

## **Supplementary Materials**

### **Geophagia and risk of squamous cell esophageal cancer in the African esophageal cancer corridor - Findings from the ESCCAPE multi-country case-control studies**

Clement T Narh<sup>1,2</sup>, Charles P Dzamalala<sup>3</sup>, Blandina T Mmbaga<sup>4,5</sup>, Diana Menya<sup>6</sup>, Yohannie Mlombe<sup>3</sup>, Peter Finch<sup>3</sup>, Gissela Nyakunga<sup>5</sup>, Joachim Schüz<sup>1</sup> and Valerie McCormack<sup>1</sup>, on behalf of the ESCCAPE team\*

\* The ESCCAPE team is listed in the Acknowledgements section.

## **Table of contents**

Supplementary Table 1: Country and prevalence of geophagia in male controls, overall and by socio-demographic characteristics

Supplementary Table 2: Odds ratios detectable with the number of cases and geophagia prevalence in ESCCAPE, by sex and country

Supplementary Figure 1: ESCCAPE esophageal cancer case-control study recruitment centres in Kenya, Tanzania and Malawi, Eastern Africa

## Supplementary tables

**Supplementary Table 1: Country and prevalence of geophagia in male controls, overall and by socio-demographic characteristics**

Variable	Category	Country			
		Tanzania		Malawi	
		Never/ Irregular	Regular	Total	Total
Status	Cases	234 (99)	2 (<1)	236	280 (91) 28 (9) 308
	Controls	237 (100)	0 (0)	237	298 (90) 32 (10) 330
	<i>P-value</i>			0.16	0.79
<b>Among controls</b>					
Type of Control	Hospital visitors	-	-	-	152 (93) 11 (7) 163
	Hospital patients	-	-	-	146 (87) 21 (13) 167
	<i>P-value</i>	-	-	-	0.07
Age	18 to <40	-	-	-	37 (80) 9 (20) 46
	40-50	-	-	-	70 (92) 6 (8) 76
	50+	-	-	-	191 (92) 17 (8) 76
	<i>P-value</i>	-	-	-	0.03
Parity	0-4	-	-	-	115 (85) 21 (15) 136
	5-7	-	-	-	134 (95) 7 (5) 141
	7+	-	-	-	49 (92) 4 (8) 53
	<i>P-value</i>	-	-	-	0.02
Education	None/partial primary	-	-	-	143 (92) 13 (8) 156
	Completed primary	-	-	-	47 (94) 3 (6) 50
	≥ Secondary	-	-	-	108 (87) 16 (13) 124
	<i>P-value</i>	-	-	-	0.60
Religion	Christian	-	-	-	260 (90) 29 (10) 289
	Muslim	-	-	-	30 (94) 2 (6) 32
	Other	-	-	-	8 (89) 1 (11) 9
	<i>P-value</i>	-	-	-	0.71
Marital Status	Married	-	-	-	249 (91) 26 (9) 275
	Unmarried	-	-	-	49 (89) 6 (11) 55
	<i>P-value</i>	-	-	-	0.74
HIV	Positive	-	-	-	58 (89) 7 (11) 65
	Negative	-	-	-	206 (91) 20 (9) 226
	Unknown	-	-	-	34 (87) 5 (13) 39
	<i>P-value</i>	-	-	-	0.65
Residence	Urban	-	-	-	123 (89) 15 (11) 138
	Rural	-	-	-	175 (91) 17 (9) 192
	<i>P-value</i>	-	-	-	0.54
Smoking	No	-	-	-	189 (91) 18 (9) 207
	Yes	-	-	-	109 (89) 14 (11) 123
	<i>P-value</i>	-	-	-	0.43
Alcohol	No	-	-	-	111 (94) 7 (6) 118
	Yes	-	-	-	187 (88) 25 (12) 212
	<i>P-value</i>	-	-	-	0.89

\*chi-square p-value. Footnote: P is P-value for difference between cases and controls, or, in controls, P-value for difference by HIV status (restricted to known status), urban/rural, smoking, alcohol and P-value for trend in age, parity and education

**Supplementary Table 2: Odds ratios detectable with the number of cases and geophagia prevalence in ESCCAPE, by sex and country**

Country	Sex	ESCAPE Sample size <sup>a</sup>		Prevalence (%) <sup>b</sup>	OR detectable
		Number of cases			
Tanzania	Male	237		0.8	5.3
	Female	73		28.8	2.6
Malawi	Male	328		20.4	1.6
	Female	256		49.2	1.6
Kenya	Male	-		-	-
	Female	97		43.3	2.3
Overall	Male	565		12.2	1.6
	Female	426		44.4	1.5

a Number of controls and 1:1 case: control ratio

b Prevalence of geophagia in controls

## Supplementary figure

### Supplementary Figure 1: ESCCAPE esophageal cancer case-control study recruitment centres in Kenya, Tanzania and Malawi, Eastern Africa.

© OpenStreetMap and contributors, CC-BY-SA

(<http://www.openstreetmap.org/>, and <http://creativecommons.org/licenses/by-sa/2.0/>)

