## **On-line Data Supplement**

**Title:** Longitudinal trends in hypertension management and mortality among octogenarians. Prospective cohort study

**Authors:** Alex Dregan, Rathi Ravindrarajah, Nisha Hazra, Shota Hamada, Stephen HD Jackson, Martin C Gulliford

**Correspondence:** Dr Alex Dregan, Department of Primary Care and Public Health, 5th Floor, Addison House, Guy's Campus, London, SE1 1UL, UK. Tel: 0207 8486639, Email: alexandru.dregan@kcl.ac.uk.

## Contents:

Supplementary Figure S1

Supplementary Figure S2

Supplementary Figure S3

Supplementary Figure S4

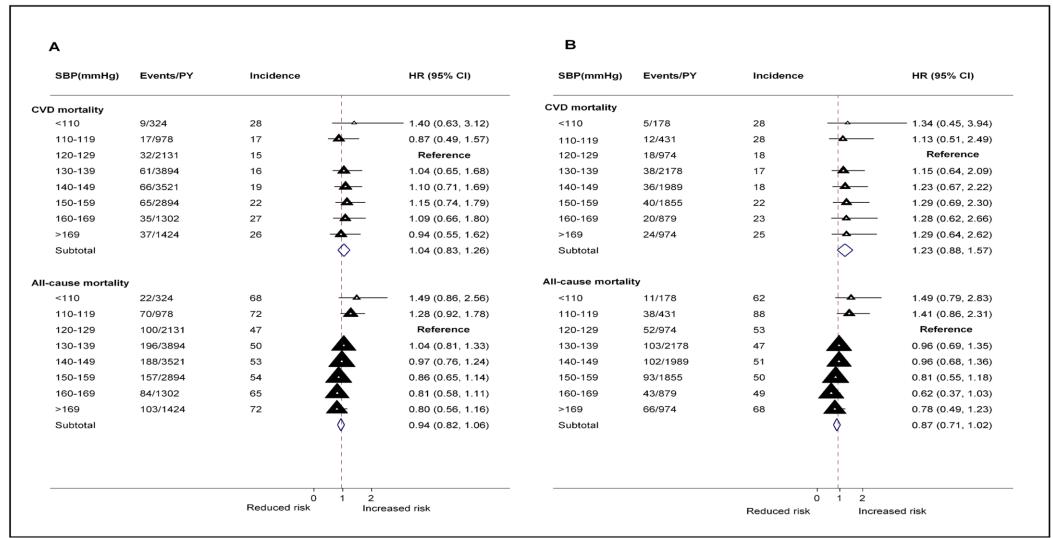


Figure S1 Adjusted hazard ratios (HR) for mortality by systolic blood pressure (SBP) levels among total (A, N=2270) and treated (B, N=1041) octogenarians after excluding baseline CVD. The analyses adjusted for age, gender, cholesterol, BMI, chronic illness (CVD, type 2 diabetes, arthritis, cancer, liver disease and chronic kidney disease), smoking, physical activity, depression, antihypertensive therapy (for overall analyses), social class, diastolic blood pressure. Note: SBP=systolic blood pressure; PY=person-years; CVD=cardiovascular disease.

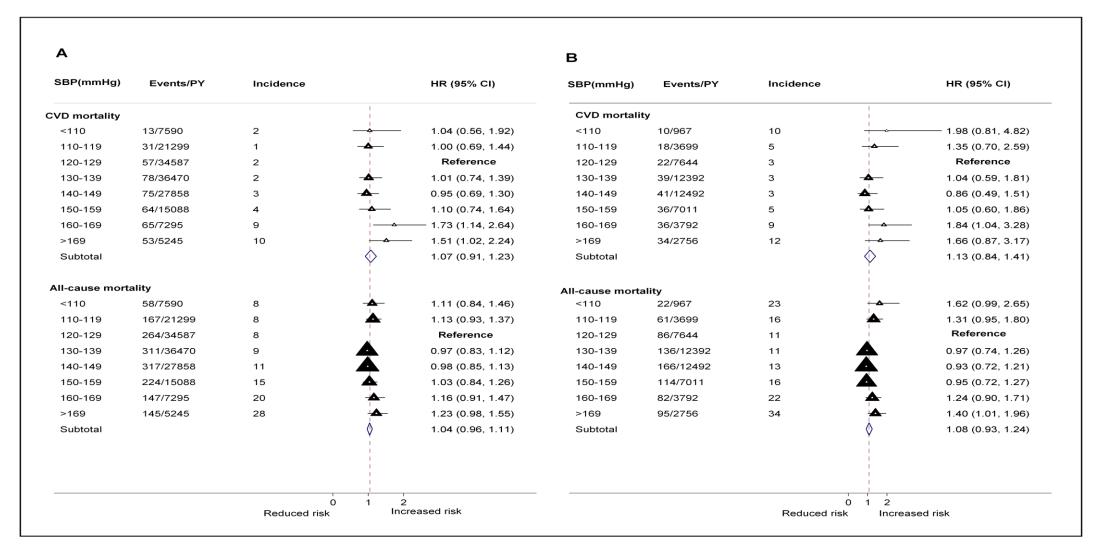


Figure S2Adjusted hazard ratios (HR) for mortality by systolic blood pressure (SBP) levels among total (A, N=19968) and treated (B, N=5611) people age 50 to 79 after excluding baseline CVD. The analyses adjusted for age, gender, cholesterol, BMI, chronic illness (type 2 diabetes, arthritis, cancer, liver disease and chronic kidney disease), smoking, physical activity, depression, antihypertensive therapy (for overall analyses), social class, diastolic blood pressure. Note: SBP=systolic blood pressure; PY=person-years; CVD=cardiovascular disease.

