TWO-PAGE DISPLAYS FOR 333 OF THE 639 VARIABLES
639个变量中的333个变量的双页图示

LABORATORY MEASUREMENTS (PLASMA, RED BLOOD CELLS, URINE)
实验室测定 (血浆，红细胞，尿)

List of laboratory (P, R, U) variables displayed (abbreviated names)
双页图示的实验室 (P, R, U) 变量清单 (缩写名)

5 cholesterol-related
5个与胆固醇有关的

P001 TOTCHOL	P002 HDLCHOL	P003 NONHDL	P004 APOA1
P005 APOB			

26 plasma proteins, vitamins, trace elements, etc.
26个血浆蛋白质，维生素，微量元素，等

P006 ALBUMIN	P007 TOTPROT	P009 B-CAROT	P012 RETINOL
P013 RBP	P014 A-TOCOPH	P016 LYCOPENE	P017 LUTEIN
P020 B-CRYPT	P024 FOLATE	P025 VITC	P026 CERULO
P027 Cu	P028 K	P029 INORG-P	P030 Se
P031 Zn	P032 Fe	P033 FERRITIN	P035 TRANSFE
P036 GLUCOSE	P037 BUN	P038 PEPSIN	P039 THYROXINE
P040 B2-MGLOB	P041 TESTOSTm		

3 infection-related
3个与感染有关的

P042 HBsAg	P043 HBsAb	P044 HPYLORI

4 tobacco-related (male and female cotinine)
4个与烟草有关的(男女可的宁)

P045 COTININEm	P046 COTININEf	P047 COTIN>20m	P048 COTIN>20f

2 intracellular
2个细胞内的

R001 Hb	R002 RIBOFDEF

16 membrane-associated (fatty acids)
16个与膜关联的(脂肪酸)

R003 SATFA	R004 MUFA	R005 TOTn6	R006 TOTn3
R007 PUFA	R008 P/S	R010 16:0	R011 18:0
R014 24:0	R016 18:1n9	R019 24:1n9	R021 20:5n3
R022 22:6n3	R023 18:2n6	R025 20:3n6	R026 20:4n6

11 electrolytes or small molecules
11个电解质或小分子

U001 Cl/cre	U002 K/cre	U003 Na/cre	U004 Ca/cre
U005 P/cre	U006 UREA/cre	U007 URIC/cre	U008 CREAT
U009 TAUR/cre	U010 AFM1/cre	U011 COT/cre	

4 related to a nitrosamine study
4个与亚硝胺研究有关的

U014 VOLURmn	U023 NO3mn	U024 INHIBPRO	U026 SUMNITa

LABORATORY MEASUREMENTS
display format:
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实验室测定
表述格式:
第 332-333 页

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DISPLAY FORMAT FOR LABORATORY VARIABLES
实验室变量的表述格式

Identifier: P001 = Plasma variable 001 (R = red blood cell, U = urine)
标识：P = 血浆变量 001（R = 红细胞 U = 尿）

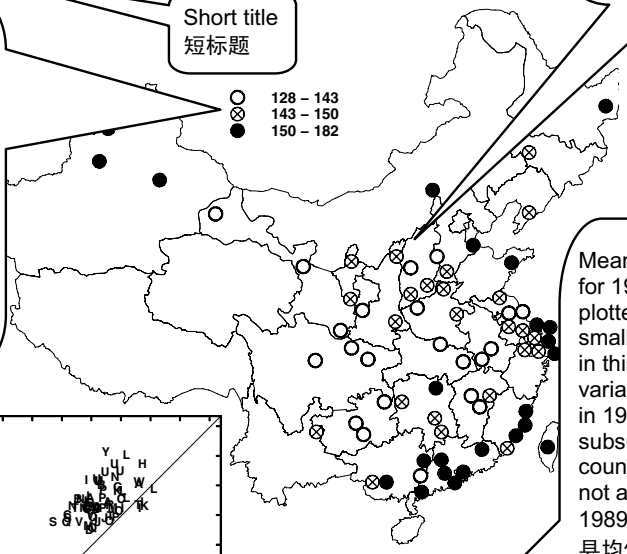
Full title, including units
长标题，含单位

Map showing all of China, with study counties designated by shaded bullets.
地图显示全中国，阴影圆点表示研究县。

