Ipertensione arteriosa: cosa cambia alla luce delle nuove Linee Guida

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2017: American College of Cardiology/ American Heart Association

Clinical Practice Guideline

2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ ASH/ASPC/NMA/PCNA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults

A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines

Hypertension. 2018;71:e13-e115.

ESC European Society of Cardiology

European Heart Journal (2018) **39**, 3021–3104
doi:10.1093/eurheartj/ehy339

ESC/ESH GUIDELINES

2018 ESC/ESH Guidelines for the management of arterial hypertension

The Task Force for the management of arterial hypertension of the European Society of Cardiology (ESC) and the European Society of Hypertension (ESH)

Eur Heart J 2018;39:3021-3104

2018: European Society of Cardiology/European Society of Hypertension

2020: International Society of Hypertension

Clinical Practice Guidelines

2020 International Society of Hypertension Global Hypertension Practice Guidelines

Thomas Unger, Claudio Borghi, Fadi Charchar, Nadia A. Khan, Neil R. Poulter, Dorairaj Prabhakaran, Agustin Ramirez, Markus Schlaich, George S. Stergiou, Maciej Tomaszewski, Richard D. Wainford, Bryan Williams, Aletta E. Schutte

***Hypertension*. 2020;75:1334-1357**

2020 International Society of Hypertension global hypertension practice guidelines

Thomas Unger[a], Claudio Borghi[b], Fadi Charchar[c,d,e], Nadia A. Khan[f,g], Neil R. Poulter[h], Dorairaj Prabhakaran[i,j,k], Agustin Ramirez[l], Markus Schlaich[m,n], George S. Stergiou[o], Maciej Tomaszewski[p,q], Richard D. Wainford[r,s,t], Bryan Williams[u], and Aletta E. Schutte[v,w]

Journal of Hypertension 2020, 38:982–1004

Agenda

1. Definizione di ipertensione arteriosa e stadiazione
2. Quando richiedere l'auto-misurazione domiciliare (Home BP) o il monitoraggio nelle 24 ore (24-h ABPM) ?
3. Quando iniziare la terapia farmacologica ?
4. Con quali farmaci iniziare e poi proseguire la terapia farmacologica?
5. Quale è l'obbiettivo della terapia? Ovvero: a quali valori va ridotta la pressione arteriosa ?

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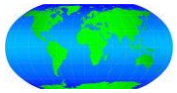
Definizione di ipertensione arteriosa e stadiazione



Topic	International Society of Hypertension (ISH) Practice Guidelines	European Society of Cardiology/European Society of Hypertension (ESC/ESH)	American College of Cardiology / American Heart Association (ACC/AHA)
Year of publication	2020	2018	2018
Definition of Hypertension			
1. Clinic BP	SBP ≥ 140 mmHg and/or DBP ≥ 90 mmHg	SBP ≥ 140 mmHg and/or DBP ≥ 90 mmHg	≥ 130 mmHg systolic or ≥ 80 mmHg diastolic
2. Self-measured home BP	SBP ≥ 135 mmHg and/or DBP ≥ 85 mmHg	SBP ≥ 135 mmHg and/or DBP ≥ 85 mmHg	≥ 130 mmHg systolic or ≥ 80 mmHg diastolic
3. Average 24-h ABP	SBP ≥ 130 mmHg and/or ≥ DBP 80 mmHg	SBP ≥ 130 mmHg and/or ≥ DBP 80 mmHg	≥ 125 mmHg systolic or ≥ 75 mmHg diastolic
4. Average daytime ABP	SBP ≥ 135 mmHg and/or ≥ DBP 85 mmHg	SBP ≥ 135 mmHg and/or ≥ DBP 85 mmHg	≥ 130 mmHg systolic or ≥ 80 mmHg diastolic
5. Average nighttime ABP	SBP ≥ 120 mmHg and/or ≥ DBP 70 mmHg	SBP ≥ 120 mmHg and/or ≥ DBP 70 mmHg	≥ 110 mmHg systolic or ≥ 75 mmHg diastolic
Hypertension grade			
Optimal	Not defined	SBP < 120 mmHg and DBP < 80 mmHg	Not defined
Normal	SBP <130 mmHg and DBP <85 mmHg	SBP 120–129 mmHg and/or DBP 80–84 mmHg	SBP < 120 mmHg and DBP < 80 mmHg
Elevated	Not Defined	Not Defined	SBP 120–129 mmHg and DBP < 80 mmHg
High-normal	SBP 130–139 mmHg and/or DBP 85–89 mmHg	SBP 130–139 mmHg and/or DBP 85–89 mmHg	Not Defined
Grade 1	SBP 140–159 mmHg and/or DBP 90–99 mmHg	SBP 140–149 mmHg and/or DBP 90–99 mmHg	SBP 130–139 mmHg or DBP 80–89 mmHg
Grade 2	SBP ≥ 160 mmHg and/or DBP ≥ 100 mmHg	SBP 170–179 mmHg and/or DBP 100–109 mmHg	SBP ≥ 140 mmHg or DBP ≥ 90 mmHg
Grade 3	Not defined	SBP ≥ 180 mmHg and/or DBP ≥ 110 mmHg	Not defined
Isolated systolic hypertension	SBP ≥ 140 mmHg and DBP < 90 mmHg	SBP ≥ 140 mmHg and DBP < 90 mmHg	Not defined

