# Alcohol consumption and cause-specific mortality in Cuba: prospective study of 120 623 adults

## Supplementary Appendix, Table of Contents

# ESTUDIO CUBANO SOBRE TABACO Y SALUD

Provincia No. ☐ 1-9  Municipio No. ☐☐ 0-99  Area de ☐ 0-9  № 17524  A
Salud No.

Carnet de ☐☐☐☐☐☐ — ☐☐☐☐☐
Identidad No.  Fecha de nacimiento (a.m.d) + 5 números
(11 números: excluir si no tiene C.I. de 6 + 5 números)

Nombre de la persona y dirección: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
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Calle　　　No.　　　　　　　　　　　　　　　Teléfono

Nombre del familiar y dirección: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
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Calle　　　No.　　　Municipio　　　　　Provincia　　　Teléfono

**LETRA DE MOLDE, POR FAVOR**

Sexo (1 = masc, 2 = fem.) ☐ 1-2
Color de piel (1 = blanco, 2 = negro, 3 = mestizo, 4 = otra) ☐ 1-4
Estado social (1 = soltero/viudo, 2 = casado) ☐ 1-2
Educación completada (0 = ninguno*, 1 = primaria, 2 = secundaria, 3 = técnico medio, 4 = obrero califi- ☐ 0-6
cado, 5 = pre-universitario, 6 = universitario)
Categoría ocupacional (0 = ninguno*, 1 = dirigente, 2 = profesional, 3 = técnico, 4 = de servicio, ☐ 0-7
5 = agrícola, 6 = industria, 7 = militar)
* Si es cero (Ej. ama de casa, jubilado o desempleado), diga si ha trabajado alguna vez. ☐ 0-7

Quisiera medir su presión arterial mientras esta sentado, hacerle unas pocas preguntas sobre tabaco y alcohol, y medir su PA de nuevo.
Presión arterial (una sola toma, sentado): ☐☐☐ / ☐☐☐ PAS / PAD

*Ahora, TABACO:* ¿Ha fumado alguna vez regularmente (Ej. en la mayoría de los días)? ☐ S=Sí, N=No
*Sl NO, vaya directamente a las preguntas sobre ALCOHOL.*

¿A QUE EDAD APROXIMADAMENTE COMENZO USTED A FUMAR REGULARMENTE? ☐☐ años de edad

¿Desde entonces ha dejado de fumar alguna vez por un año o más? ☐ S=Sí, N=No

¿Aproximadamente cuántos cigarrillos por día se fumó usted el último mes?　(0 = ninguno) ☐☐ diariamente

¿Aproximadamente cuántos tabacos por día se fumó usted el último mes?　(0 = ninguno) ☐☐ diariamente

¿Si no fumó el último mes, a que edad dejó usted de fumar?　(en blanco si no es aplicable) ☐☐ años de edad

*Ahora me gustaría hacerle algunas preguntas sobre ALCOHOL:*

¿Aproximadamente cuántos días a la semana toma usted ron u otra bebida fuerte? ☐ 0-7
(0 = cero días o usualmente menos de una vez por semana)

¿El día que usted toma ron (u otra bebida fuerte) cuántas líneas se toma? ☐☐ líneas

¿Aproximadamente cuántos días a la semana toma usted cerveza? ☐ 0-7
(0 = cero días o usualmente menos de una vez por semana)

¿El día que usted toma cerveza, cuántas botellas se toma (aprox.) ☐☐ botellas

*Finalmente, algunos aspectos médicos:* Quisiera preguntarle sobre algunas enfermedades. Lo que quiero conocer es si usted alguna vez ha sido tratado por alguna de estas enfermedades. Si no lo ha sido, conteste No (N).

| | | | | | | |
|---|---|---|---|---|---|---|
| Asma | ☐ S/N | A.V.E. (definitivo/probable) | ☐ S/N | Cirrosis | | ☐ S/N |
| Enfisema (E.P.O.C.) | ☐ S/N | Infarto miocardio " | ☐ S/N | Enf. renal crónica | | ☐ S/N |
| Diabetes | ☐ S/N | Angina pectoris " | ☐ S/N | Cáncer de piel | | ☐ S/N |
| Ulcera péptica | ☐ S/N | Hipertensión arterial | ☐ S/N | Otro cáncer* | | ☐ S/N |

¿*Si Otro Cáncer = Sí, dónde le comenzó el cáncer? ☐ 0-9
(1 = boca o faringe, 2 = laringe, 3 = pulmón, 4 = esófago, 5 = estómago, 6 = páncreas, 7 = cuello útero, 8 = vejiga, 9 = mama, 0 = otro, más de un sitio, o no conocido)

¿Esta usted tomando alguna medicina regularmente desde hace más de un mes? Si es Sí: ¿Qué medicinas esta tomando? (Marque con X)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Digoxina | ☐ | Nitratos | ☐ | Hipoglic. oral | ☐ | Anticoncept. | ☐ | Ca. Antag. | ☐ |
| Beta B. | ☐ | Inh. ACE | ☐ | Insulina | ☐ | Antidepres. | ☐ | Broncodilat. | ☐ |
| Diurético | ☐ | ASA | ☐ | Esteroides | ☐ | Ansiolítico | ☐ | Antiácido/H2 | ☐ |

*MUCHAS GRACIAS POR SUS RESPUESTAS: Ahora necesito tomarle de nuevo su presión arterial.* Repita la toma de PA (una sola toma sentado): ☐☐☐ / ☐☐☐ PAS/PAD

¿Cuál es la última cifra PA que tiene en su historia clínica antes de hoy?

