

1 **Supplementary Information**

2 **Table S1.** Cramer's  $V \pm 95\%$  CI for all pairwise combinations of deprivation metrics – men in top half  
 3 (shaded; N=4516), women in bottom half (unshaded; N=4332). These estimates were generated as a  
 4 sensitivity analysis for the imputation used to complete missing deprivation data by proxy using  
 5 other household adults, therefore these estimates exclude any individuals with imputed data. Data  
 6 source: ONS LS.

	<b>Occupation (individ)</b>	<b>Education (individ)</b>	<b>Income (individ)</b>	<b>Occupation (LSOA)</b>	<b>Education (LSOA)</b>	<b>Income (LSOA)</b>
<b>Occupation (individ)</b>		0.41 (0.39 – 0.43)	0.39 (0.36 – 0.41)	0.18 (0.15 – 0.21)	0.19 (0.17 – 0.22)	0.18 (0.15 – 0.21)
<b>Education (individ)</b>	0.42 (0.40 – 0.45)		0.25 (0.22 – 0.27)	0.12 (0.09 – 0.15)	0.14 (0.11 – 0.17)	0.12 (0.09 – 0.15)
<b>Income (individ)</b>	0.56 (0.54 – 0.58)	0.31 (0.28 – 0.34)		0.08 (0.05 – 0.11)	0.09 (0.06 – 0.11)	0.08 (0.06 – 0.11)
<b>Occupation (LSOA)</b>	0.15 (0.12 – 0.18)	0.09 (0.06 – 0.12)	0.08 (0.05 – 0.11)		0.46 (0.45 – 0.49)	0.63 (0.61 – 0.67)
<b>Education (LSOA)</b>	0.17 (0.14 – 0.19)	0.11 (0.08 – 0.14)	0.08 (0.05 – 0.11)	0.48 (0.45 – 0.50)		0.48 (0.46 – 0.51)
<b>Income (LSOA)</b>	0.15 (0.12 – 0.18)	0.09 (0.06 – 0.12)	0.08 (0.05 – 0.12)	0.63 (0.61 – 0.66)	0.49 (0.46 – 0.51)	

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8 **Table S2.** Data on average total weekly income per age group in each wave of the ELSA study, taken  
 9 directly from Table EL2a in the ELSA study report [34]. The shading has been added to illustrate each  
 10 age cohort moving through the waves of the study (as mid-point age of each age category at two-  
 11 year intervals of the waves of the study).

Age group	Wave 1 (2002-2003)	Wave 2 (2004-2005)	Wave 3 (2006-2007)	Wave 4 (2008-2009)	Wave 5 (2010-2011)	Wave 6 (2012-2013)
50-54	464.11	453.76	434.42	432.07	399.10	474.18
55-59	422.60	415.02	391.35	385.86	369.92	366.09
60-64	394.19	385.33	369.41	348.70	332.15	339.47
65-69	345.51	313.67	313.08	307.48	296.21	313.03
70-74	297.62	308.96	287.19	292.42	303.03	281.56
75+	275.11	269.58	257.37	266.03	274.18	272.99

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 13 The annualised change in income was calculated per age group (taken over the widest possible  
 14 period for each age group in the given data), and the calculated annual percentage decrease in  
 15 income was applied to the current dataset for every year after the age of 60. Age groups were  
 16 assigned according to the age at the start of the study (i.e census year 2001). The actual percentage  
 17 decreases which were used are shown in **Table S3**.

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19 **Table S3.** Calculated annualised percentage decreases in income, per age group. Shading is applied  
 20 per age group to match **Table S2**.

Age group	Observed decrease (years of data)	Annualised decrease
50-54	27% (10)	2.7%
55-59	26% (10)	2.6%
60-64	29% (10)	2.9%
65-69	21% (10)	2.1%
70-74	10.6% (6)	1.8%
75+	2.0% (2)	1.0%

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- 22 **Table S4.** Breast cancer (C50) patients only: Cramer's  $V \pm 95\%$  CI for all pairwise combinations of  
 23 deprivation metrics – women only, bottom half (unshaded; N=3330). Data source: ONS LS.