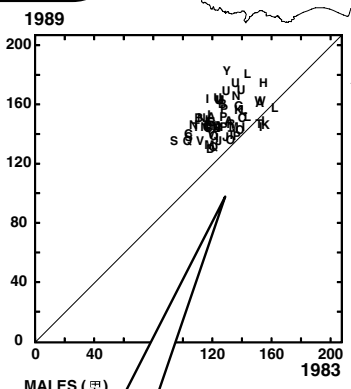
P001 TOTCHOL – plasma TOTAL CHOLESTEROL (mg/dL)

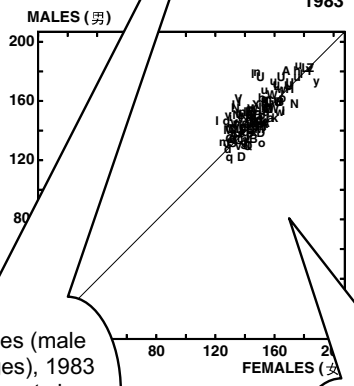
Short title
短标题

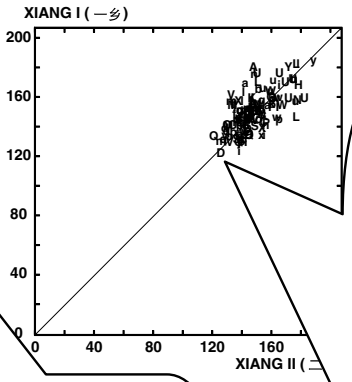
Shaded bullets indicate low, middle and high ranges in study areas. In most cases, each category includes about 1/3 of the mainland counties. A single value is reported for the aggregated Taiwan study areas.
圆点疏密表示研究区域的低中高范围。在大多数情况下，每类包括 1/3 大陆县。对台湾研究地区，给出一总的平均值。



Mean county values for 1989 vs. 1993 are plotted in a separate, small scatter diagram in this space (only for variables remeasured in 1993 reliability subsurvey of 13 counties: P001 was not among these).
1989 年对 1993 年的县均值用在这里的一个单独小散点图表示（仅适于 1993 年 13 个县可靠性调查中重新测量过的变量：P001 不在其内）。







Mean small-area values in 1989 (male and female, all ages), xiang I vs. xiang II. Within each xiang, values for males (upper case) and females (lower case) are plotted separately. The correlation is an indicator of the reliability of county mean values (i.e., of xiangs I and II combined).
1989 年小区域均值（男女，所有年龄段），一乡对二乡。 在每个乡内，男性（大写）和女性（小写）的值是分别图示的。相关性是县均值（即一乡二乡的组合）可靠性的一个指针。

Mean county values (male and female, all ages), 1983 vs. 1989. Each county is represented by the letter designating its province (so where there is more than one study county per province, letters are repeated). Points above the diagonal indicate temporal increases in measured values.
县平均值（男女，所有年龄段），1983 对 1989 年。每个县用其省的标识符表示（因此在有一个以上研究县的省，符号会有重复）。对角线以上的点表示测量值有暂时上升趋势。

Mean small-area values in 1989, male vs. female. Within each county, values for xiang I (upper case) and xiang II (lower case) are plotted separately. Points above the diagonal indicate higher mean values in males.
1989 年小区域均值，男性对女性。在每个县内，一乡(大写)和二乡 (小写）的值是分开图示的。对角线以上的点表示高的男性平均值。