Fecha de la última PA (a.m.d) ☐☐☐☐☐☐ & ☐☐☐ / ☐☐☐ PAS/PAD

**Por favor chequee TODA la encuesta ¡MUCHAS GRACIAS!**

¿Cuál es su *TALLA* aproximada? (medirlo o preguntarlo) ☐☐☐ cm
¿Cuál es su *PESO* aproximado? (pesarlo o preguntarlo) ☐☐☐ kg
Fecha de la entrevista ☐☐☐☐☐☐ (a.m.d)
Calidad de la cooperación (1 = pobre, 2 = regular, 3 = buena) ☐ 1-3

Nombre y apellidos del entrevistador: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

¿Algún comentario? .................................................................................................................. 2

**PARA LA SIGUIENTE PERSONA, UTILICE EL REVERSO DE ESTA PAGINA →**

# CUBAN STUDY OF TOBACCO AND HEALTH: PROSPECTIVE

Province № ☐ 1-9   Municipality № ☐☐ 0-99   Health Area № ☐ 0-9   Identity Card № ☐☐☐☐.☐☐☐—☐☐☐☐☐   Date of birth (y,m,d)

Name of interviewee: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Address: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Street · № · Municipality · Province · Telephone

Name of friend: ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

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Street · № · Municipality · Province · Telephone

## CAPITAL LETTERS, PLEASE!

Sex (1=masc, 2=fem) ☐ 1-2

Skin colour (1=white, 2=black, 3=mixed, 4=other) ☐ 1-4

Marital status (1=single/widowed, 2=married) ☐ 1-2

Education completed (0=none, 1=primary, 2=secondary, 3=technician, 4=skilled worker, 5=high school, 6=university) ☐ 0-6

Occupational category (0=none, 1=manager, 2=professional, 3=technician, 4=service worker, 5=agricultural, 6=industrial, 7=military; if housewife, retired or unemployed, we would like to know if you were employed in the past) ☐ 0-7

(☐ 0-7)

What I'd like to do is measure your blood pressure while you are sitting down, ask you a few questions about tobacco and alcohol, and then do your blood pressure again.   Blood pressure (single measurement, seated): ☐☐☐ / ☐☐☐ SBP / DBP

**Now, TOBACCO: Have you EVER smoked regularly (i.e. on most days for at least a year)?** ☐ Y=Yes, N=No
**If NO, then go directly to the ALCOHOL questions**

AT ABOUT WHAT AGE DID YOU FIRST START SMOKING TOBACCO REGULARLY? ☐☐ years of age

Since then, have you ever STOPPED smoking for a year or more? ☐ Y=Yes, N=No

About how many cigarettes a day did you smoke last month?  (0=none) ☐☐ daily

About how many cigars a day did you smoke last month?  (0=none) ☐☐ daily

If NO SMOKING last month, at about what age did you last stop smoking? (blank = not applicable) ☐☐ years of age

**Now I'd like to ask you some questions about ALCOHOL:**

About how many days a week would you drink any rum or other spirits?
(0=none or usually less than once a week) ☐ 0-7

On a day when you drink rum (or other spirits), about how many glasses ("lineas") would you drink? ☐☐ lineas

About how many days a week would you drink beer?
(0=none or usually less than once a week) ☐ 0-7

On a day when you do drink beer, about how many bottles would you drink? ☐☐ bottles

**Finally, MEDICAL MATTERS: I'd like to ask about various different illnesses. What I want to know for each illness is whether you've ever had medical attention for it. If you've never heard of the illness, then just say NO.**

| | | | |
|---|---|---|---|
| Asthma ☐ Y/N | Stroke (definite/probable) ☐ Y/N | Cirrhosis of the liver ☐ Y/N |
| Emphysema/C.O.P.D. ☐ Y/N | Myocardial infarction " ☐ Y/N | Chronic kidney disease ☐ Y/N |
| Diabetes ☐ Y/N | Angina pectoris " ☐ Y/N | Skin cancer ☐ Y/N |
| Peptic ulcer ☐ Y/N | Hypertension ☐ Y/N | Other cancer* ☐ Y/N |

*If Other cancer, where in your body did the cancer start? ☐ 0-9
(1=mouth, 2=larynx, 3=lung, 4=oesphagus, 5=stomach, 6=pancreas, 7=cervix, 8=bladder, 9=breast, 0=other, more than 1 site, or not known)

Have you been taking any regular medication for more than 1 month? If Yes: What such medicines are you now taking? (Mark with an X)

| | | | | |
|---|---|---|---|---|
| Digoxin ☐ | Nitrates ☐ | Oral hypoglycaemic ☐ | O.Contraceptive ☐ | Ca. antagonist ☐ |
| Beta blocker ☐ | ACE inhibitor ☐ | Insulin ☐ | Antidepressant ☐ | Bronchodilator ☐ |
| Diuretic ☐ | Aspirin ☐ | Steroids ☐ | Tranquillisers ☐ | Antacid/H2 ☐ |

**THANK YOU VERY MUCH FOR YOUR ANSWERS. Now we just need one more blood pressure. Repeat blood pressure (single measurement, seated)** ☐☐☐ / ☐☐☐ PAS / PAD

What was the last blood pressure in the patient's medical record **before** today?

Date of last BP (y,m,d) ☐☐☐☐☐☐ & ☐☐☐ / ☐☐☐ PAS / PAD

**Please check that ALL the questions have been answered, so that there is no need to write back to you for extra details. MANY THANKS!**

What is your approximate HEIGHT (either ask or measure)? ☐☐☐ cm

What is your approximate WEIGHT (either ask or measure)? ☐☐☐ kg

Date of interview ☐☐☐☐☐☐ (y,m,d)

Quality of co-operation (1=poor, 2=fair, 3=good) ☐ 1-3

Name of interviewer: please PRINT ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Any comments: .........................................................................................................................................................

