

What's New in Hypertension? Lots!

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Dualities of Interest

- **Research**

- Sanofi-Aventis, GSK, Biovail, Boehringer Ingelheim, Astra Zeneca, AMGEN, Ortho-Biotech, Novartis, Novo Nordisk

- **Advisor**

- BMS, Sanofi-Aventis, Biovail, Novartis, Boehringer Ingelheim, AMGEN, Ortho-Biotech, Merck/Schering, Takeda, Servier, Valient

- **Continuing Education Events**

- Abbott/Solvay, BMS, Merck, Sanofi-Aventis, Biovail, Boehringer Ingelheim, Novartis, GSK, Servier, Valient

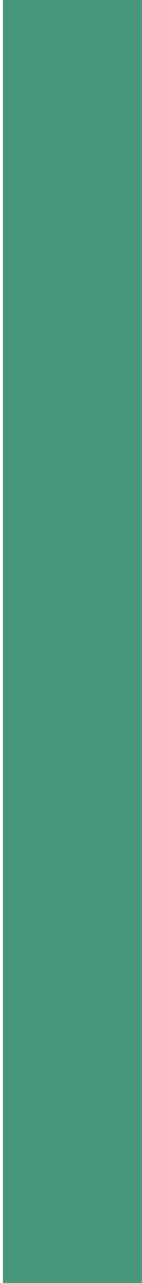
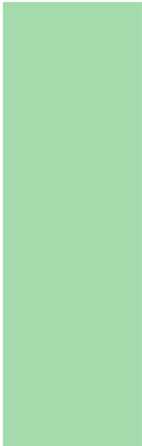
Topic 1: Diagnosis

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Where to take BP?

How to take BP?

What BP = Hypertension?



Case 1

- 56 year old man
- BP check in office 161/94
 - Right arm, sitting comfortably, careful manual reading taken by yourself
- Patient has checked his BP recently at the pharmacy and it was 112/79. He has a printout with this data from the pharmacy.
- He doesn't think he has hypertension

**Whose reading
is right?**

Diagnosis - In Office

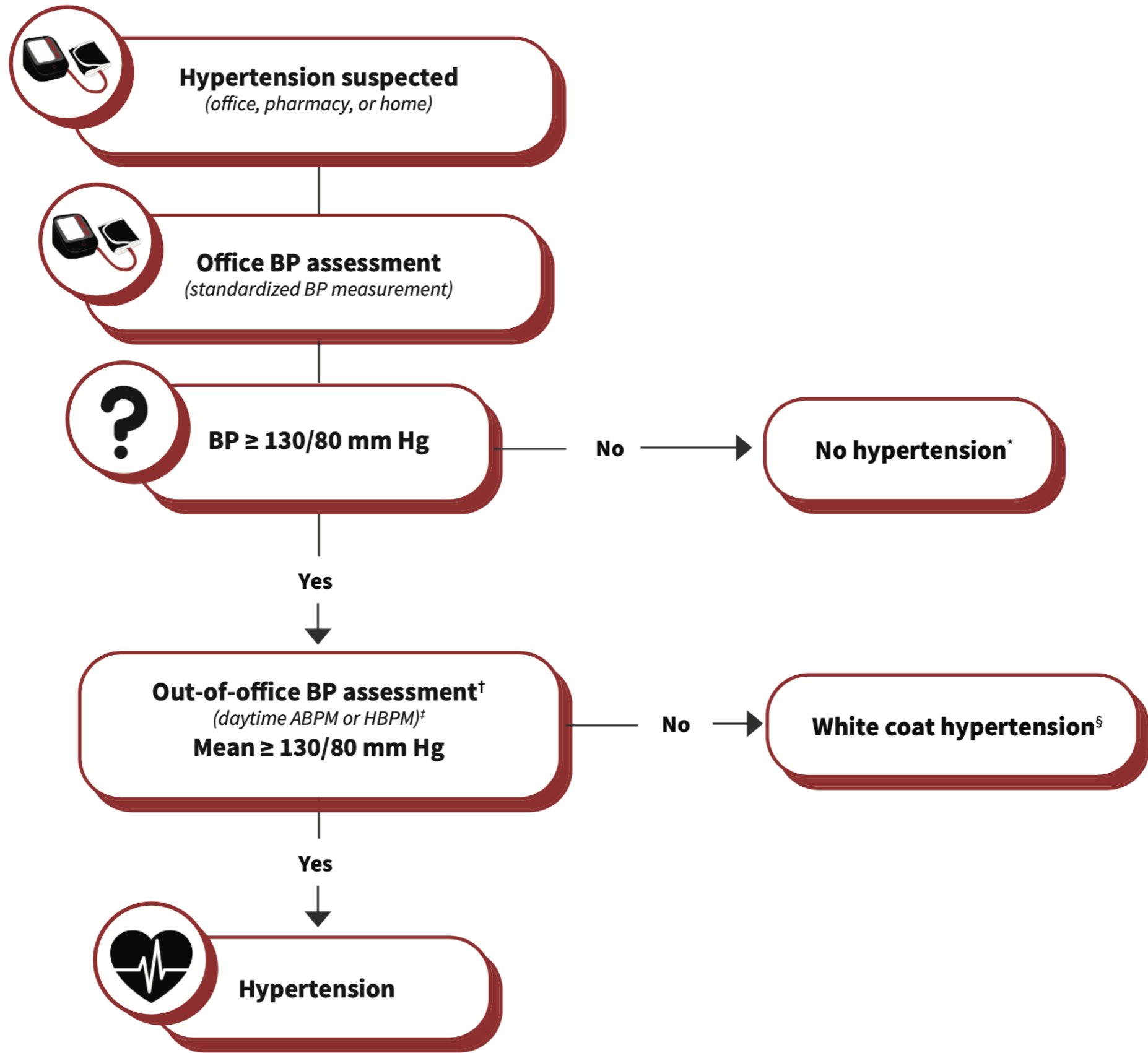
- Hypertension Canada Guideline
 - AOBP is the preferred method of performing in-office BP measurement (Grade D).