A				В			
SBP(mmHg)	Events/PY	Incidence	HR (95% CI)	SBP(mmHg)	Events/PY	Incidence	HR (95% CI)
D mortality				CVD mortality			
<120	41/1701	24 —	1.12 (0.75, 1.67)	<120	30/876	34	1.21 (0.73, 2.00)
120-129	45/2543	18	Reference	120-129	28/1349	21	Reference
130-139	79/4405	18 -4	1.03 (0.74, 1.45)	130-139	52/2601	20	0.92 (0.58, 1.48)
140-149	72/3996	18 🕳	1.03 (0.69, 1.53)	140-149	39/2353	17	0.91 (0.59, 1.42)
150-159	78/3322	23	0.93 (0.77, 1.55)	150-159	51/2218	23	1.09 (0.72, 1.65)
>159	94/3023	31	0.95 (0.76, 1.60)	>159	63/2130	30	1.20 (0.78, 1.85)
Subtotal			1.01 (0.83, 1.19)	Subtotal		<	1.03 (0.82, 1.25)
cause mortality	,			All-cause mortal	ity		
<120	120/1701	71	1.34 (1.03, 1.73)	<120	68/876	77	1.30 (0.91, 1.86)
120-129	128/2543	50	Reference	120-129	75/1349	56	Reference
130-139	237/4405	54	1.05 (0.84, 1.32)	130-139	135/2601	52	0.95 (0.70, 1.30)
140-149	215/3996	54	1.03 (0.80, 1.33)	140-149	118/2353	50	0.95 (0.73, 1.24)
150-159	187/3322	56	1.03 (0.69, 1.26)	150-159	117/2218	53	0.82 (0.62, 1.08)
>159	229/3023	76	1.23 (0.73, 1.25)	>159	144/2130	68	0.80 (0.59, 1.09)
Subtotal		<	1.12 (0.99, 1.24)	Subtotal		<b>♦</b>	0.90 (0.78, 1.02)
		0 1	2			0 1	2

Figure S3 Adjusted hazard ratios (HR) for mortality by systolic blood pressure (SBP) levels among total (A, N=2692) and treated (B, N=1299) octogenarians using restricted SBP categories. The analyses adjusted for age, gender, cholesterol, BMI, chronic illness (type 2 diabetes, arthritis, cancer, liver disease and chronic kidney disease), smoking, physical activity, depression, antihypertensive therapy (for overall analyses), social class, diastolic blood pressure. Note: SBP=systolic blood pressure; PY=person-years; CVD=cardiovascular disease.

SBP(mmHg)	Events/PY	Incidence	HR (95% CI)	B SBP(mmHg)	Events/PY	Incidence		HR (95% CI)
VD mortality				CVD mortality			i	
<120	73/31298	2 -	1.13 (0.83, 1.53)	<120	51/6381	8	<b>_</b>	1.30 (0.73, 2.00)
120-129	77/37025	2	Reference	120-129	39/9280	4		Reference
130-139	107/39948	3	1.00 (0.76, 1.32)	130-139	60/14869	4	_	1.01 (0.89, 1.91)
140-149	98/30442	3	0.93 (0.72, 1.20)	140-149	62/14436	4	<b>A</b>	0.94 (0.69, 1.48)
150-159	84/16780	5	1.06 (0.82, 1.37)	150-159	53/8299	6	<b>-</b>	1.17 (0.82, 1.66)
>159	146/14147	10	1.47 (1.13, 1.92)	>159	92/7949	12		<b>—</b> 1.67 (1.19, 2.34)
Subtotal		•	1.08 (0.92, 1.23)	Subtotal			$\diamondsuit$	1.17 (0.93, 1.40)
All-cause mort	ality		 	All-cause morta	lity			
<120	289/31298	9	1.22 (1.06, 1.41)	<120	133/6381	21	<b>_</b>	1.33 (1.06, 1.67)
120-129	322/37025	9	Reference	120-129	133/9280	14		Reference
130-139	386/39948	10	1.09 (0.95, 1.25)	130-139	197/14869	13	<b>A</b>	1.11 (0.89, 1.38)
140-149	386/30442	13	1.01 (0.90, 1.14)	140-149	219/14436	15	<b>A</b>	1.06 (0.88, 1.29)
150-159	276/16780	16	1.02 (0.87, 1.21)	150-159	157/8299	19	<b>A</b>	1.13 (0.91, 1.39)
>159	361/14147	26	1.21 (1.03, 1.42)	>159	234/7949	29	_	1.41 (1.14, 1.76)
Subtotal			1.10 (1.01, 1.18)	Subtotal			$\Diamond$	1.17 (1.05, 1.30)
			1 					
		0	1 2			0	1 2	

Figure S4 Adjusted hazard ratios (HR) for mortality by systolic blood pressure (SBP) levels among total (A, N=22007) an dtreated (B, N=6311) people age 50 to 79 using restricted SBP categories. The analyses adjusted for age, gender, cholesterol, BMI, chronic illness (CVD, type 2 diabetes, arthritis, cancer, liver disease and chronic kidney disease), smoking, physical activity, depression, antihypertensive therapy (for overall analyses), social class, diastolic blood pressure. Note: SBP=systolic blood pressure; PY=person-years; CVD=cardiovascular disease.