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## Table S1: Mortality endpoints and ICD codes

| Endpoint name | ICD-9 codes | ICD-10 codes |
|---|---|---|
| **Vascular** | 390-459, 798 | I00-I99, R96 |
|    Ischaemic heart disease | 410-414 | I20-I25 |
|    Stroke | 430-431, 433-434, 436 | I60-I61, I63-I64 |
|    Other | 390-409, 415-429, 432, 435, 437-459, 798 | I00-I19, I26-I59, I62, I65-I99, R96 |
| **Neoplastic** | 140-208 | C00-C97 |
|    Lung cancer | 162 | C33-C34 |
|    Upper aero-digestive cancer | 140-150, 161 | C00-C15, C32 |
|    Other | 151-160, 163-208 | C16-C31, C35-C97 |
| **Other medical** | 000-1002 excl (390-459, 798, 140-208, 800-1002, 780-797, 799) | A00-Y89 excl (I00-I99, R96, C00-C97, S00-Y89, R00-R95, R98-R99) |
|    Respiratory | 460-519, 010-012 | J00-J98, A15-A16 |
|    Liver cirrhosis | 571 | K70, K74 |
|    Other | 000-1002 excl (390-459, 798, 140-208, 460-519, 010-012, 571, 800-1002, 780-797, 799) | A00-Y89 excl (I00-I99, R96, C00-C97, J00-J98, A15-A16, K70, H74, S00-Y89, R00-R95, R98-R99) |
| **External** | 800-1002 | S00-Y89 |
| **Ill-defined** | 780-797, 799 | R00-R95, R98-R99 |
| **All causes** | 000-1002 | A00-Y89 |

## Table S2: Number of participants excluded from mortality analyses, by sex

|  | Men | Women | All |
|---|---|---|---|
| **Number of participants recruited** | 64 743 (100%) | 81 813 (100%) | 146 556 (100%) |
| **Reasons for exclusion (not mutually exclusive):** | | | |
| **Prior disease*** | 9061 (14.0%) | 10 850 (13.3%) | 19 911 (13.6%) |
| **Alcohol variables** | | | |
| Missing values | 152 (0.2%) | 20 (0.02%) | 172 (0.1%) |
| Incomplete information | 211 (0.3%) | 92 (0.1%) | 303 (0.2%) |
| **Missing values in covariates** | | | |
| Age | 0 (0%) | 0 (0%) | 0 (0.0%) |
| Sex | 0 (0%) | 0 (0%) | 0 (0.0%) |
| Province | 0 (0%) | 0 (0%) | 0 (0.0%) |
| Level of education | 61 (0.1%) | 103 (0.1%) | 164 (0.1%) |
| Smoking | 0 (0%) | 0 (0%) | 0 (0.0%) |
| **No follow-up at ages 35-79 years** | | | |
| Age 80 years or over at baseline | 3333 (5.1%) | 4156 (5.1%) | 7489 (5.1%) |
| **Total participants excluded** | **11 814 (18.2%)** | **14 119 (17.3%)** | **25 933 (17.7%)** |
| **Total participants in main analyses** | **52 929 (81.8%)** | **67 694 (82.7%)** | **120 623 (82.3%)** |

*Prior history at baseline of myocardial infarction, angina, stroke, chronic obstructive pulmonary disease, cirrhosis of the liver, chronic kidney disease, any cancer (including skin), or peptic ulcer.

**Table S3. Frequency of alcohol consumption in regular drinkers included in the main analyses, by sex and type of alcohol consumed**

| | Days per week of alcohol consumption | | | | | | | All |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | All |
| **Men** | | | | | | | | |
| Rum only drinkers | 2520 (30%) | 2193 (26%) | 1366 (16%) | 557 (7%) | 428 (5%) | 170 (2%) | 1282 (15%) | 8516 (100%) |
| Beer only drinkers | 486 (56%) | 219 (25%) | 76 (9%) | 21 (2%) | 16 (2%) | 8 (1%) | 38 (4%) | 864 (100%) |
| Drinkers of both rum and beer | | | | | | | | |
|   Rum | 2494 (41%) | 1643 (27%) | 800 (13%) | 317 (5%) | 239 (4%) | 93 (2%) | 455 (8%) | 6041 (100%) |
|   Beer | 3313 (55%) | 1556 (26%) | 556 (9%) | 185 (3%) | 152 (3%) | 45 (1%) | 234 (4%) | 6041 (100%) |
|   All (highest frequency of rum or beer) | 2185 (36%) | 1695 (28%) | 906 (15%) | 365 (6%) | 283 (5%) | 109 (2%) | 498 (8%) | 6041 (100%) |
| | | | | | | | | |
| **Women** | | | | | | | | |
| Rum only drinkers | 547 (49%) | 245 (22%) | 139 (12%) | 48 (4%) | 33 (3%) | 17 (2%) | 87 (8%) | 1116 (100%) |
| Beer only drinkers | 385 (73%) | 85 (16%) | 30 (6%) | 4 (1%) | 4 (1%) | 4 (1%) | 16 (3%) | 528 (100%) |
| Drinkers of both rum and beer | | | | | | | | |
|   Rum | 851 (61%) | 291 (21%) | 119 (8%) | 44 (3%) | 21 (1%) | 16 (1%) | 59 (4%) | 1401 (100%) |
|   Beer | 951 (68%) | 273 (19%) | 79 (6%) | 37 (3%) | 12 (1%) | 10 (1%) | 39 (3%) | 1401 (100%) |
|   All (highest frequency of rum or beer) | 792 (57%) | 301 (21%) | 140 (10%) | 65 (5%) | 20 (1%) | 18 (1%) | 65 (5%) | 1401 (100%) |

Exclusions and conventions are as per table 1.