Hypertension - Diagnosis

- Generally speaking, out-of-office BP readings more reliable and predictive of future cardiorenal events
 - Assumptions:
 - Accurate monitor
 - Proper technique
 - Accurate recording of results

Diagnosis

- Hypertension Canada New Guideline 2025
 - Out-of-office BP assessment is recommended to confirm the diagnosis of hypertension or to detect white-coat hypertension and masked hypertension (strength of recommendation = strong, certainty = moderate)



Optimal blood pressure measuring technique:

- ✓ Sitting position
- ✓ Back supported
- ✓ Arm bare and supported
- ✓ Use a cuff size appropriate for arm
- ✓ Middle of the cuff at heart level
- ✓ Lower edge of the cuff 3 cm above elbow crease
- ✓ Ask patient not to talk or move during rest period and between measurements
- ✓ Legs uncrossed
- ✓ Feet flat on the floor



Proper preparation:

- Quiet and calm room
- No caffeine, tobacco, or exercise in the 30 minutes before the measurements

Appropriate equipment:

- Validated automated BP device (see <https://hypertension.ca/public/recommended-devices> or ask a pharmacist)
- Wide range of cuff sizes to select the appropriate size



Standardized protocol:

- If feasible, observe a rest period of 1–5 minutes before measurements
- Measure BP 3 times at 1-minute intervals
- Average and record all values

Diagnosis - Definition

- Hypertension Canada New Guideline 2025
 - The definition of hypertension in adults is recommended as BP \geq 130/80 mmHg when measured with a validated device under optimal conditions

Meta-analysis, SBP 130 breakpoint

- A recent large meta-analysis (> 70 000 participants)
- Vs. systolic BP target of ≥ 130 mm Hg, BP target of < 130 mm Hg led to:
 - 22% reduction in major adverse cardiovascular events (HR 0.78, 95% CI 0.70–0.87)
 - 11% reduction in all-cause death (HR 0.89, 95% CI 0.79–0.99)

SPRINT

Systemic BP

Intervention

Trial?

Topic 1: Diagnosis

Where to take BP?

How to take BP?

What BP = Hypertension?

Topic 1: Diagnosis

Where to take BP?

Home

How to take BP?

Automated Validated Device

Hypertension?

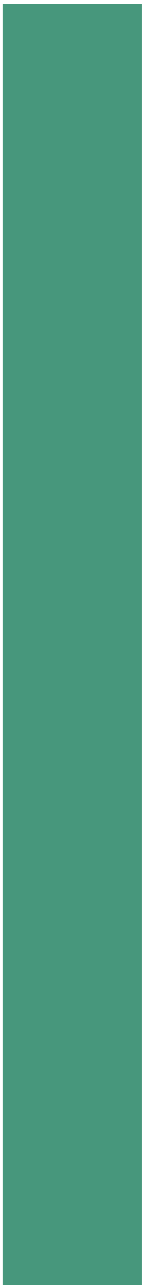
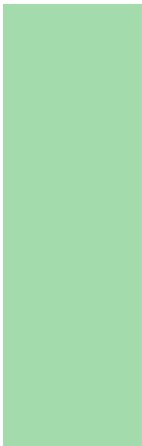
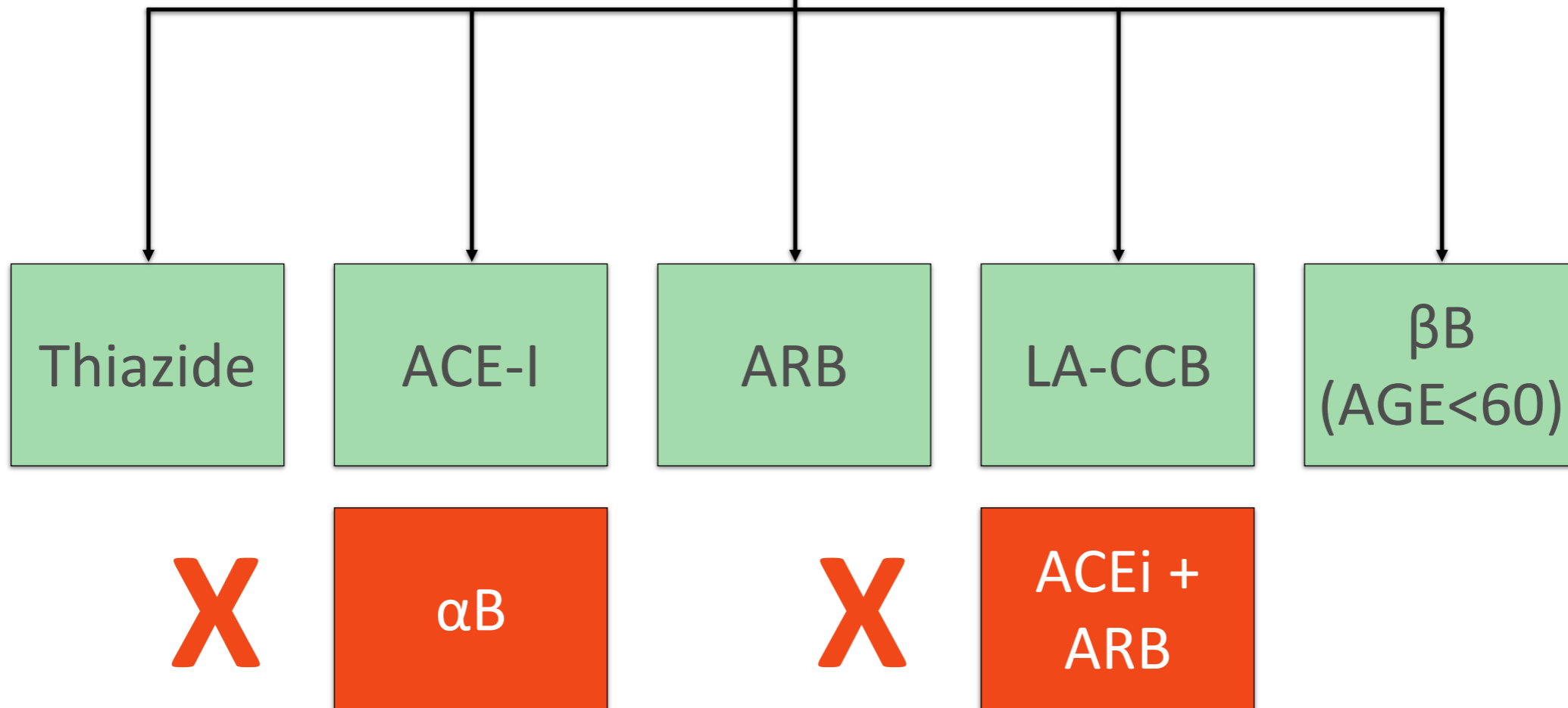
>130/80

