Supplementary Online Content

Leiba A, Fishman B, Twig G, et al. Association of adolescent hypertension with future end-stage renal disease. *JAMA Intern Med.* Published online February 25, 2019. doi:10.1001/jamainternmed.2018.7632

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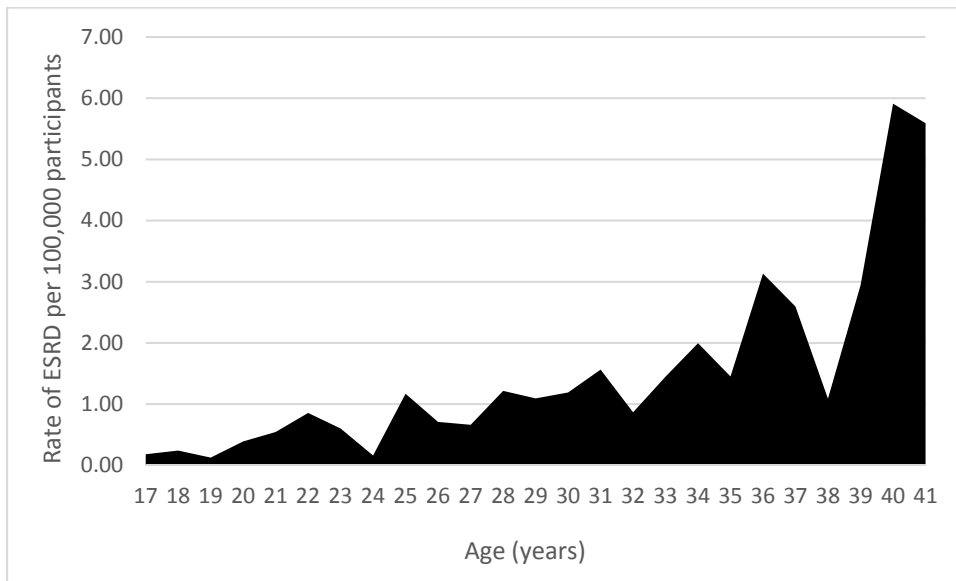**eTable 4.** Models' Results of Subanalysis of the Overweight Population

This supplementary material has been provided by the authors to give readers additional information about their work.

eFigure 1. The Rate of New ESRD Cases per 100,000 Participants by Age During 2 Enrollment Periods: 1967-2013 and 1990-2013

A: Presents the rate of new ESRD cases per 100,000 participants by age for those participants examined in the conscription center during 1967-2013. The figure shows the low rate of cases before the age of 40.
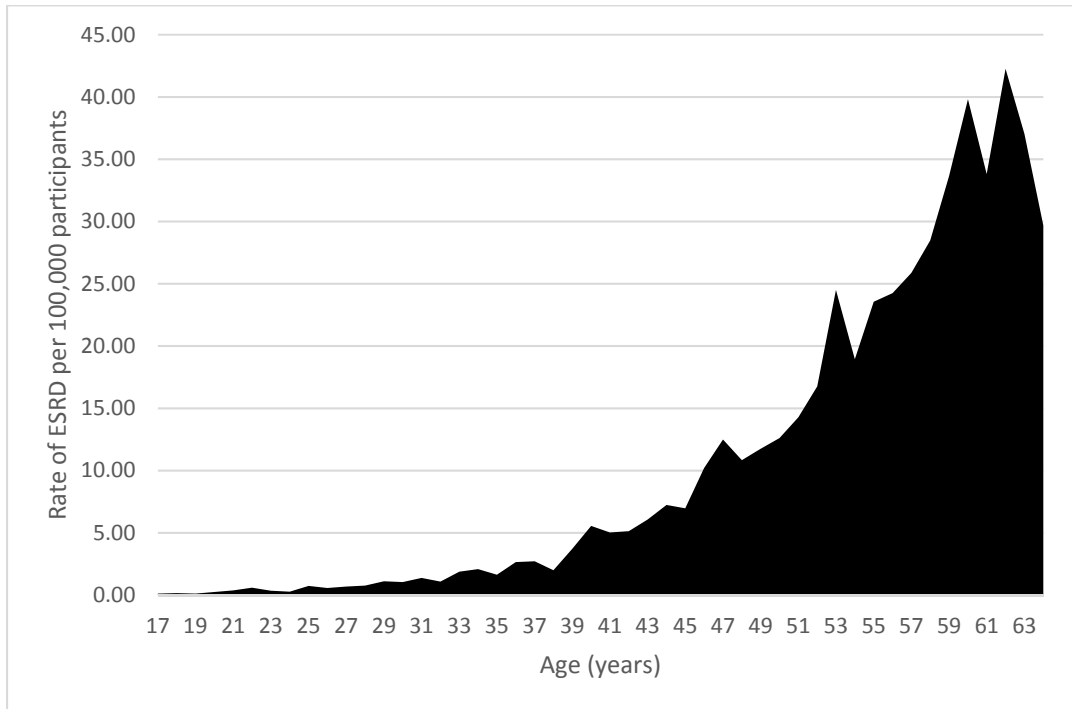
B: Presents the rate of new ESRD cases per 100,000 participants by age who were examined in the conscription center during 1990-2013. Notably, every participant who was examined in the conscription center started the follow up on the same day. This figure shows the low rate of ESRD cases before the age of 40, thus, strengthening our assumption that the lack of follow up before 1990 of the subjects enrolled in the cohort between 1967 to 1989, is negligible.