**Table S4. Alcohol consumption at baseline and resurvey (mean 8.6 years after recruitment), among 20 593 participants***

| | Non-drinkers | Occasional drinkers | Regular drinkers (35cl bottles of rum per week) | | |
| --- | --- | --- | --- | --- | --- |
| | | | <1 | 1-<3 | ≥3 |
| **Participants, at baseline** | 18 298 | 148 | 451 | 804 | 892 |
| **Alcohol consumption at resurvey, N (%)** | | | | | |
| Non-drinkers | 17 936 (98) | 69 (47) | 138 (31) | 216 (27) | 212 (24) |
| Occasional drinkers | 2 (0.01) | 3 (2) | 1 (0.2) | 0 (0) | 0 (0) |
| Regular drinkers, 35cl bottles of rum per week | | | | | |
| <1 | 118 (0.6) | 46 (31) | 302 (67) | 30 (4) | 37 (4) |
| 1-<3 | 141 (0.8) | 14 (9) | 6 (1) | 537 (67) | 75 (8) |
| ≥3 | 101 (0.6) | 16 (11) | 4 (0.9) | 21 (3) | 568 (64) |
| **Mean alcohol consumption (35cl bottles/week), mean (SD)** | | | | | |
| At baseline, all participants | 0 (0) | 0 (0) | 0.6 (0.3) | 1.9 (0.5) | 6.4 (3.3) |
| At resurvey, all participants | 0.05 (0.5) | 0.9 (1.7) | 0.5 (0.8) | 1.5 (1.8) | 4.2 (4.2) |
| At baseline, regular drinkers at both baseline and resurvey | - | - | 0.6 (0.3) | 1.9 (0.5) | 6.5 (3.4) |
| At resurvey, regular drinkers at both baseline and resurvey | - | - | 0.7 (0.8) | 2.1 (1.7) | 5.5 (4.0) |

*Exclusions and conventions are as per table 1, with further exclusion of participants with missing or incomplete information on alcohol consumption at resurvey