Office	**≥ 140/90 mmHg**	**≥ 140/90 mmHg**	**≥ 130/80 mmHg**
At home	≥ 135/85 mmHg	≥ 135/85 mmHg	≥ 130/80 mmHg
Daytime ABP	≥ 135/85 mmHg	≥ 135/85 mmHg	≥ 130/80 mmHg

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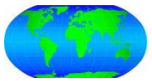
Quando richiedere l'automisurazione domiciliare ('home BP') e il monitoraggio nelle 24 ore ('24-h ABPM') ?



International Society of Hypertension (ISH) Practice Guidelines

Out-of-office BP measurement is often necessary for the accurate diagnosis of hypertension and for treatment decisions

In untreated or treated subjects with office BP classified as high-normal BP or grade 1 hypertension (130–159/85–89 mm Hg) BP level needs to be confirmed, if possible, using home or ambulatory BP monitoring

1. Home BP e 24-h ABPM '**sono spesso necessari**'
2. **Nei soggetti con PA clinica 130-159/85-89 mmHg**, questi valori debbono essere confermati ('**verificati**') con home BP oppure con 24-h ABPM

European Society of Cardiology/European Society of Hypertension (ESC/ESH)

Diagnosis of hypertension should be based on: repeated office BP measurements on more than one visit, except when hypertension is severe (grade 3, especially in high-risk patients)

OR

Out-of-office BP measurement with home or ambulatory BP monitoring, provided that these measurements are logistically and economically feasible.

La diagnosi di ipertensione **dovrebbe essere basata su**:

1. **Numerose misurazioni di PA clinica, oppure**
2. **Home BP o 24-h ABPM**

Ad eccezione che nei pazienti con PA clinica ≥180/110 mmHg (grado 3) anche in una sola visita.

American College of Cardiology / American Heart Association (ACC/AHA)

In adults with untreated SBP >130 mmHg but <160 mm Hg, or DBP >80 mmHg but <100 mmHg, it is reasonable to screen for presence of white-coat hypertension using either daytime ambulatory BP or self-measured home BP before diagnosis of hypertension

In adults with untreated office BP between 120 and 129 mmHg for SBP or between 75 and 79 mmHg for DBP, screening for masked hypertension with self-measured home BP or 24-hour ambulatory BP is reasonable. It may be reasonable to screen for masked uncontrolled hypertension with self-measured home BP in adults treated for hypertension and office BP at goal, but in the presence of TOD or increased overall CVD risk

Home BP o 24-hour ABPM sono indicati nei soggetti con:

1. **PA clinica 131-159/81-99** (per cercare 'white-coat hypertension')
2. **PA clinica 120-129/75-79** (per cercare 'masked hypertension')
3. **Segni di danno d'organo in presenza di PA clinica (stranamente) normale**

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Quando iniziare la terapia farmacologica ?