eTable 1. Models' Results of Sub analysis of the Participants Enrolled During 1977-2013

Cox regression models' results of the sub analysis of subjects examined between 1977 and 2013 (N= 2,264,301). Overall, there were 787 cases of ESRD in this population with 15 cases amongst examinees with hypertension (N=6118).

	All population N=2,264,031	
	HR	**95%CI**
Model 1 (Crude)	**5.43**	**3.25-9.05**
Model 2	**3.38**	**2.03-5.65**
Model 3	**1.82**	**1.01-3.26**

Model 1- unadjusted- crude.

Model 2 was adjusted for year of birth, age at examination at a military recruitment center and sex**.**

Model 3 was adjusted for year of birth, age at examination at a military recruitment center, sex, BMI, country of origin, years of education and socioeconomic status.

 Overall, there were 15 cases of ESRD found amongst the hypertensive group, however the association remained significant. A participant who enrolled in the study in 1977, at the age of 17 years, would have attained the age of 30 years by 1990 (the beginning of the ESRD registry). In this analysis, the effect of the lack of follow up years until 1989, is even more negligible than in the main analysis (1967-2013). Note that the association persisted, although, there are less ESRD cases, given that most cases of ESRD occurred in participants enrolled in the first decade of the cohort (64%).

eTable 2. Models' Results of Sub analysis of the Participants Enrolled During 1967-1984

Cox regression models' results of the sub analysis of subjects examined between 1967-1984 (N= 728,145). Overall, there were 1870 cases of ESRD in this population with 39 cases found amongst the hypertensive group (N=3,753)

|	All population N=728,145	
	HR	**95%CI**
Model 1 (Crude)	4.17	3.04-5.73
Model 2	3.40	2.48-4.68
Model 3	1.90	1.33-2.68

Model 1- unadjusted- crude.

Model 2 was adjusted for year of birth, age at examination at a military recruitment center and sex**.**

Model 3 was adjusted for year of birth, age at examination at a military recruitment center, sex, BMI, country of origin, years of education and socioeconomic status.

Because of the insidious nature of ESRD development, many participants of the entire cohort would have had a low risk of developing ESRD. The included subjects in this sub analysis, had at least 30 years of follow up to develop ESRD.

eFigure 2. Survival Diagrams by Examination Periods: 1977-2013 and 1967-1984

A. ESRD cases of participants examined during 1977-2013 amongst the hypertensive (N=6,118) group compared to the non-hypertensive group (N=2,258,183).
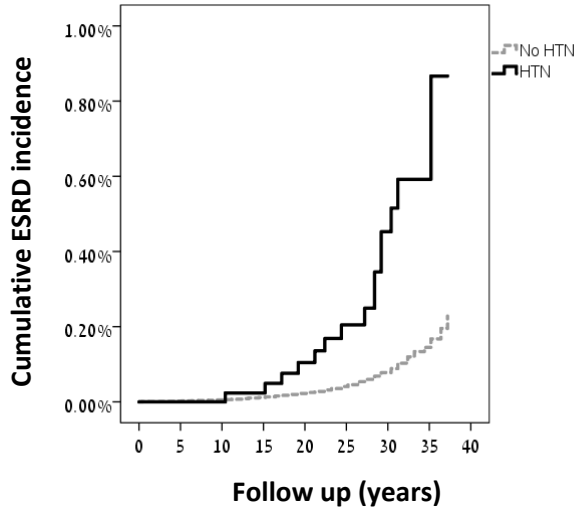
B. ESRD cases of participants examined during 1967-1984 amongst the hypertensive (N=3,753) group compared to the non-hypertensive group (N=724,392).
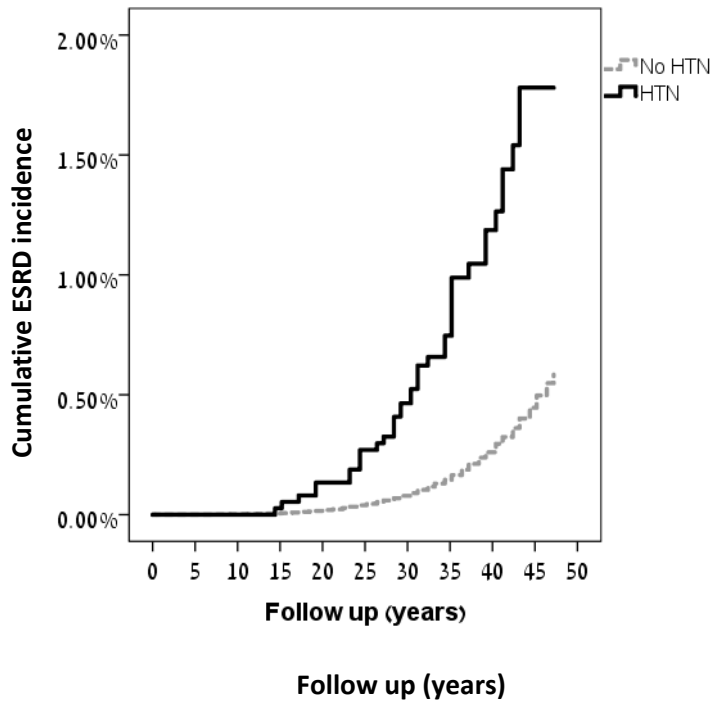
eTable 3. Stratification of the Population by BMI: Non-overweight and Overweight