Topic 2: Initial Therapy

**Treatment:
No Compelling
Indications**

Hypertension Without Compelling Indications

Lifestyle



FDC/SPC?

Topic 2: Initial Therapy

- An SPC will be more convenient and likely bring down BP faster
- But would it be more likely to have side effects?

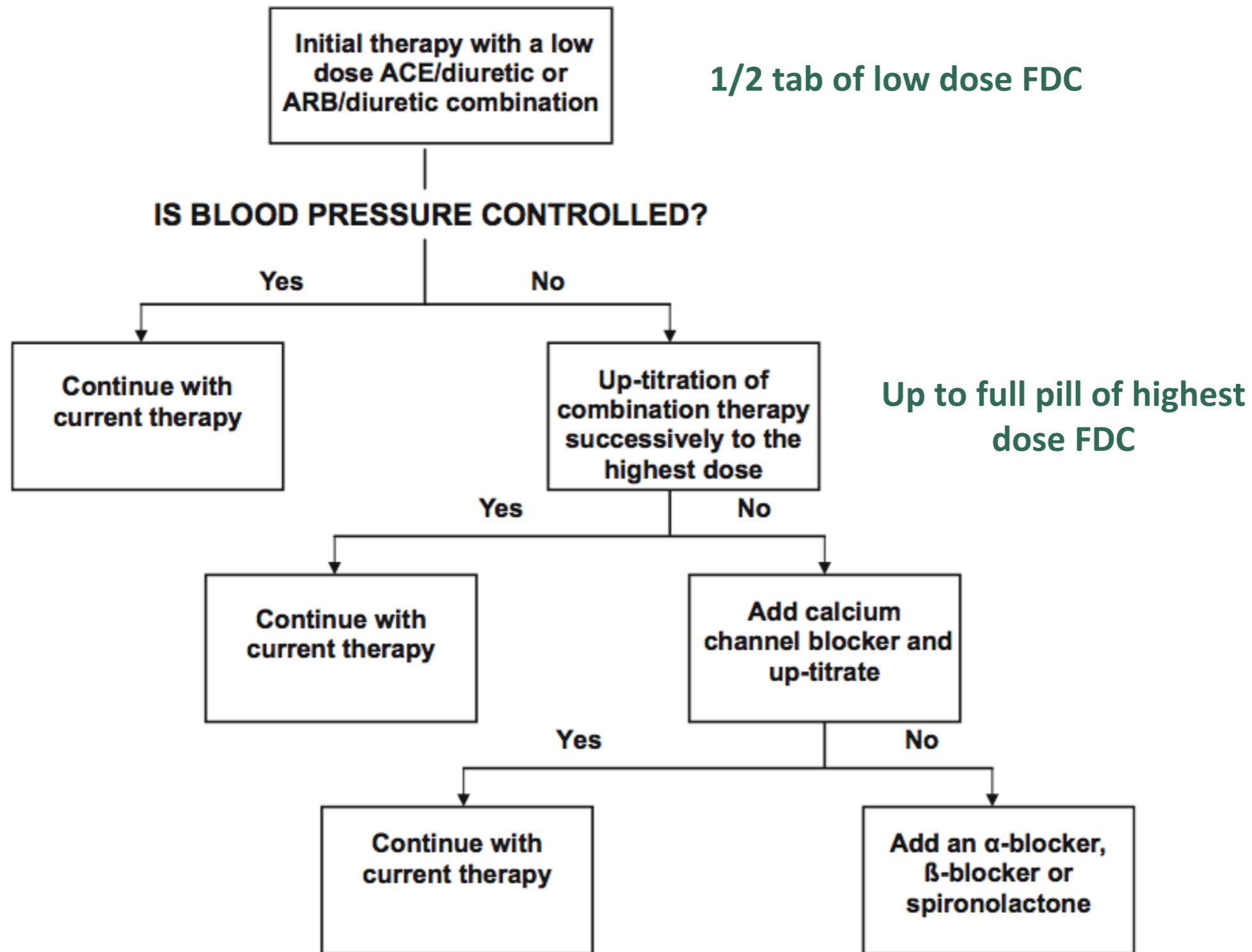
FDC/SPC?