Topic	International Society of Hypertension (ISH) Practice Guidelines	European Society of Cardiology/European Society of Hypertension (ESC/ESH)	American College of Cardiology / American Heart Association (ACC/AHA)
Office BP requiring therapy	≥ 160/100 mmHg: Immediate drug treatment ≥ 140–149/90–99 mmHg: Drug treatment Immediate if CVD, CKD, DM, TOD After 3–6 months if not CVD, CKD, DM, TOD and if unlimited drug availability After 3–6 months if not CVD, CKD, DM, TOD and age 50–80 if limited drug availability	≥ 160/100 mmHg: Immediate drug treatment ≥ 140–149/90–99 mmHg: Drug treatment Immediate if CVD, CKD, DM, TOD After 3–6 months if not CVD, CKD, DM, TOD	≥140/90 mmHg: Drug treatment in all patients regardless of ASCVD risk ≥130/80 mmHg: Drug treatment In primary prevention if ASCVD risk ≥10% In secondary prevention in all patients

- **≥160/100 mmHg: subito.**
- **140-159/90-99 mmHg: subito se: CVD, CKD, DM, TOD.**
- **Dopo 3-6 mesi di insuccesso della terapia non farmacologica in assenza di CVD, CKD, DM, TOD.**

- **≥160/100 mmHg: subito.**
- **140-159/90-99 mmHg: subito se: CVD, CKD, DM, TOD.**
- **Dopo 3-6 mesi di insuccesso della terapia non farmacologica in assenza di CVD, CKD, DM, TOD.**

- **≥140/90 mmHg: subito.**
- **130-139/80-89 mmHg: subito se in prevenzione secondaria** (evidenza clinica di CVD).
- **130-139/80-89 mmHg: subito se in prevenzione primaria e rischio ≥10% a 10 anni** (http://tools.acc.org/ASCVD-Risk-Estimator /S8.1.2)

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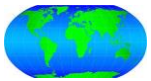

International Society of Hypertension (ISH) Practice Guidelines

Step 1: Dual low-dose combination (*A + C*)

Step 2: Dual high-dose combination (*A + C*)

Step 3: Triple combination (*A + C + D*)

Step 4 (Resistant hypertension): triple combination + spironolactone or others

European Society of Cardiology/European Society of Hypertension (ESC/ESH)

Initial therapy: free or fixed combination *A* + (C or D); monotherapy in low-risk grade 1 (SBP < 150 mmHg), or in the very old (> 80 years) or frailer patients

Step 2: *A + C + D*

Step 3 (Resistant hypertension): add spironolactone or other diuretic, α blockers or β blockers

American College of Cardiology / American Heart Association (ACC/AHA)

Initiation of antihypertensive drug therapy with a first-line agent (D or C or A) in adults with stage 1 hypertension and BP goal < 130/80 mmHg, with dosage titration and sequential addition of other agents to achieve the BP target

Initiation of antihypertensive drug therapy with with 2 agents of different classes, (either as separate agents or in a fixed-dose combination), in adults with average BP by more than 20/10 mm Hg above their BP target (i.e., > 150/90 mmHg)

Abbreviations: A = ACE-inibitors or angiotensin receptor blockers; D = diuretics; C = calcium channel blockers.

A + C a basse dosi

↓

A + C ad alte dosi

↓

A + C + D

↓

Aggiungere spironolattone,
o altro diuretico,
o α-bloccante o β-bloccante

A + (C oppure D)

[Monoterapia se PAS<150, età>80 o paz. fragile]

↓

A + C + D

↓

Aggiungere spironolattone,
o altro diuretico,
o α-bloccante o β-bloccante

Monoterapia con A, oppure D, oppure C.

Varie combinazioni libere o fisse di A, D e C se PA >150/90 mmHg (>20/10 mmHg rispetto al target di 130/80)

↓

Varie combinazioni di A, D, e C

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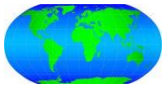