**Table S5. Alcohol consumption versus all-cause mortality at ages 35-79 years in Cuba, among regular (ie, at least weekly) drinkers, with progressive adjustment for potential confounders**
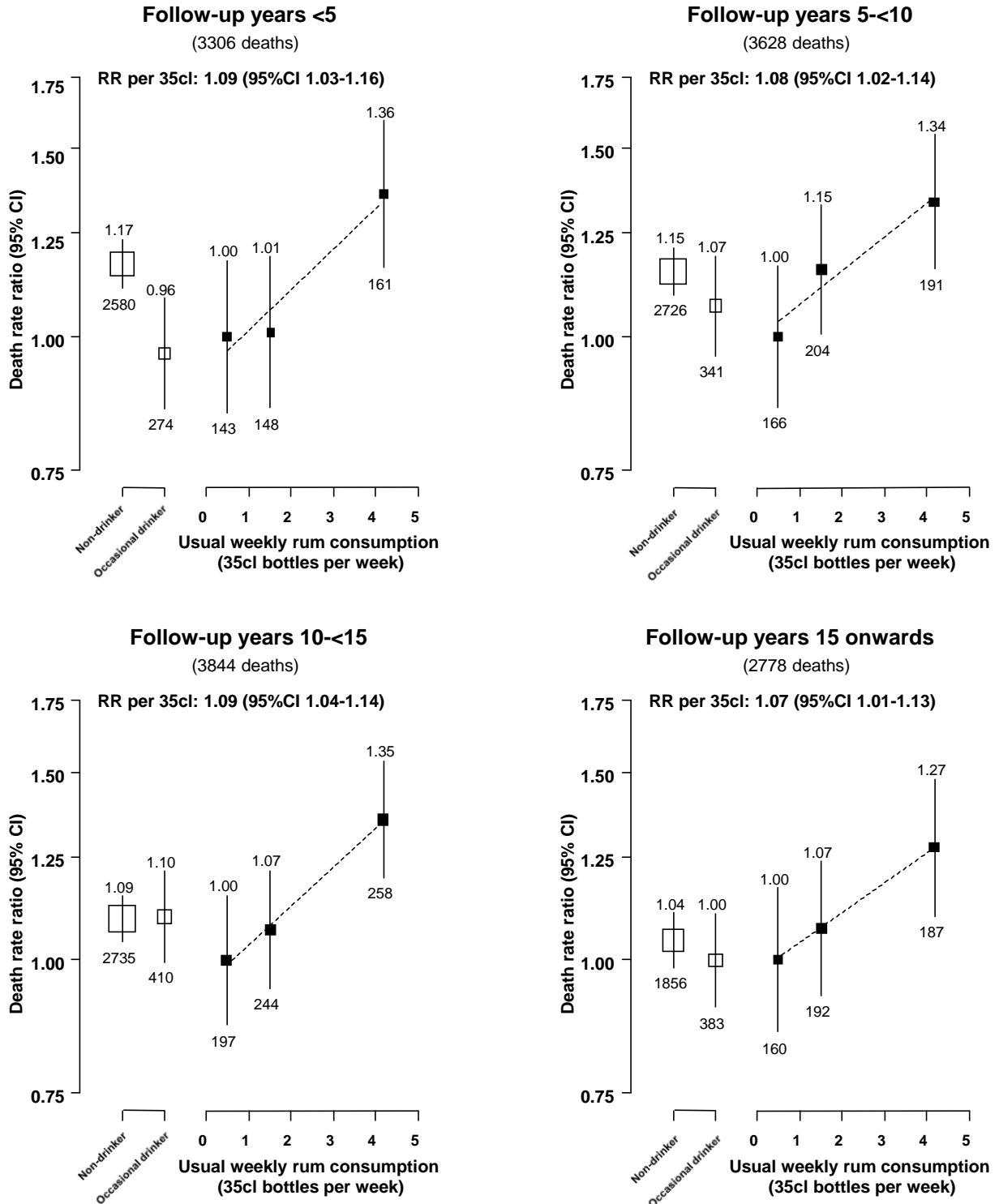
| | Deaths | RR per 35cl bottle of rum per week, adjusting for age, sex, and province | | RR per 35cl bottle of rum per week, adjusting for age, sex, province and education | | RR per 35cl bottle of rum per week, adjusting for age, sex, province, education and smoking | |
|---|---|---|---|---|---|---|---|
| | | RR (95%CI) | Wald $\chi^2$ | RR (95%CI) | Wald $\chi^2$ | RR (95%CI) | Wald $\chi^2$ |
| **Vascular** | 801 | 1.07 (1.03-1.12) | 9.7 | 1.06 (1.02-1.11) | 7.3 | 1.05 (1.00-1.10) | 4.1 |
| Ischaemic heart disease | 386 | 1.07 (1.00-1.14) | 3.9 | 1.06 (0.99-1.13) | 3.0 | 1.04 (0.97-1.11) | 1.4 |
| Stroke | 192 | 1.05 (0.96-1.16) | 1.3 | 1.04 (0.95-1.15) | 0.8 | 1.03 (0.94-1.14) | 0.5 |
| Other | 223 | 1.11 (1.02-1.21) | 5.5 | 1.10 (1.01-1.19) | 4.4 | 1.08 (0.99-1.17) | 2.9 |
| **Cancer** | 773 | 1.11 (1.06-1.16) | 20.4 | 1.10 (1.06-1.16) | 18.2 | 1.07 (1.03-1.12) | 9.1 |
| Lung | 229 | 1.08 (0.99-1.17) | 3.3 | 1.07 (0.98-1.16) | 2.3 | 1.01 (0.93-1.10) | 0.1 |
| Upper aero-digestive | 158 | 1.30 (1.18-1.43) | 27.0 | 1.28 (1.16-1.41) | 24.4 | 1.23 (1.11-1.36) | 16.3 |
| Other | 386 | 1.05 (0.98-1.12) | 1.9 | 1.05 (0.98-1.12) | 1.7 | 1.03 (0.96-1.10) | 0.8 |
| **Other medical** | 505 | 1.16 (1.09-1.22) | 26.1 | 1.14 (1.08-1.21) | 22.3 | 1.13 (1.07-1.19) | 17.2 |
| Respiratory | 187 | 1.15 (1.05-1.26) | 8.7 | 1.13 (1.03-1.24) | 6.9 | 1.10 (1.01-1.21) | 4.3 |
| Liver cirrhosis | 65 | 1.34 (1.14-1.58) | 12.9 | 1.33 (1.13-1.56) | 11.7 | 1.32 (1.12-1.55) | 10.9 |
| Other | 253 | 1.12 (1.03-1.21) | 7.4 | 1.11 (1.02-1.20) | 6.3 | 1.10 (1.01-1.19) | 5.3 |
| **External** | 161 | 1.18 (1.07-1.30) | 10.6 | 1.16 (1.05-1.29) | 9.0 | 1.15 (1.04-1.28) | 7.8 |
| **Ill-defined** | 11 | 0.88 (0.55-1.42) | 0.3 | 0.87 (0.54-1.40) | 0.4 | 0.82 (0.51-1.33) | 0.6 |
| **All** | 2251 | 1.11 (1.08-1.14) | 61.3 | 1.10 (1.07-1.13) | 51.4 | 1.08 (1.05-1.11) | 32.3 |

One 35cl bottle of rum is equivalent to 110g of pure alcohol. Exclusions and conventions are as per table 1.

# Figure S1. Alcohol consumption versus all-cause mortality at ages 35-79 years in Cuba, during follow-up years <5, 5-<10, 10-<15, and 15 onwards

Rate ratio (RR) adjusted for age, sex, education, province, and smoking. Exclusions and conventions as in table 1.

**Follow-up years <5**
(3306 deaths)

**Follow-up years 5-<10**
(3628 deaths)

**Follow-up years 10-<15**
(3844 deaths)

**Follow-up years 15 onwards**
(2778 deaths)

RR per 35cl: 1.09 (95%CI 1.03-1.16)

RR per 35cl: 1.08 (95%CI 1.02-1.14)

RR per 35cl: 1.09 (95%CI 1.04-1.14)

RR per 35cl: 1.07 (95%CI 1.01-1.13)

Death rate ratio (95% CI)

Usual weekly rum consumption (35cl bottles per week)

Non-drinker

Occasional drinker

# Figure S2. Alcohol consumption versus all-cause mortality in Cuba, by age, by sex and by smoking

Rate ratios (RR) adjusted for age, sex, education, province, and smoking. Exclusions and conventions as per table 1.