Correlations of county-specific values, comparing male vs. female (1989, with both xiangs combined), xiang I vs. xiang II (1989, with both genders combined) and, where values for both periods are available, 1983 vs. 1989 (with both areas and both genders combined).
N = number of counties contributing to each correlation; r% = correlation coefficient: strong correlations indicate informative data.
县的相关，比较男女(1989, 两乡混合)，一乡二乡(1989，男女混合)，和当两个时期的值都有时，比较1983 年和 1989 年(两乡及男女混合)。 N = 参加相关的县的数目， r% = 相关系数：强的相关表明有益的数据。

Coastal and inland counties are grouped and their gender-specific means compared statistically. (The Taiwan and mainland means are not compared statistically.)
沿海和内地县分别组合其按性别的平均值用来作统计比较。（台湾和大陆的平均值不作统计比较）

P001 TOTCHOL – (毫克/100毫升)

Inland Provinc			Coastal Provinces					Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	142	143	QA			AA	162	154		144	144	ZA	192	204
CC	147	150	QB			AB	143	150		151	147	ZB	184	188
CD	140	135	QC			AC	144	154	LB	160	148	ZC	183	188
DA	139	147	RA			BA	148	14	LC	178	179	ZD	193	178
DB	143	143	SA			BB	138	15	LD	159	151	ZE	172	185
DC	122	132	SB			BC	158	157	PA	148	151	ZF	197	193
FA	144	147	SC			EA	148	143	PC	138	146	ZG	186	198
GA	158	154	TA			HA	172	172	PD	155	154	ZH	176	180
JA	133	138	TC			IA	150	143	PE	138	134	ZI	167	163
JB	134	132	TD			IB	141	129	UA	169	151	ZJ	159	178
MB	134	127	VA			IC	144	148	UB	164	160	ZK	179	189
MC	142	144	VB			ID	141	143	UC	172	172	ZL	194	182
MD	140	144	VC	1	8	IE	150	150	UD	168	165	ZM	167	166
NA	146	139	WA	1	1	IF	157	165	UE	169	165	ZN	175	191
NB	149	147	WB	1	3	IG	152	133	UF	162	159	ZO	175	177
NC	151	135	WC	1	9	KB	151	156				ZP	183	184
ND	166	160	XA	14	6									
OA	134	147	XB	14	2									
OB	136	131	YA	17	5									

Mean 平均值	Male (男)	Fem. (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	143†	1	154†	152*	180	184

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	148	12	147	12	84	12.5	†
Xiang (乡) I	vs	Xiang (乡) II	69	148	12	148	13	75	9.4	†
1983	vs	1989	65	127	15	147	12	42	3.7	†