**Can start with more than
one drug if BP >20/10
from target**



STITCH

Simplified Treatment
Intervention to
Control
Hypertension Study



Initial FDC in Uncontrolled Hypertension

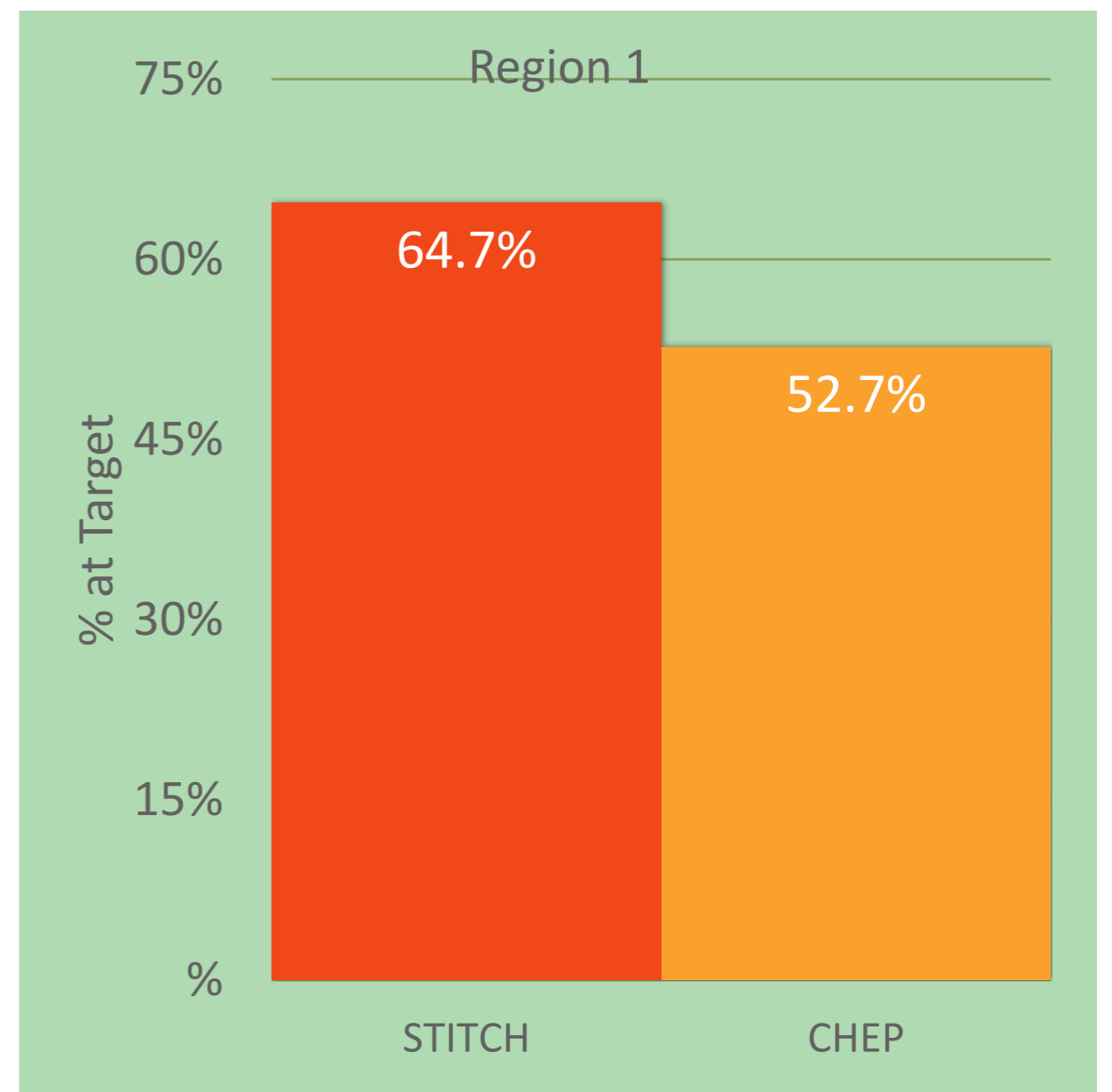
- **% at target**

- 64.7% STITCH, 52.7% CHEP (p=.026)
- Similar in analyses weighted or not weighted for practice size

- **BP change**

- 22.6 ± 4.9/10.4 ± 3.3 mmHg STITCH vs. 17.5 ± 5.2/8.2 ± 3.1 mmHg CHEP
- Difference 5.2 mmHg (95% CI 2.0-8.5, p=.002)/2.2 mmHg (95% CI 0.2-2.2, p=.03)