Topic	International Society of Hypertension (ISH) Practice Guidelines	European Society of Cardiology/European Society of Hypertension (ESC/ESH)	American College of Cardiology / American Heart Association (ACC/AHA)
Office BP target	Reduction by at least 20/10 mmHg; Ideally to < 140/90 mmHg	< 140/90 mmHg	< 130/80 mmHg
Office BP target in specific conditions			
Age < 65 years	< 130/80 mmHg if tolerated	< 130/80 mmHg if tolerated	< 130/80 mmHg
Age ≥ 65 years	< 140/90 mmHg, but consider individualized BP targets in the context of frailty, independence and tolarability of threatment	130–139/70–79 mmHg if tolerated	< 130/80 mmHg
Diabetes	< 130/80 mmHg (<140/80 if age ≥65 years)	< 130/80 mmHg (130–139/<80 if age ≥65 years)	< 130/80 mmHg
Coronary artery disease	< 130/80 mmHg (<140/80 if age ≥65 years)	< 130/80 mmHg (130–139/<80 if age ≥65 years)	< 130/80 mmHg
Previous stroke	< 130/80 mmHg (<140/80 if age ≥65 years)	120–130 mmHg	< 130/80 mmHg
Heart failure	< 130/80 mmHg (but >120/70 mmHg)	Avoid actively lowering <120/70 mmHg	< 130/80 mmHg
Chronic kidney disease	< 130/80 mmHg (<140/80 if age ≥65 years)	130–139/70–79 mmHg	< 130/80 mmHg
Safety boundaries (BP not below these values)			
Age < 65 years	120/70 mmHg	120/70 mmHg	Not indicated
Age ≥ 65 years with o without comorbidities	Not indicated	130/70 mmHg	Not indicated

ISH: Non abbassate la PA al di sotto di questi valori!

ESC/ESH: Non abbassate la PA al di sotto di questi valori!

Office BP treatment targets in hypertensive patients

Recommendations	Class[a]	Level[b]
It is recommended that the first objective of treatment should be to lower BP to <140/90 mmHg in all patients and, provided that the treatment is well tolerated, treated BP values should be targeted to 130/80 mmHg or lower in most patients.[2,8]	I	A
In patients <65 years receiving BP-lowering drugs, it is recommended that SBP should be lowered to a BP range of 120–129 mmHg in most patients.[c 2,215,229]	I	A
In older patients (aged ≥65 years) receiving BP-lowering drugs: • It is recommended that SBP should be targeted to a BP range of 130–139 mmHg.[2,235,244]	I	A
• Close monitoring of adverse effects is recommended.	I	C
• These BP targets are recommended for patients at any level of CV risk and in patients with and without established CVD.[2,8]	I	A
A DBP target of <80 mmHg should be considered for all hypertensive patients, independent of the level of risk and comorbidities.[226,235]	IIa	B

Per essere di 'Livello di evidenza A', la raccomandazione deve essere supportata da 'molti studi randomizzati, oppure da meta-analisi'

Table 2 ESC Levels of evidence

Level of evidence A	Data derived from multiple randomized clinical trials or meta-analyses.
Level of evidence B	Data derived from a single randomized clinical trial or large non-randomized studies.
Level of evidence C	Consensus of opinion of the experts and/or small studies, retrospective studies, registries.

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The 2020 International Society of Hypertension global hypertension practice guidelines - key messages and clinical considerations

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ARTICLE INFO

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ABSTRACT

The International Society of Hypertension (ISH) has recently developed practice guidelines for the management of hypertension in adults aged ≥18 years. Conceptually, the 2020 ISH Guidelines are closer to the 2018 ESC/ESH Guidelines rather than to the 2017 ACC/AHA Guidelines. The ISH Guidelines have two distinctive features when compared with the 2018 European Society of Cardiology/European Society of Hypertension (ESC/ESH) Guidelines and the 2017 American College of Cardiology/American Heart Association (ACC/AHA) Guidelines. First, they are written in a concise and easy-to-read style; second, they focuses on practical issues related to the management of hypertension in 'high-income' as well as in 'low-income' countries, where there is limited access to resources for the diagnosis and treatment of hypertension. In our opinion, the 2020 ISH Guidelines share with the 2018 ESC/ESH Guidelines an important limitation which may impair the retention of these key aspects of Guidelines by physicians, with consequent difficult adoption in clinical practice. It consists in the definition of several blood pressure targets in relation to age, target organ damage and concomitant disease. We believe that results of randomized clinical trials and meta-analysis do not support the recommendation of differential BP targets, as well as of rigid 'safety boundaries'. This review critically examines similarities and differences across the three major Hypertension Guidelines, which include the definition of hypertension, drug treatment, and blood pressure targets, with emphasis on key messages relevant for clinical practice.