Mainland only (仅限中国大陆)
All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001
Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-31	M003 ALL15-34	-38 *	M075 PEPULCERc	-33 *	R015 16:1n7	35 *	D026 SeCARRY
-35 *	M005 ALL35-69	-34 *	M076 ENTCOLc	-24	R016 18:1n9	-53 †	D028 PLNTFOOD
-39 *	M006 ALL70-79	-30	M077 INTESTOBc	-27	R018 22:1n9	64 †	D029 ANIMFOOD
-34 *	M008 MEDICALc	-46 †	M078 CIRRHOSb	-35 *	R019 24:1n9	-69 †	D031 %PLNTFOOD
-25	M010 NONMEDc	-42 †	M079 CIRRHOSc	39 †	R021 20:5n3	69 †	D032 %ANIMFOOD
-33 *	M012 INFECTc	-25	M085 GENITURIc	31 *	R022 22:6n3	-44 †	D033 PLNTPROT
-34 *	M014 INTESTINc	31	M095 ROADACCb	-24	R025 20:3n6	69 †	D034 ANIMPROT
-32 *	M015 PULMTBb	-27	M117 NEOTETANa	24	R026 20:4n6	-69 †	D035 %PLNTPROT
-24	M024 MOUTHCAc	56 †	P002 HDLCHOL	-50 †	U001 Cl/cre	69 †	D036 %ANIMPROT
36 *	M031 LIVERCAc	90 †	P003 NONHDL	-46 †	U003 Na/cre	24	D046 NUTS
45 †	M035 LUNGCAmc	47 †	P004 APOA1	31	U008 CREAT	56 †	D049 MEAT
48 †	M036 LUNGCAfc	82 †	P005 APOB	67 †	U009 TAUR/cre	57 †	D050 REDMEAT
34 *	M037 BREASTCAc	45 †	P013 RBP	-31 *	D001 KCAL	57 †	D052 FISH
33 *	M039 BRAINCAc	-27	P015 G-TOCOPH	43 †	D002 TOTFAT	-32 *	D057 ADDEDSALT
-34 *	M047 MALNUTRIc	-37 *	P017 LUTEIN	-54 †	D004 SOLCARB	-30	D059 TOTNDF
33 *	M050 MENTALb	52 †	P030 Se	60 †	D005 %FATKCAL	47 †	D072 LYSINE
-39 *	M053 NERVOUSc	41 †	P033 FERRITIN	33 *	D006 %PROTKCAL	45 †	D082 MUFA
-34 *	M056 EPILEPSYb	45 †	P037 BUN	71 †	D007 %ANPRKCAL	0 †	D084 SATFA
-38 *	M057 EPILEPSYc	-32 *	P040 B2-MGLOB	-30	D008 %PLPRKCAL	†	D085 CHOL
-33 *	M058 ALLVASCb	36 *	P041 TESTOSTm	-65 †	D009 %CARBKCAL	†	D086 LYS/ARG
-36 *	M060 RHEUMHDb	-28	P047 COTIN>20m	49 †	D010 RETINOL		D087 %MUFA
-36 *	M061 RHEUMHDc	-37 *	R004 MUFA	-28	D011 TOTCAROT		D088 %PUFA
-32 *	M066 VASC-STRb	39 †	R006 TOTn3	-39 †	D014 VITC		D089 %SATFA
-42 †	M069 ALLRESPc	30	R007 PUFA	-28	D019 Fe		D090 P/S
-33 *	M071 PNEUMONc	-29	R009 14:0	-30	D020 Cu		D091 M/P
-39 *	M072 COPDc	-27	R010 16:0	-26	D021 K		D094 TOTn9
-33 *	M073 DIGESTIVb	34 *	R013 22:0	-30	D022 Mg		D096 %TOTn6
-41 †	M074 DIGESTIVc	56 †	R014 24:0	-26	D024 TOTNa		D104 14:0

35 *	D026 SeCARRY	44 †	D136 %14:0
-53 †	D028 PLNTFOOD	60 †	D141 %16:1
64 †	D029 ANIMFOOD	33 *	D145 %18:0
-69 †	D031 %PLNTFOOD	-36 *	D147 %18:2
69 †	D032 %ANIMFOOD	46 †	Q019 dCANREAD
-44 †	D033 PLNTPROT	45 †	Q031 alNCOME
69 †	D034 ANIMPROT	25	Q050 c%H2OPIPE
-69 †	D035 %PLNTPROT	-27	Q068 dCOOKf
69 †	D036 %ANIMPROT	27	Q094 dHEPATIT
24	D046 NUTS	-32 *	Q096 dMALARIA
56 †	D049 MEAT	31 *	Q108 dSBP
57 †	D050 REDMEAT	30	Q109 dDBP
57 †	D052 FISH	33 *	Q110 dMIDBP
-32 *	D057 ADDEDSALT	35 *	Q113 dMMEFadj
-30	D059 TOTNDF	29	Q151 dBEERday
47 †	D072 LYSINE	-24	Q162 dLEGUME
45 †	D082 MUFA	43 †	Q166 dSALTFISH
0 †	D084 SATFA	44 †	Q167 dSALTFKID
†	D085 CHOL	46 †	Q173 dFRUIT
†	D086 LYS/ARG	59 †	Q174 dFISH
	D087 %MUFA	65 †	Q175 dMEAT
	D088 %PUFA	24	Q176 dEGGS
	D089 %SATFA	31 *	Q177 dMILK
	D090 P/S	34 *	Q184 dBLACKTEA
	D091 M/P	34 *	Q201 eDOCVIS
	D094 TOTn9	-24	Q227 e%DIARRH
	D096 %TOTn6	27	Q245 fHTadj
	D104 14:0	-31 *	G003 ELEVATION

