, perhaps at lower doses, provide a similar benefit with less risk? (LOE = 1a)

Reference:

Ridker PM, Danielson E, Fonseca FAH, et al. Rosuvastatin to Prevent Vascular Events in Men and Women with Elevated C-Reactive Protein. N Engl J Med 2008; 359: 2195-207.

Study Design:

Randomized controlled trial (double-blinded)

Funding:

Industry

Setting:

Outpatient (any)

Allocation:

Concealed

Synopsis:

The Air Force/Texas Coronary Atherosclerosis Prevention Study found that statins may be effective in patients with normal cholesterol but elevated levels of C-reactive protein, a measure of inflammation. In this study, the authors identified adults with LDL cholesterol < 130 mg/dl and C-reactive protein > 2.0 mg/L. Nearly 90,000 men over age 50 years and women over age 60 years were screened for enrollment in the trial, and the vast majority were excluded due to an elevated LDL (37,611), low CRP (25,993), withdrawal of consent (3948), diabetes (957), hypothyroidism (349), or other reasons. Patients with preexisting heart disease or who had ever taken a statin or hormone replacement therapy were ineligible, as were patients with elevated creatine kinase, creatinine, or hepatic transaminases at baseline. The remaining 19,323 took placebos for 4 weeks to assess their compliance, and those taking less than 80% of the study drug were excluded. This of course has the effect of making the study drug look more effective than it is in the real world of clinical practice. The remaining 17,802 patients (62% male, 75% white, mean age 66 years) were randomized to rosuvastatin (Crestor) 20 mg once daily or matching placebo. At each of the annual follow-up visits, the LDL in the rosuvastatin group was approximately half that of the placebo group (55 vs 110 mg/dl) and the CRP was also significantly lower (~2.0 vs 3.5 mg/L).

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A meta-analysis of the vascular-related safety profile and efficacy of alpha-adrenergic blockers for symptoms related to benign prostatic hyperplasia. Int J Clin Pract	Internal Medicine	6	6

Just click on the title to review the abstract and/or PubMed record.

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