**Age-at-risk 35-69y**
(7086 deaths)

**Age-at-risk 70-79y**
(6470 deaths)

**Men**
(6981 deaths)

**Women**
(6575 deaths)

**Ever smokers**
(7194 deaths)

**Never smokers**
(6362 deaths)
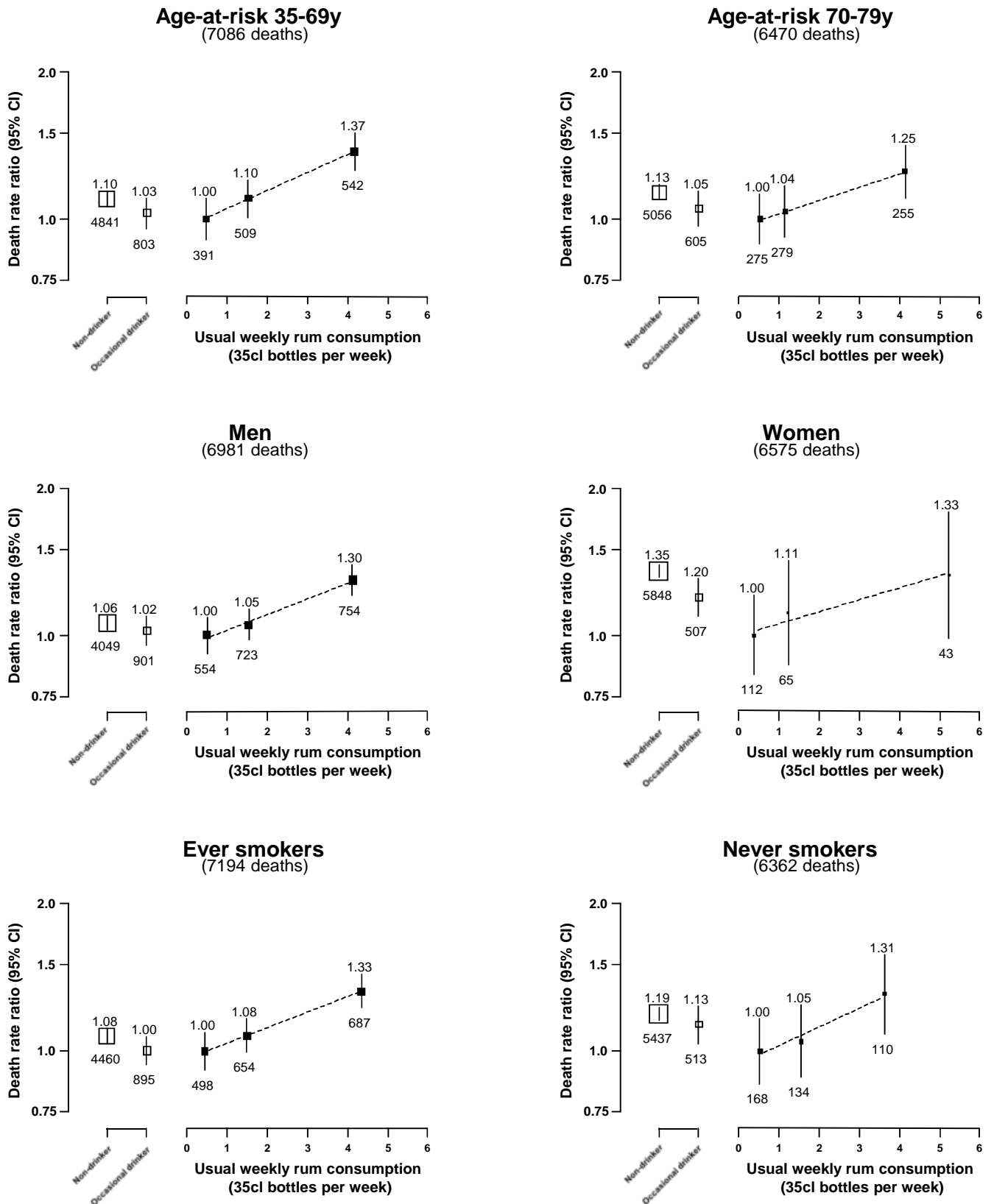
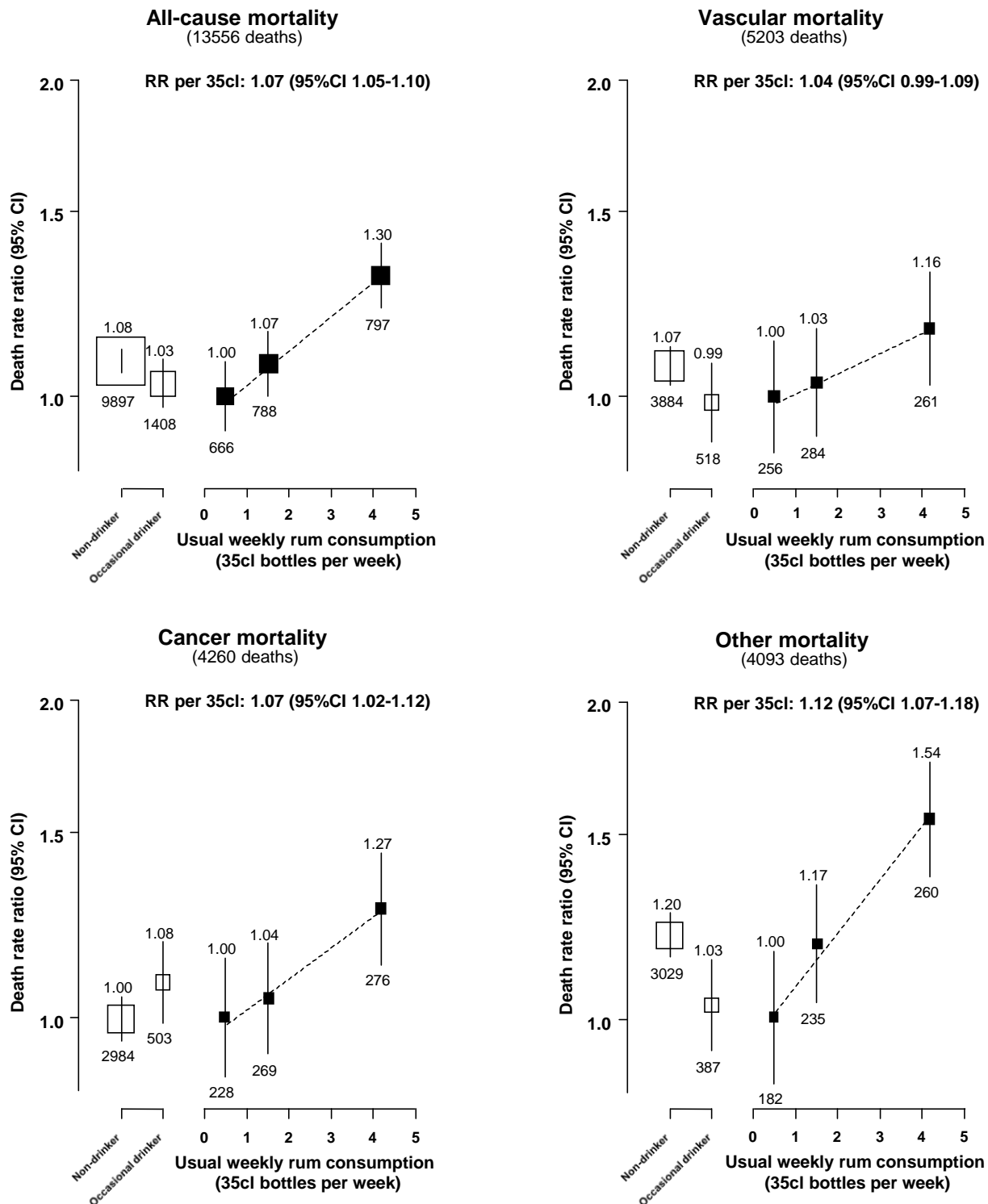**Table S6. Observed and expected numbers of deaths from specific causes at ages 35-79 years in Cuba, by weekly alcohol consumption**