- Analysis by colourimetry, using a ferric ammonium sulfate colour developir … is suitable for ascorbate-preserved plasma samples. The same methods were used in the 1983 and 1989 surveys.
- Substantial variation among counties (range 127-180 mg/dL [3.3-4.7 mmo…
- Geographical distribution of high values mainly along coast with the hig… ning the mean value of 182 mg/dL (4.7 mmol/L) in Taiwan.
- Reliability of measurement supported by good correlations between men a… tween xiangs I and II.
- Increase of 16% in mean value between 1983 and 1989 (rising from 127 to … 8 mmol/L) represents a major change, most likely mirroring changes in diet. The change involves increases both in … P002: HDLCHOL and P004: APOA1) and in LDL cholester… (see P003: NONHDL and P005:APOB).
- Simultaneous (s… by-side) remeasurements in 1997 of samples stored fr… 89 confirm the reality of the increase (see text).
- Strong correla… th dietary fat intake (60%† D005: %FATKCAL).
- Representat… e in UK men (Parish et al. BMJ 311:471-477, 1995) v… mg/dL vs. 148 mg/dL [5.5 vs. 3.8 mmol/L].

(P001的中文… 20页)

Conversi… d lipids *to* SI Units (血脂换算-*到*国际单位): … = mmol/L
Convers… d lipids *from* SI Units (血脂换算-*从*国际单…