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The 2020 International Society of Hypertension global hypertension practice guidelines - key messages and clinical considerations

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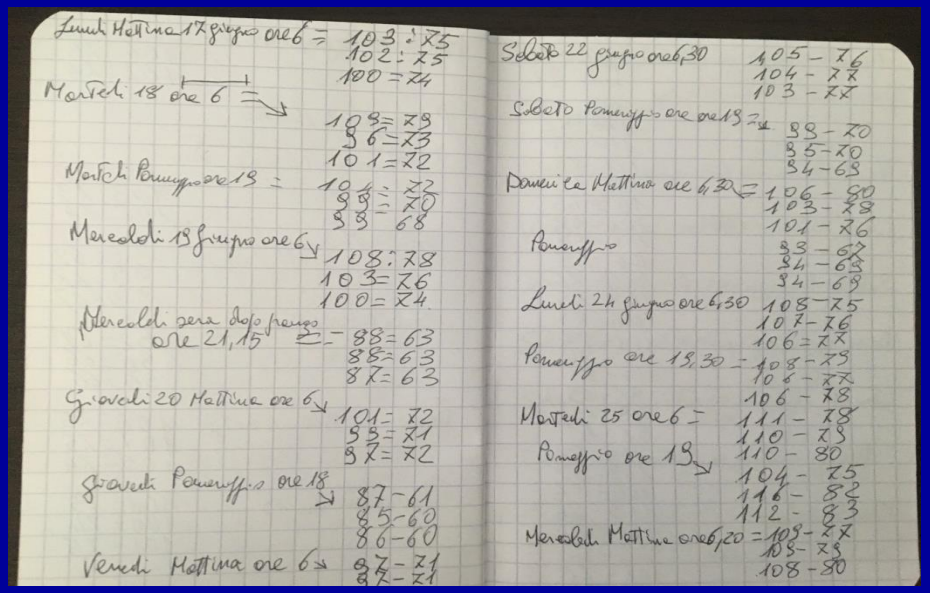
In our opinion, an important limitation of the 2020 ISH and 2018 ESC/ESH Guidelines is the definition of several different BP targets in relation to age, target organ damage and concomitant disease. This may impair the retention of these key aspects of Guidelines by physicians, with consequent difficult adoption in clinical practice. Beyond such consideration, data from randomized clinical trials and meta-analysis barely support the recommendation of differential BP targets, as well as of rigid 'safety boundaries' (i.e., low BP values not to be overcome because of the fear of low-BP induced unwanted effects). We believe that a single BP target (i.e., <130/80 mmHg) coupled with the evaluation of treatment tolerability in each single patient, is a reasonable and sufficiently evidence-based goal in the management of hypertensive patients (Table 3).

Un esempio pratico…



- F.B., maschio, età 64 anni
- Ipertensione nota da 8 anni
- PA clinica 164/94 mmHg pre-trattamento
- Diabete tipo 2. Dieta + metformina.
- Attualmente in trattamento con combinazione fissa (perindopril 5 mg + indapamide 1,5 mg + amlodipina 5 mg)
- PA clinica ~110/68 mmHg
- PA automisurata a domicilio ~104/72 mmHg
- Normale funzione renale. Elettroliti normali. No ipotensione. No sincope. Si sente benissimo.

Age group	Office SBP treatment target ranges (mmHg)					Office DBP treatment target range (mmHg)
	Hypertension	+ Diabetes	+ CKD	+ CAD	+ Stroke[a]/TIA	
18 - 65 years	**Target to 130** *or lower if tolerated* Not <120	**Target to 130** *or lower if tolerated* Not <120	**Target to <140 to 130** *if tolerated*	**Target to 130** *or lower if tolerated* Not <120	**Target to 130** *or lower if tolerated* Not <120	70–79
65 - 79 years[b]	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	70–79
≥80 years[b]	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	**Target to 130-139** *if tolerated*	70–79
Office DBP treatment target range (mmHg)	70–79	70–79	70–79	70–79	70–79	

Williams B et al. 2018 ESC/ESH Guidelines
Eur Heart J. 2018 Sep 1;39:3021-3104

PAS clinica **< 120 mmHg** !!
Le Linee Guida dicono: **no al di sotto di 120 mmHg**

Cosa fare, quindi ?