| | At least weekly alcohol drinker (35cl bottles of rum per week) | | | | | | |
| | 1-<3 bottles | | ≥3 bottles | | Total (≥1 bottle) | | |
| | Observed deaths | Expected deaths | Observed deaths | Expected deaths | Observed deaths | Expected deaths | Excess Deaths |
|---|---|---|---|---|---|---|---|
| **Vascular** | 284 | 272.2 | 261 | 218.3 | 545 | 490.5 | 54.5 (21%) |
| Ischaemic heart disease | 138 | 132.7 | 125 | 107.8 | 263 | 240.5 | 22.5 (9%) |
| Stroke | 67 | 66.3 | 59 | 52.2 | 126 | 118.5 | 7.5 (3%) |
| Other | 79 | 73.1 | 77 | 58.3 | 156 | 131.5 | 24.5 (10%) |
| **Cancer*** | 190 | 174.4 | 197 | 143.5 | 387 | 317.9 | 69.1 (27%) |
| Upper aero-digestive | 44 | 46.3 | 79 | 40.9 | 123 | 87.2 | 35.8 (14%) |
| Other | 146 | 128.1 | 118 | 102.6 | 264 | 230.7 | 33.3 (13%) |
| **Other Medical** | 173 | 151.0 | 192 | 122.5 | 365 | 273.4 | 91.6 (36%) |
| Respiratory | 61 | 62.2 | 71 | 51.4 | 132 | 113.7 | 18.3 (7%) |
| Liver cirrhosis | 23 | 11.3 | 32 | 9.2 | 55 | 20.5 | 34.5 (14%) |
| Other | 89 | 77.4 | 89 | 61.8 | 178 | 139.2 | 38.8 (15%) |
| **External** | 56 | 45.2 | 66 | 37.9 | 122 | 83.1 | 38.9 (15%) |
| **Ill-defined** | 6 | 3.9 | 2 | 3.5 | 8 | 7.4 | 0.6 (0%) |
| **All** | 709 | 646.6 | 718 | 525.7 | 1427 | 1172.3 | 254.7 (100%) |

Expected deaths are calculated by applying the rates at ages 35-79 years (table 3) among those who reported drinking <1 bottle rum per week. Excess deaths are calculated as observed minus expected deaths. Death from vascular, cancer and other medical are sum of subcategories. Exclusions and conventions are as per table 1. *Excludes lung cancer for which there was no evidence of an association among at least weekly drinkers.

## Figure S3. Alcohol consumption versus all-cause, vascular, cancer and other mortality at ages 35-79 years in Cuba, with additional adjustment for other potential confounders

Rate ratios (RR) adjusted for age, sex, education, province, smoking, occupation, marital status, diabetes, and BMI. Exclusions and conventions as per table 1.