LABORATORY MEASUREMENTS
display format: pages 332-333

methods: pages 10-11

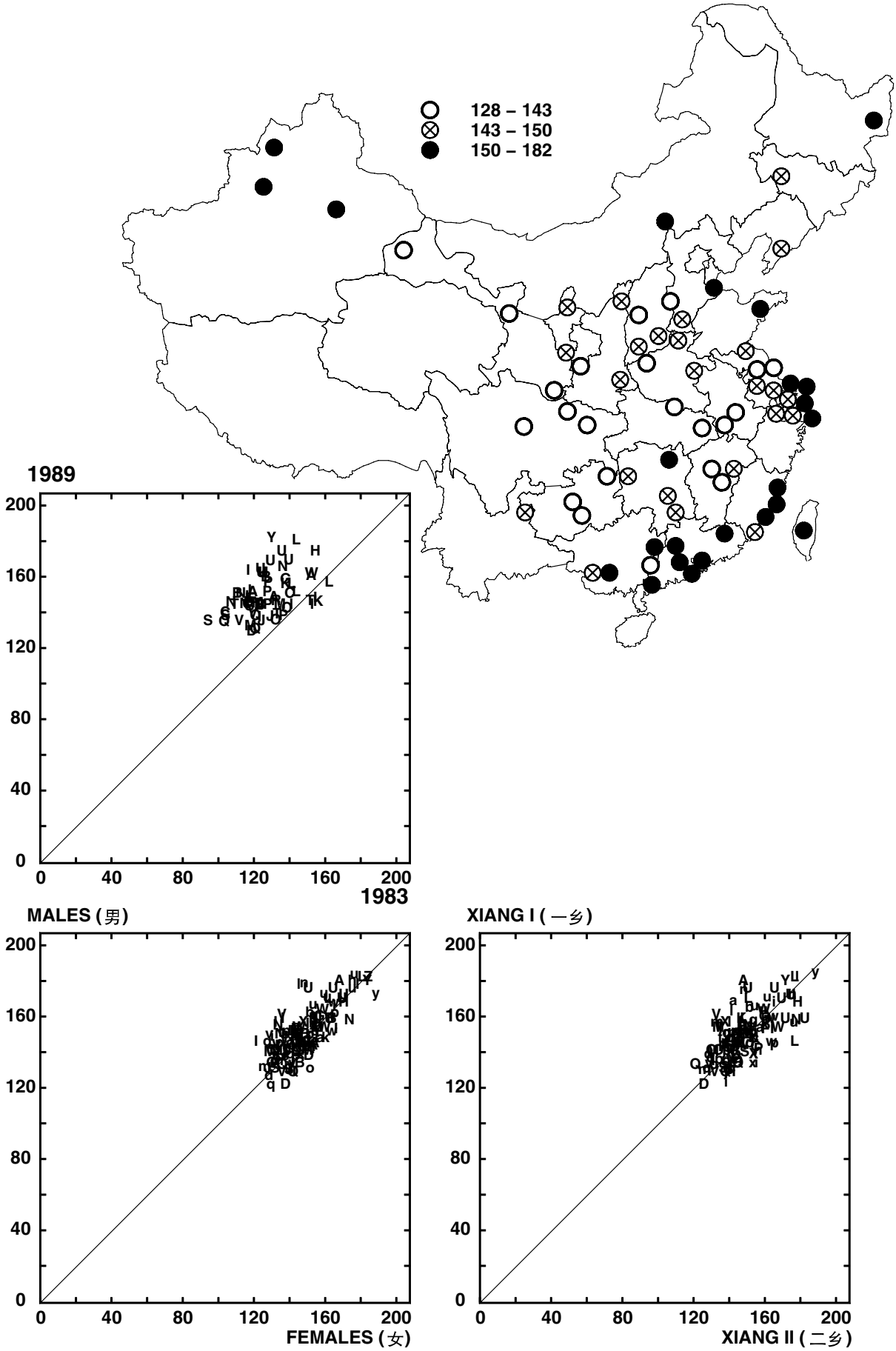
实验室测定
表述格式：
第 332-333 页

方法：
第 10-11 页

Notes and comments, including units of conversion, where applicable.
注释和评论，包括适当地方的单位转换。

Correlation coefficients (mainland only), p-values and names for all variables with a 2p<0.05 correlation with the variable featured on this double page. There are 392 eligible variables (printed in non-italics in the Summary Statistics on pages 19-103), including the 333 with 2-page displays.
和本双页所描述的变量有 2p<0.05 相关的所有变量的相关系数(仅限中国大陆)，p-值和名称。有 392 个合格的变量（在第 19-103 页的统计总结表中印成非斜体的变量），包括 333 个有双页描述的变量。

P001 TOTCHOL – plasma TOTAL CHOLESTEROL (mg/dL)



P001 TOTCHOL – 血浆：总胆固醇 (毫克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	142	143	QA	138	128	AA	162	154	KC	144	144	ZA	192	204
CC	147	150	QB	125	132	AB	143	150	LA	151	147	ZB	184	188
CD	140	135	QC	132	140	AC	144	154	LB	160	148	ZC	183	188
DA	139	147	RA	148	140	BA	148	149	LC	178	179	ZD	193	178
DB	143	143	SA	143	140	BB	138	145	LD	159	151	ZE	172	185
DC	122	132	SB	132	134	BC	158	157	PA	148	151	ZF	197	193
FA	144	147	SC	133	138	EA	148	143	PC	138	146	ZG	186	198
GA	158	154	TA	148	140	HA	172	172	PD	155	154	ZH	176	180
JA	133	138	TC	141	143	IA	150	143	PE	138	134	ZI	167	163
JB	134	132	TD	134	139	IB	141	129	UA	169	151	ZJ	159	178
MB	134	127	VA	129	137	IC	144	148	UB	164	160	ZK	179	189
MC	142	144	VB	145	130	ID	141	143	UC	172	172	ZL	194	182
MD	140	144	VC	145	138	IE	150	150	UD	168	165	ZM	167	166
NA	146	139	WA	159	161	IF	157	165	UE	169	165	ZN	175	191
NB	149	147	WB	151	153	IG	152	133	UF	162	159	ZO	175	177
NC	151	135	WC	160	159	KB	151	156				ZP	183	184
ND	166	160	XA	146	146									
OA	134	147	XB	145	142									
OB	136	131	YA	174	185									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	143†	143*	154†	152*	180	184