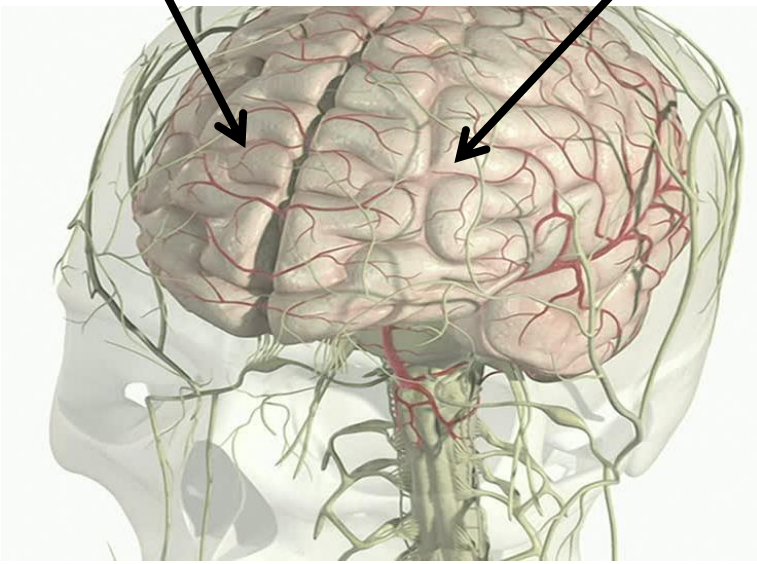
1. Sospendere/ridurre il trattamento ?
2. Andare avanti senza modificazioni? (in contrasto con le Linee Guida)

The lower the blood pressure, the better

(less risk of stroke, heart failure, CHD, dementia, etc)

Strictly monitor the tolerability of treatment

(Orthostatic hypotension [risk of falls, etc], renal failure, iper or ipokaliaemia, etc)



Intensive Blood Pressure Reduction and Outcome

More Versus Less Intensive Blood Pressure–Lowering Strategy

Cumulative Evidence and Trial Sequential Analysis

Paolo Verdecchia,* Fabio Angeli, Giorgio Gentile, Gianpaolo Reboldi*

See Editorial Commentary, pp 546–548

Abstract—Several randomized trials compared a more versus less intensive blood pressure–lowering strategy on the risk of major cardiovascular events and death. Cumulative meta-analyses and trial sequential analyses can establish whether and when firm evidence favoring a specific intervention has been reached from accrued literature. Therefore, we conducted a cumulative trial sequential analysis of 18 trials that randomly allocated 53 405 patients to a more or less intensive blood pressure–lowering strategy. We sought to ascertain the extent to which trial evidence added to previously accrued data. Outcome measures were stroke, myocardial infarction, heart failure, cardiovascular death, and all-cause death. Achieved blood pressure was 7.6/4.5 mm Hg lower with the more intensive than the less intensive blood pressure–lowering strategy. For stroke and myocardial infarction, the cumulative Z curve crossed the efficacy monitoring boundary solely after the SPRINT (Systolic Blood Pressure Intervention Trial) study, thereby providing firm evidence of superiority of a more intensive over a less intensive blood pressure–lowering strategy. For cardiovascular death and heart failure, the cumulative Z curve crossed the conventional significance boundary, but not the sequential monitoring boundary, after SPRINT. For all-cause death, the SPRINT trial pushed the cumulative Z curve away from the futility area, without reaching the conventional significance boundary. We conclude that evidence accrued to date strongly supports the superiority of a more intensive versus a less intensive blood pressure–lowering strategy for prevention of stroke and myocardial infarction. Cardiovascular death and heart failure are likely to be reduced by a more intensive blood pressure–lowering strategy, but evidence is not yet conclusive. (*Hypertension*. 2016;68:642-653. DOI: 10.1161/HYPERTENSIONAHA.116.07608.) • Online Data Supplement

Key Words: blood pressure ■ heart failure ■ hypertension ■ myocardial infarction ■ stroke

Try to achieve the lowest well-tolerated BP !

Grazie
per l’attenzione