	Occupation (individ)	Education (individ)	Income (individ)	Occupation (LSOA)	Education (LSOA)	Income (LSOA)
Occupation (individ)						
Education (individ)	0.42 (0.39 – 0.45)					
Income (individ)	0.56 (0.53 – 0.58)	0.30 (0.27 – 0.33)				
Occupation (LSOA)	0.16 (0.13 – 0.19)	0.11 (0.07 – 0.14)	0.08 (0.05 – 0.12)			
Education (LSOA)	0.17 (0.14 – 0.20)	0.13 (0.10 – 0.16)	0.09 (0.05 – 0.12)	0.48 (0.46 – 0.51)		
Income (LSOA)	0.16 (0.13 – 0.20)	0.11 (0.08 – 0.14)	0.08 (0.05 – 0.12)	0.64 (0.62 – 0.66)	0.50 (0.47 – 0.52)	

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- 25 **Table S5.** Colon cancer (C18) patients only: Cramer's  $V \pm 95\%$  CI for all pairwise combinations of  
 26 deprivation metrics – men in top half (shaded; N=692), women in bottom half (unshaded; N=608).  
 27 Data source: ONS LS.

	Occupation (individ)	Education (individ)	Income (individ)	Occupation (LSOA)	Education (LSOA)	Income (LSOA)
Occupation (individ)		0.38 (0.32 – 0.44)	0.35 (0.28 – 0.41)	0.19 (0.12 – 0.26)	0.22 (0.15 – 0.29)	0.19 (0.12 – 0.26)
Education (individ)	0.42 (0.35 – 0.48)		0.25 (0.18 – 0.32)	0.11 (0.03 – 0.18)	0.15 (0.08 – 0.23)	0.12 (0.04 – 0.19)
Income (individ)	0.53 (0.48 – 0.59)	0.32 (0.25 – 0.39)		0.09 (0.02 – 0.17)	0.10 (0.03 – 0.18)	0.09 (0.01 – 0.16)
Occupation (LSOA)	0.14 (0.06 – 0.21)	0.12 (0.04 – 0.19)	0.09 (0.01 – 0.17)		0.47 (0.41 – 0.53)	0.65 (0.60 – 0.69)
Education (LSOA)	0.18 (0.10 – 0.17)	0.13 (0.05 – 0.21)	0.09 (0.01 – 0.17)	0.48 (0.41 – 0.54)		0.49 (0.44 – 0.55)
Income (LSOA)	0.16 (0.08 – 0.24)	0.12 (0.04 – 0.19)	0.08 (0.00 – 0.16)	0.64 (0.59 – 0.68)	0.48 (0.42 – 0.54)	

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29 **Table S6.** Rectal cancer (C19-21) patients only: Cramer's  $V \pm 95\%$  CI for all pairwise combinations of  
 30 deprivation metrics – men in top half (shaded; N=521), women in bottom half (unshaded; N=349).  
 31 Data source: ONS LS.

	Occupation (individ)	Education (individ)	Income (individ)	Occupation (LSOA)	Education (LSOA)	Income (LSOA)
Occupation (individ)		0.36 (0.28 – 0.43)	0.38 (0.31 – 0.45)	0.18 (0.09 – 0.26)	0.19 (0.10 – 0.27)	0.19 (0.10 – 0.27)
Education (individ)	0.38 (0.29 – 0.47)		0.26 (0.18 – 0.34)	0.15 (0.06 – 0.23)	0.15 (0.06 – 0.23)	0.16 (0.07 – 0.24)
Income (individ)	0.54 (0.46 – 0.61)	0.31 (0.21 – 0.40)		0.10 (0.02 – 0.19)	0.10 (0.01 – 0.18)	0.12 (0.03 – 0.20)
Occupation (LSOA)	0.18 (0.08 – 0.28)	0.11 (0.01 – 0.21)	0.13 (0.03 – 0.23)		0.45 (0.38 – 0.51)	0.66 (0.61 – 0.71)
Education (LSOA)	0.16 (0.06 – 0.26)	0.10 (0.00 – 0.21)	0.11 (0.00 – 0.21)	0.47 (0.39 – 0.55)		0.49 (0.42 – 0.55)
Income (LSOA)	0.16 (0.05 – 0.26)	0.08 (0.00 – 0.19)	0.09 (0.00 – 0.20)	0.65 (0.59 – 0.71)	0.53 (0.45 – 0.60)	

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 33 **Table S7.** Prostate cancer (C61) patients only: Cramer's  $V \pm 95\%$  CI for all pairwise combinations of  
 34 deprivation metrics – men only, top half (shaded; N=2840). Data source: ONS LS.

