Supplementary Material

# Supplementary Data

Supplementary Table 1:

Anti-hypertensive medications found in the VISTA dataset, divided into those with EC-stabilizing properties (described anywhere in the literature), and those without (no description of these properties in the literature).

|  |  |
| --- | --- |
| **EC-stabilizing properties (defined as increasing NO)** | **No EC-stabilizing properties** |
| **ACEIs:** [Captopril](https://en.wikipedia.org/wiki/Captopril)[Enalapril](https://en.wikipedia.org/wiki/Enalapril)[Fosinopril](https://en.wikipedia.org/wiki/Fosinopril)[Lisinopril](https://en.wikipedia.org/wiki/Lisinopril)[Perindopril](https://en.wikipedia.org/wiki/Perindopril)[Quinapril](https://en.wikipedia.org/wiki/Quinapril)[Ramipril](https://en.wikipedia.org/wiki/Ramipril)[Trandolapril](https://en.wikipedia.org/wiki/Trandolapril)[Benazepril](https://en.wikipedia.org/wiki/Benazepril)Cilazapril DelaprilImidaprilMoexiprilSpiraprilZofenopril | **Diuretics:**FurosemideBendroflumethiazideBumetanideTorsemideHydrochlorothiazide and ChlorothiazideEpitizideIndapamide (and its derivative Metipamide )MetolazoneAmilorideTriamterenePretanideClopamideMethyclothiazideMefrusideCyclopenthiazide |
| **Some Beta blockers** (third generation with NO release)[Carvedilol](https://en.wikipedia.org/wiki/Carvedilol)[Nebivolol](https://en.wikipedia.org/wiki/Nebivolol)[Bucindolol](https://en.wikipedia.org/wiki/Bucindolol)[Labetalol](https://en.wikipedia.org/wiki/Labetalol)Celiprolol  | **Most beta blockers:**[Atenolol](https://en.wikipedia.org/wiki/Atenolol)[Nadolol](https://en.wikipedia.org/wiki/Nadolol)[Propranolol](https://en.wikipedia.org/wiki/Propranolol)[Timolol](https://en.wikipedia.org/wiki/Timolol)[Metoprolol](https://en.wikipedia.org/wiki/Metoprolol)[Oxprenolol](https://en.wikipedia.org/wiki/Oxprenolol)[Pindolol](https://en.wikipedia.org/wiki/Pindolol)Bisoprolol |
| **ARBs:**[Candesartan](https://en.wikipedia.org/wiki/Candesartan)[Eprosartan](https://en.wikipedia.org/wiki/Eprosartan)[Irbesartan](https://en.wikipedia.org/wiki/Irbesartan)[Losartan](https://en.wikipedia.org/wiki/Losartan)[Olmesartan](https://en.wikipedia.org/wiki/Olmesartan)[Telmisartan](https://en.wikipedia.org/wiki/Telmisartan)[Valsartan](https://en.wikipedia.org/wiki/Valsartan)[Fimasartan](https://en.wikipedia.org/wiki/Fimasartan) | AcebutololEsmololBetaxolol |
| **Calcium Channel Blockers:**[Amlodipine](https://en.wikipedia.org/wiki/Amlodipine)[Cilnidipine](https://en.wikipedia.org/wiki/Cilnidipine)[Felodipine](https://en.wikipedia.org/wiki/Felodipine)[Isradipine](https://en.wikipedia.org/wiki/Isradipine)[Lercanidipine](https://en.wikipedia.org/wiki/Lercanidipine)[Levamlodipine](https://en.wikipedia.org/wiki/Levamlodipine)[Nicardipine](https://en.wikipedia.org/wiki/Nicardipine)[Nifedipine](https://en.wikipedia.org/wiki/Nifedipine)[Nimodipine](https://en.wikipedia.org/wiki/Nimodipine)[Nitrendipine](https://en.wikipedia.org/wiki/Nitrendipine)[Diltiazem](https://en.wikipedia.org/wiki/Diltiazem)[Verapamil](https://en.wikipedia.org/wiki/Verapamil)Nisoldipine ManidipineLacidipineBarnidipineNilvadipineMibefradilGallopamilBepridil |  |
| **Special diuretic:**Chlorthalidone |  |
| Cicletanine | **Alpha-blockers:**[Prazosin](https://en.wikipedia.org/wiki/Prazosin)[Terazosin](https://en.wikipedia.org/wiki/Terazosin)[Doxazosin](https://en.wikipedia.org/wiki/Doxazosin)[Clonidine](https://en.wikipedia.org/wiki/Clonidine)[Phentolamine](https://en.wikipedia.org/wiki/Phentolamine)[Indoramin](https://en.wikipedia.org/wiki/Indoramin)[Phenoxybenzamine](https://en.wikipedia.org/wiki/Phenoxybenzamine)UrapidilRilmenidine |
|  | [Reserpine](https://en.wikipedia.org/wiki/Reserpine) |
|  | [Tolazoline](https://en.wikipedia.org/wiki/Tolazoline) |
|  | [Hydralazine](https://en.wikipedia.org/wiki/Hydralazine) [Methyldopa](https://en.wikipedia.org/wiki/Methyldopa)  |
|  | [Eplerenone](https://en.wikipedia.org/wiki/Eplerenone)[Spironolactone](https://en.wikipedia.org/wiki/Spironolactone) (and metabolite  *potassium canrenoate*) |
| [Aliskiren](https://en.wikipedia.org/wiki/Aliskiren)  | [Sodium Nitroprusside](https://en.wikipedia.org/wiki/Sodium_nitroprusside) |
| [Bosentan](https://en.wikipedia.org/wiki/Bosentan)  | Ethacrynic Acid |
|  | [Guanabenz](https://en.wikipedia.org/wiki/Guanabenz)[Guanfacine](https://en.wikipedia.org/wiki/Guanfacine)[Guanethidine](https://en.wikipedia.org/wiki/Guanethidine)  |
|  | [Moxonidine](https://en.wikipedia.org/wiki/Moxonidine)[Mecamylamine](https://en.wikipedia.org/wiki/Mecamylamine)  |

**Supplementary Table 2:**

Statin medications taken by patients in the VISTA dataset.

|  |
| --- |
| Statins in dataset: |
| AtorvastatinFluvastatinLovastatinPravastatinRosuvastatinSimvastatinPitavastatinCerivastatinMevastatin[Pitavastatin](http://www.statinanswers.com/pitavastatin.htm) |

**Supplementary Table 3.** Univariable analysis comparing all patients exposed or not to endothelial cell-stabilizing antihypertensive medication limited to patients taking antihypertensive medication

|  |  |  |  |
| --- | --- | --- | --- |
|  | Exposed to EC-stabilizing anti-HT drugN=6671 | Exposed to non-EC stabilizing anti-HT drugsN=1354 | P |
| Female | 3024 | 633 | 0.33 |
| Hypertension history | 4840 | 791 | <0.0001 |
| Diabetes Mellitus | 1456 | 204 | <0.0001 |
| Myocardial Infarct | 833 | 172 | 0.76 |
| Atrial fibrillation | 1649 | 372 | 0.23 |
| Previous stroke | 1400 | 275 | 0.24 |
|  |
| Lacunar stroke | 1515 (23%) | 179 (15%) | <0.0001 |
| Non-lacunar stroke | 5156 (77%) | 1175 (85%) |

EC – Endothelial cell, HT-hypertensive

*The final cell reports significance testing for comparative analysis comparing proportion of lacunar stroke in those exposed and non-exposed to EC stabilizing antihypertensive medication.*