Presents the stratification of the population by BMI: Non-overweight (CDC BMI <85TH percentile) and overweight (CDC BMI≥85th percentile).

	Overweight and obese subjects only (CDC BMI>85TH percentile)			Non overweight weight (CDC BMI<85TH percentile)		
	Normal BP N=329289	**Hypertensive N=3802**	**Total N=333091**	**Normal BP N=2,237231**	**Hypertensive N=3946**	**Total N=2241177**
Number of ESRD overall (%)	525 (0.2)	31 (0.8)	556 (0.2)	1444 (0.1)	9 (0.1)	1453 (0.1)
Follow-up period (PY)	5701906	88932	5790839	48,532,758	110,130	48,642,889
Median follow-up, years (IQR)	14.8 (7.1-24.9)	24.1 (8.9-35.2)	14.8 (7.2-25.0)	20.4 (11.1-31.9)	30.4 (19.72-37.2)	20.4 (11.1-31.9)
Age at ESRD (mean±SD)	53.7±6.3	49.7±3.7	53.7±6.3	53.7±6.3	49.7±3.7	53.7±6.3
Crude incidence of ESRD (cases per 100,000 PY)	9.2	34.9	9.6	3.0	8.2	3.0

Abbreviations: BP, blood pressure; CDC, Centers for Disease Control and Prevention; BMI, body mass index; SD, standard deviation; PY, person years.

eTable 4. Models' Results of Sub analysis of the Overweight Population

Cox regression models of the sub analysis of the overweight population (CDC BMI>85TH percentile) compared to the entire cohort. Overall, there were 556 cases of ESRD in this population with 31 cases amongst the hypertensive participants (N=3,802).

	All population N=2,658,238		CDC BMI>85 percentile N= 333,091	
	HR	95%CI	HR	95%CI
Model 1 (Crude)	5.07	3.73-6.88	3.41	2.38-4.91
Model 2	3.33	2.45-4.52	1.97	1.37-2.84
Model 3	1.98	1.42-2.77	1.90	1.29-2.78

Abbreviations: BP, blood pressure; CDC, Centers for Disease Control and Prevention; BMI, body mass index; SD, standard deviation; PY, person years.

Model 1- unadjusted- crude.

Model 2 was adjusted for year of birth, age at examination at a military recruitment center and sex**.**

Model 3 was adjusted for year of birth, age at examination at a military recruitment center, sex, BMI, country of origin, years of education and socioeconomic status.

eFigure 3. Survival Diagrams Stratified by BMI

A. ESRD cases of participants examined commencing from 1967 amongst the hypertensive (N=3,946) group compared to the non-hypertensive group (N=2,237,231) in the non-overweight population (CDC BMI<85TH percentile)
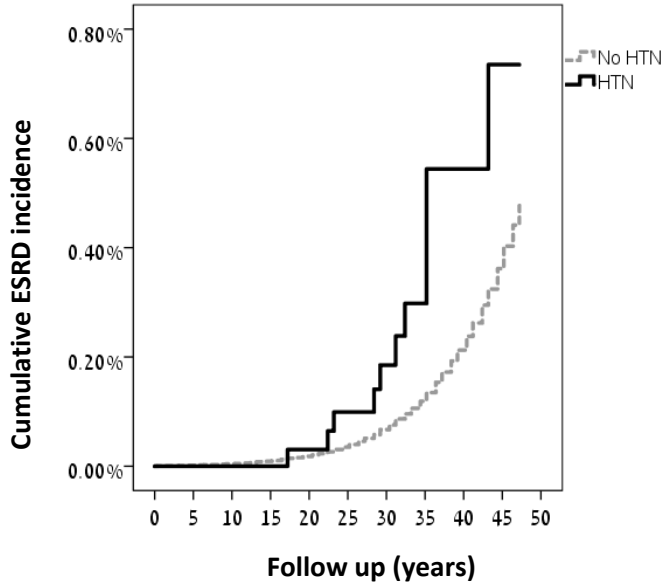
B. ESRD cases of participants examined commencing from 1967 amongst the hypertensive (N=3,802) group compared to the non-hypertensive group (N=329,289) in the overweight and obese population (CDC BMI >85TH percentile)