	Occupation (individ)	Education (individ)	Income (individ)	Occupation (LSOA)	Education (LSOA)	Income (LSOA)
Occupation (individ)		0.42 (0.39 – 0.45)	0.39 (0.36 – 0.42)	0.18 (0.14 – 0.21)	0.19 (0.15 – 0.22)	0.18 (0.14 – 0.21)
Education (individ)			0.25 (0.21 – 0.28)	0.13 (0.09 – 0.16)	0.14 (0.11 – 0.18)	0.12 (0.09 – 0.16)
Income (individ)				0.08 (0.05 – 0.12)	0.09 (0.05 – 0.12)	0.09 (0.05 – 0.13)
Occupation (LSOA)					0.47 (0.45 – 0.50)	0.64 (0.62 – 0.67)
Education (LSOA)						0.49 (0.46 – 0.52)
Income (LSOA)						

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36 **Table S8.** Bladder cancer (C67) patients only: Cramer's  $V \pm 95\%$  CI for all pairwise combinations of  
 37 deprivation metrics – men in top half (shaded; N=395), women in bottom half (unshaded; N=130).  
 38 Data source: ONS LS.

	Occupation (individ)	Education (individ)	Income (individ)	Occupation (LSOA)	Education (LSOA)	Income (LSOA)
Occupation (individ)		0.40 (0.32 – 0.48)	0.39 (0.30 – 0.47)	0.22 (0.12 – 0.31)	0.23 (0.13 – 0.32)	0.21 (0.12 – 0.31)
Education (individ)	0.49 (0.35 – 0.61)		0.24 (0.14 – 0.33)	0.15 (0.05 – 0.25)	0.15 (0.06 – 0.25)	0.15 (0.05 – 0.24)
Income (individ)	0.57 (0.44 – 0.67)	0.35 (0.19 – 0.49)		0.16 (0.06 – 0.25)	0.14 (0.05 – 0.24)	0.13 (0.04 – 0.23)
Occupation (LSOA)	0.16 (0.00 – 0.32)	0.25 (0.08 – 0.41)	0.19 (0.02 – 0.35)		0.48 (0.40 – 0.55)	0.66 (0.60 – 0.71)
Education (LSOA)	0.25 (0.08 – 0.40)	0.25 (0.08 – 0.40)	0.23 (0.05 – 0.38)	0.50 (0.35 – 0.62)		0.50 (0.42 – 0.57)
Income (LSOA)	0.23 (0.06 – 0.39)	0.21 (0.04 – 0.37)	0.21 (0.04 – 0.37)	0.60 (0.48 – 0.70)	0.47 (0.32 – 0.60)	

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 40 **Table S9.** NHL cancer (C82-86) patients only: Cramer's  $V \pm 95\%$  CI for all pairwise combinations of  
 41 deprivation metrics – men in top half (shaded; N=378), women in bottom half (unshaded; N=304).  
 42 Data source: ONS LS.

	Occupation (individ)	Education (individ)	Income (individ)	Occupation (LSOA)	Education (LSOA)	Income (LSOA)
Occupation (individ)		0.41 (0.32 – 0.49)	0.40 (0.31 – 0.48)	0.24 (0.14 – 0.33)	0.25 (0.15 – 0.34)	0.25 (0.15 – 0.34)
Education (individ)	0.41 (0.32 – 0.50)		0.27 (0.18 – 0.36)	0.18 (0.08 – 0.27)	0.18 (0.08 – 0.27)	0.17 (0.07 – 0.27)
Income (individ)	0.55 (0.47 – 0.63)	0.30 (0.19 – 0.40)		0.20 (0.10 – 0.29)	0.16 (0.06 – 0.26)	0.19 (0.09 – 0.28)
Occupation (LSOA)	0.17 (0.06 – 0.28)	0.13 (0.02 – 0.24)	0.13 (0.02 – 0.24)		0.46 (0.37 – 0.53)	0.65 (0.58 – 0.70)
Education (LSOA)	0.16 (0.04 – 0.26)	0.15 (0.04 – 0.26)	0.12 (0.01 – 0.23)	0.45 (0.35 – 0.53)		0.46 (0.37 – 0.54)
Income (LSOA)	0.17 (0.05 – 0.27)	0.14 (0.03 – 0.25)	0.12 (0.00 – 0.23)	0.67 (0.61 – 0.73)	0.44 (0.34 – 0.53)	

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