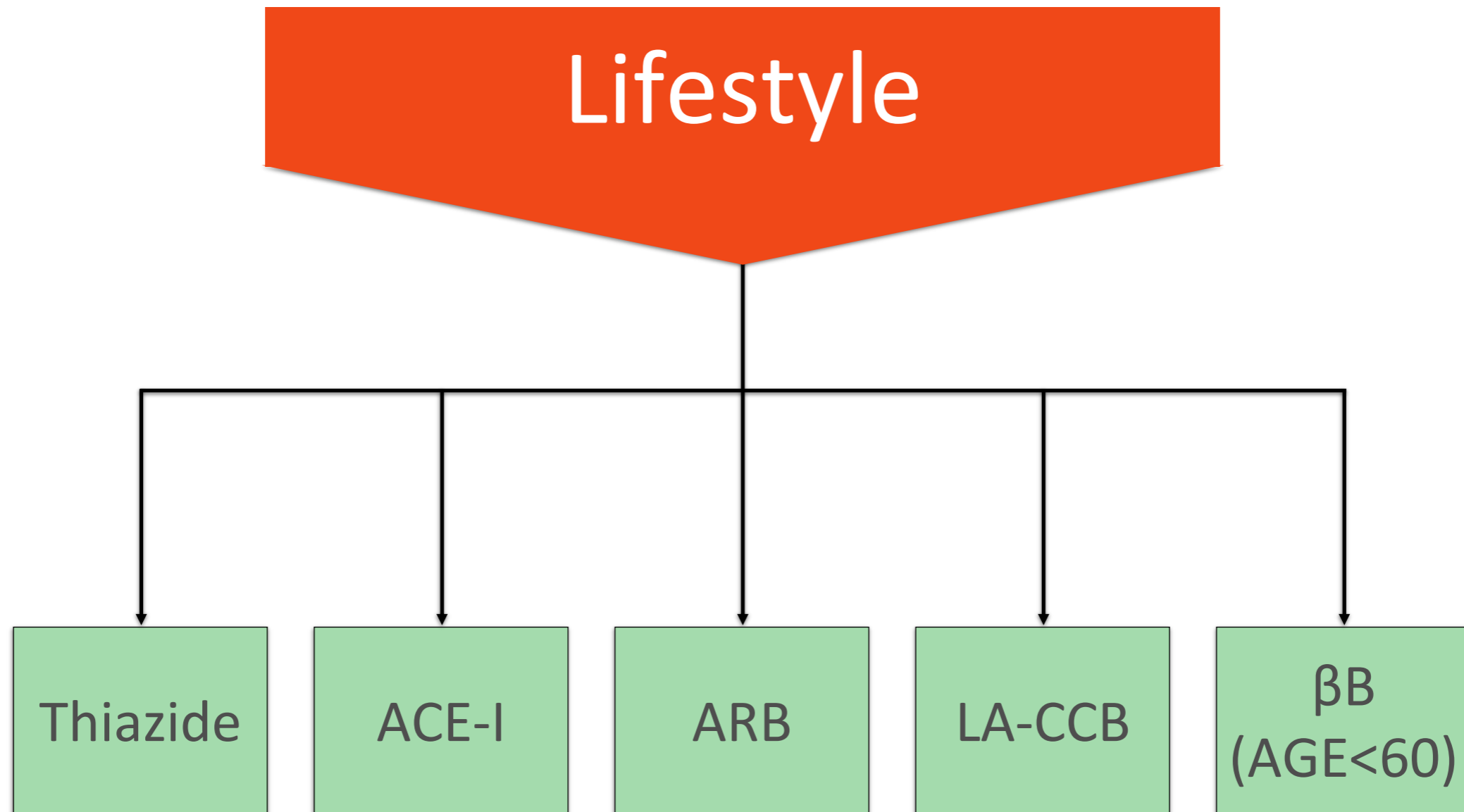
- **No increase in side effects**



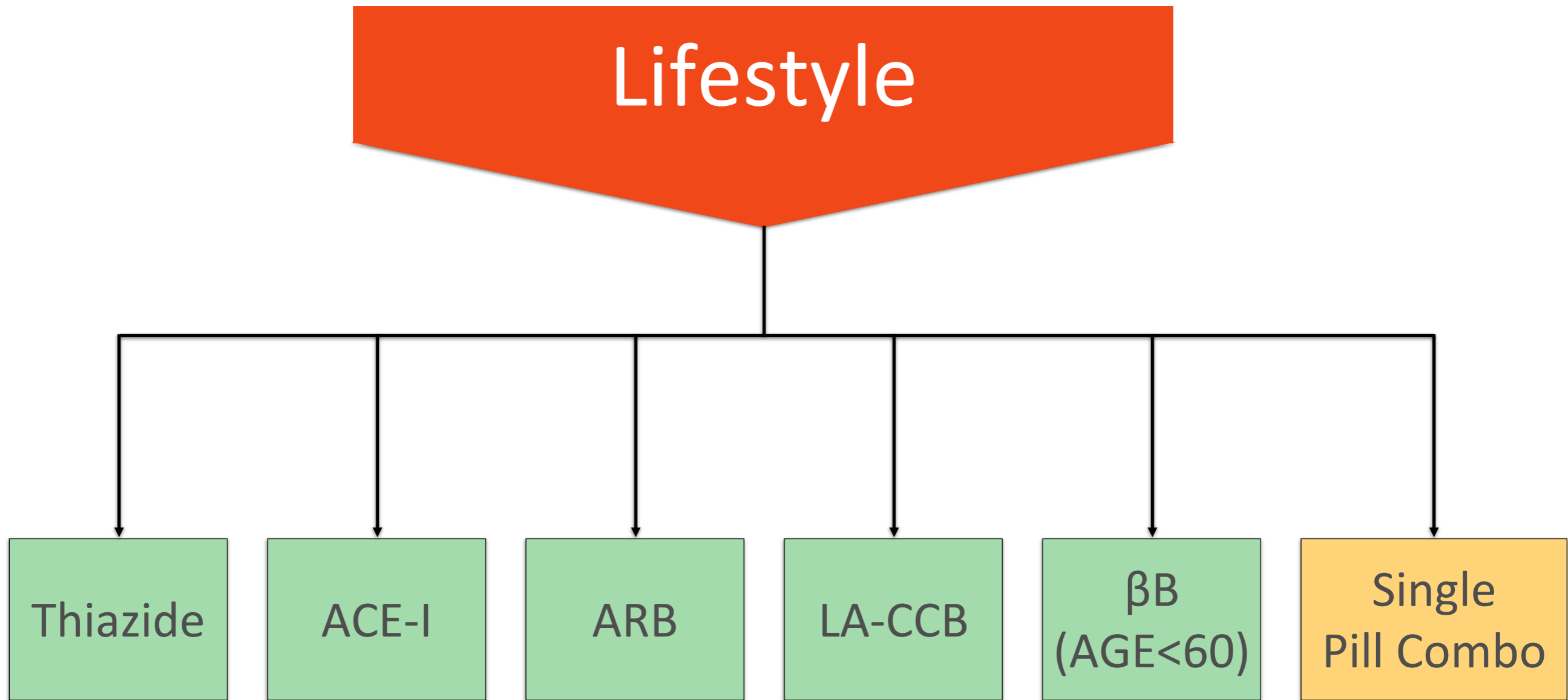
Hypertension Canada Guidelines 2017



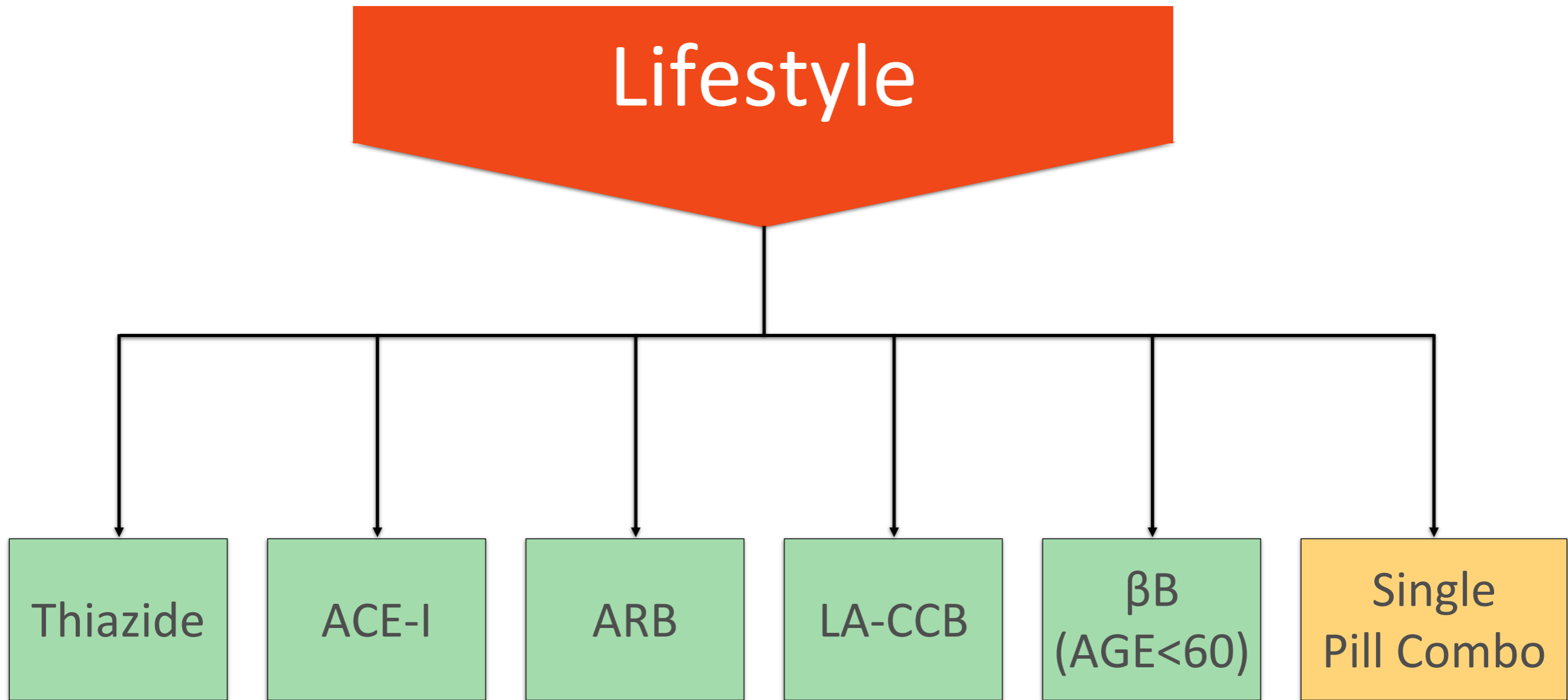
Hypertension Without Compelling Indications



Hypertension Without Compelling Indications



Hypertension Without Compelling Indications



ACEi + CCB

ARB + CCB

ACEi + diuretic

ARB + diuretic

Hypertension Canada 2025

- For adults with hypertension requiring pharmacotherapy, low-dose combination therapy (ideally as a single-pill combination) is recommended as initial treatment, which includes drugs from 2 of the following 3 complementary classes of medications: ACEIs or ARBs, thiazide or thiazide-like diuretics, and long-acting dihydropyridine CCBs.

Case 2 - Takeaways

- Initial use of SPCs in hypertension associated with more rapid achievement of BP goal
- Less therapeutic turbulence
- Same or fewer side effects

FDC/SPC?