### All-cause mortality
(13556 deaths)

RR per 35cl: 1.07 (95%CI 1.05-1.10)

### Vascular mortality
(5203 deaths)

RR per 35cl: 1.04 (95%CI 0.99-1.09)

### Cancer mortality
(4260 deaths)

RR per 35cl: 1.07 (95%CI 1.02-1.12)
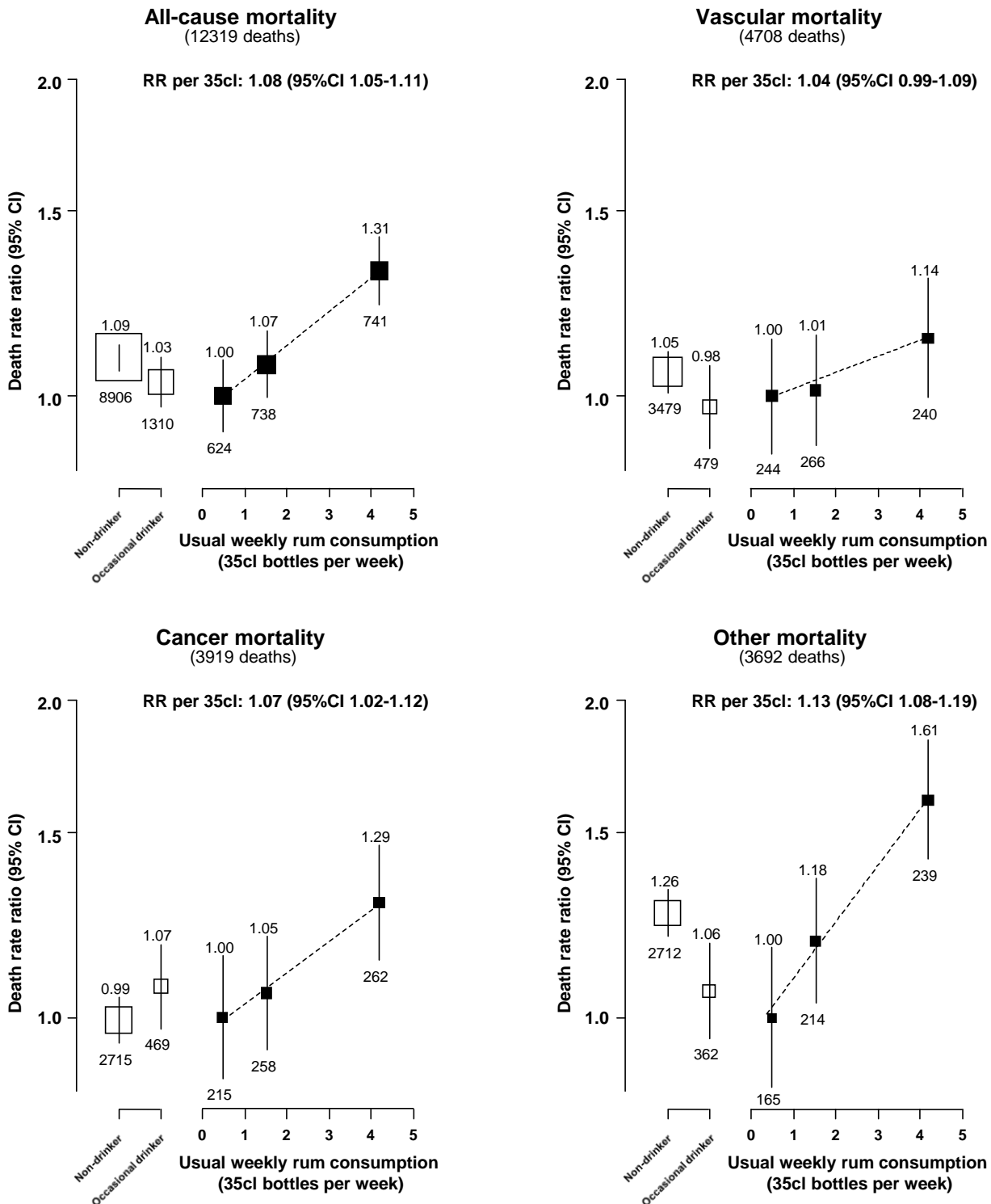
### Other mortality
(4093 deaths)

RR per 35cl: 1.12 (95%CI 1.07-1.18)

# Figure S4. Alcohol consumption versus all-cause, vascular, cancer and other mortality at ages 35-79 years in Cuba, excluding first two years of follow-up

Rate ratios (RR) adjusted for age, sex, education, province, and smoking. Exclusions and conventions as per table 1, with further exclusion of the first 2 years of follow-up.



**All-cause mortality**
(12319 deaths)

RR per 35cl: 1.08 (95%CI 1.05-1.11)

**Vascular mortality**
(4708 deaths)

RR per 35cl: 1.04 (95%CI 0.99-1.09)

**Cancer mortality**
(3919 deaths)

RR per 35cl: 1.07 (95%CI 1.02-1.12)

**Other mortality**
(3692 deaths)

RR per 35cl: 1.13 (95%CI 1.08-1.19)

# Figure S5. Alcohol consumption versus all-cause, vascular, cancer and other mortality at ages 35-79 years in Cuba, excluding participants taking anti-hypertensives

Rate ratios (RR) adjusted for age, sex, education, province, and smoking. Exclusions and conventions as per table 1, with further exclusion of those taking antihypertensive medication.



**All-cause mortality**
(10 448 deaths)

RR per 35cl: 1.09 (95%CI 1.06-1.12)

**Vascular mortality**
(3676 deaths)

RR per 35cl: 1.05 (95%CI 1.00-1.11)

**Cancer mortality**
(3530 deaths)

RR per 35cl: 1.07 (95%CI 1.02-1.13)

**Other mortality**
(3242 deaths)

RR per 35cl: 1.14 (95%CI 1.08-1.21)