**Now recommended as the
preferred initial therapy!**

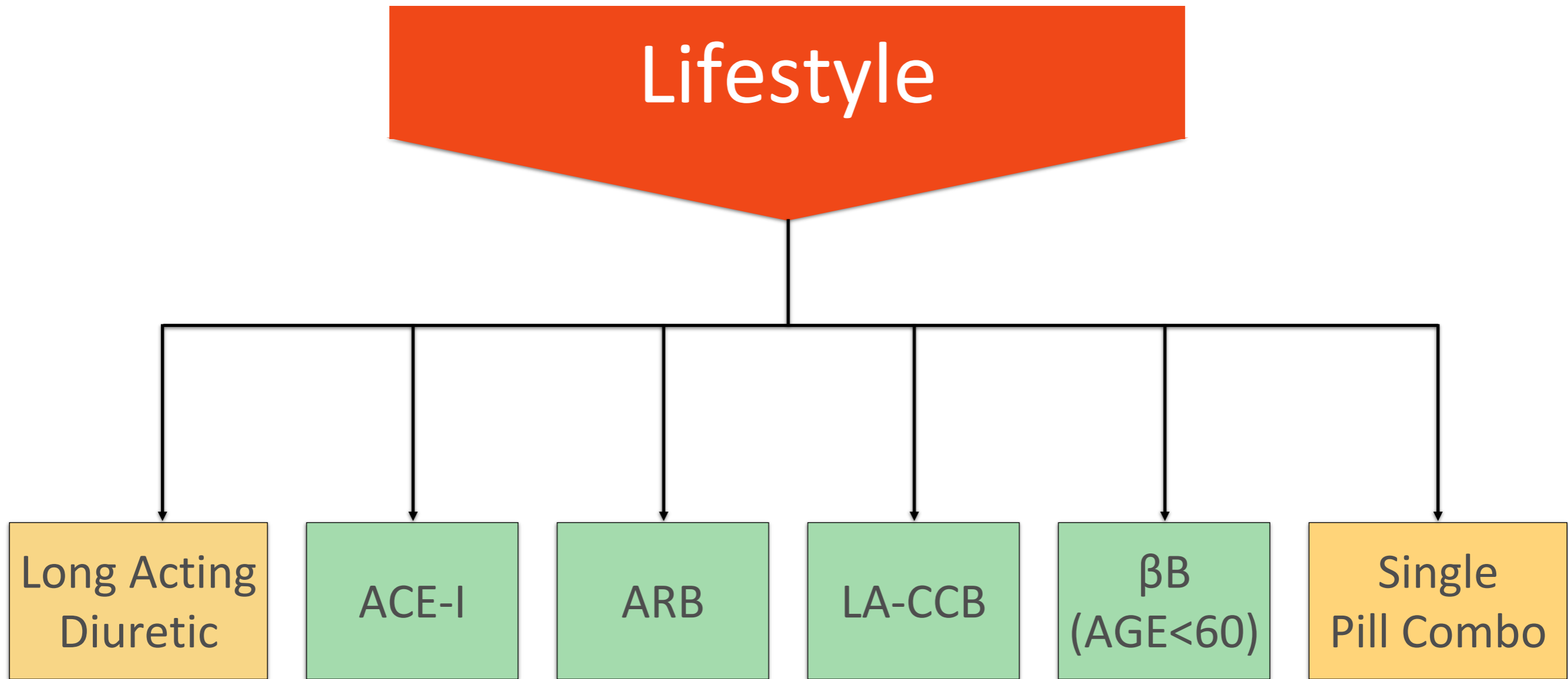
Topic 3: Optimizing Therapy



Hypertension Canada Guidelines 2017



Hypertension Without Compelling Indications

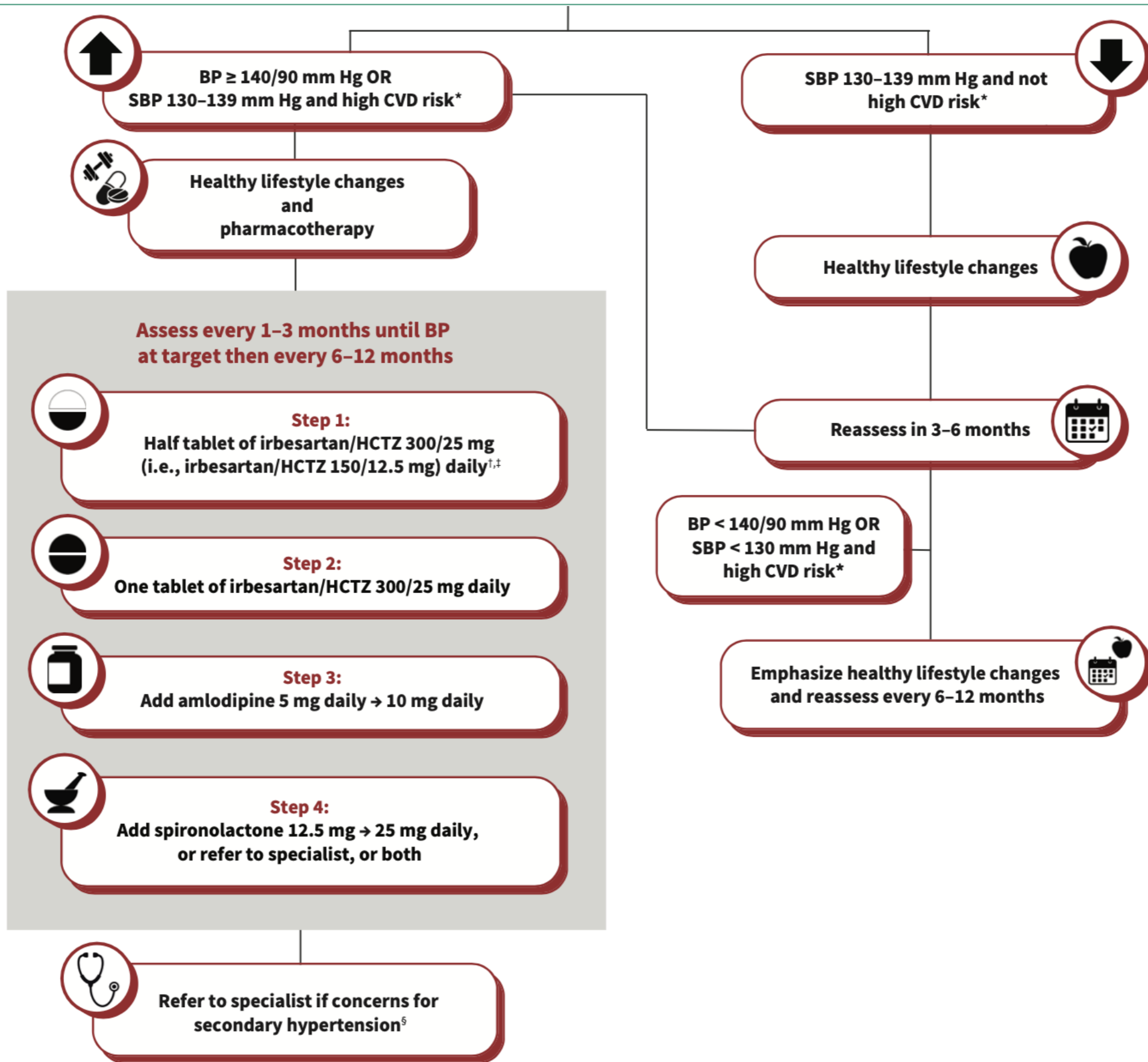


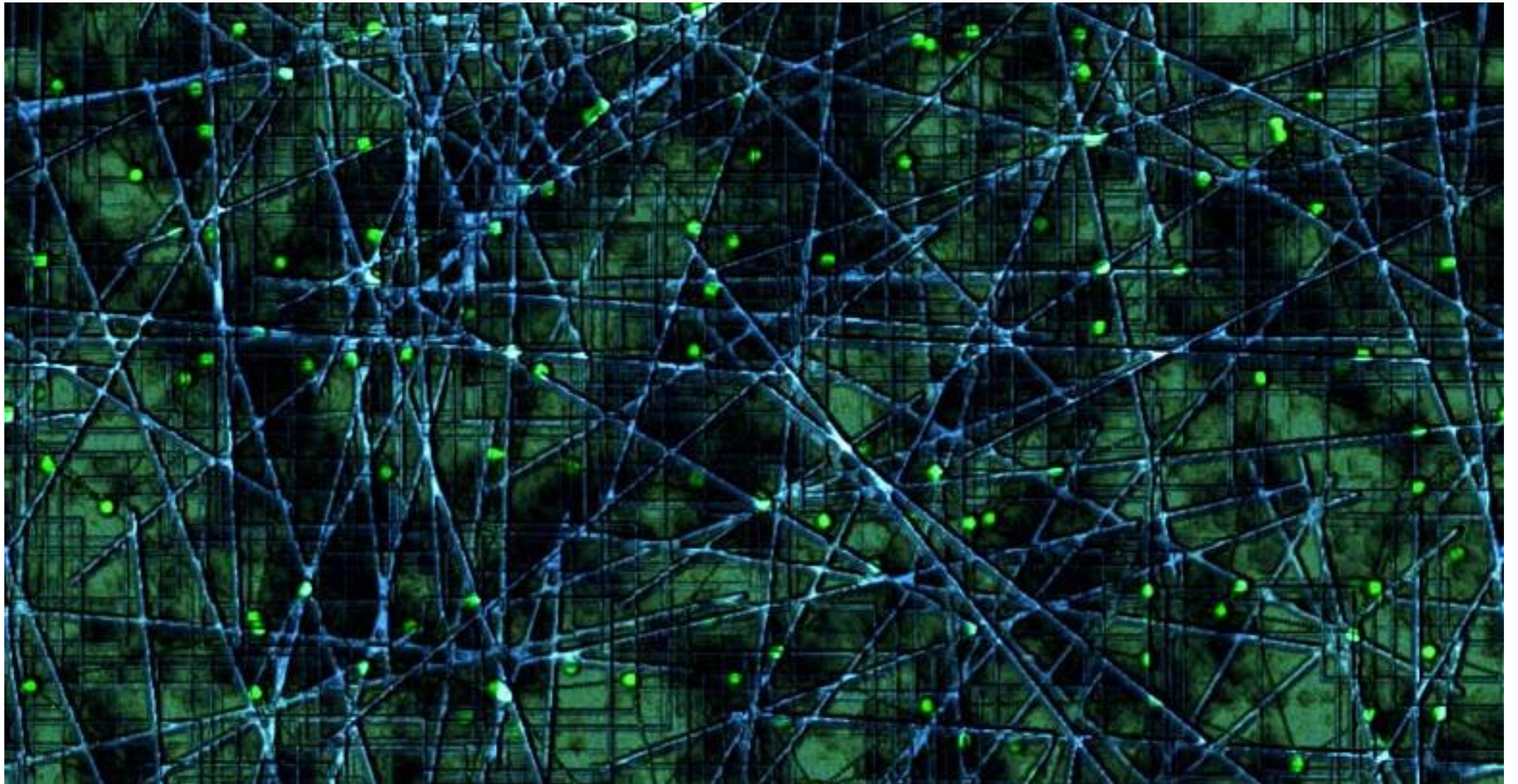
Problem:

**Too many
options**



**Tell me the drug
and the dose and
I'll do it**





Summary

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- Out of office BP may be more accurate
- Use automated unattended devices in clinic
- Initial use of SPCs now an recommended for first line therapy
 - Irbesartan + HCTZ followed by amlodipine followed by spironolactone
- Aim for < 130/80

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