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
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Xiang (乡) I	vs	Xiang (乡) II	69	148	12	148	13	75	9.4	†
1983	vs	1989	65	127	15	147	12	42	3.7	†

Mainland only (仅限中国大陆)

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-31 M003 ALL15-34	-38 * M075 PEPULCERc	-33 * R015 16:1n7	35 * D026 SeCARRY	44 † D136 %14:0
-35 * M005 ALL35-69	-34 * M076 ENTCOLc	-24 R016 18:1n9	-53 † D028 PLNTFOOD	60 † D141 %16:1
-39 * M006 ALL70-79	-30 M077 INTESTOBc	-27 R018 22:1n9	64 † D029 ANIMFOOD	33 * D145 %18:0
-34 * M008 MEDICALc	-46 † M078 CIRRHOSb	-35 * R019 24:1n9	-69 † D031 %PLNTFOOD	-36 * D147 %18:2
-25 M010 NONMEDc	-42 † M079 CIRRHOSc	39 † R021 20:5n3	69 † D032 %ANIMFOOD	46 † Q019 dCANREAD
-33 * M012 INFECTc	-25 M085 GENITURfc	31 * R022 22:6n3	-44 † D033 PLNTPROT	45 † Q031 alNCOME
-34 * M014 INTESTINc	31 M095 ROADACCb	-24 R025 20:3n6	69 † D034 ANIMPROT	25 Q050 c%H2OPIPE
-32 * M015 PULMTBb	-27 M117 NEOTETANa	24 R026 20:4n6	-69 † D035 %PLNTPROT	-27 Q068 dCOOKf
-24 M024 MOUTHCAc	56 † P002 HDLCHOL	-50 † U001 Cl/cre	69 † D036 %ANIMPROT	27 Q094 dHEPATIT
36 * M031 LIVERCAc	90 † P003 NONHDL	-46 † U003 Na/cre	24 D046 NUTS	-32 * Q096 dMALARIA
45 † M035 LUNGCAmc	47 † P004 APOA1	31 U008 CREAT	56 † D049 MEAT	31 * Q108 dSBP
48 † M036 LUNGCAfc	82 † P005 APOB	67 † U009 TAUR/cre	57 † D050 REDMEAT	30 Q109 dDBP
34 * M037 BREASTCAc	45 † P013 RBP	-31 * D001 KCAL	57 † D052 FISH	33 * Q110 dMIDBP
33 * M039 BRAINCAc	-27 P015 G-TOCOPH	43 † D002 TOTFAT	-32 * D057 ADDEDSALT	35 * Q113 dMMEFadj
-34 * M047 MALNUTRIc	-37 * P017 LUTEIN	-54 † D004 SOLCARB	-30 D059 TOTNDF	29 Q151 dBEERday
33 * M050 MENTALb	52 † P030 Se	60 † D005 %FATKCAL	47 † D072 LYSINE	-24 Q162 dLEGUME
-39 * M053 NERVOUSc	41 † P033 FERRITIN	33 * D006 %PROTKCAL	45 † D082 MUFA	43 † Q166 dSALTFISH
-34 * M056 EPILEPSYb	45 † P037 BUN	71 † D007 %ANPRKCAL	50 † D084 SATFA	44 † Q167 dSALTFKID
-38 * M057 EPILEPSYc	-32 * P040 B2-MGLOB	-30 D008 %PLPRKCAL	64 † D085 CHOL	46 † Q173 dFRUIT
-33 * M058 ALLVASCb	36 * P041 TESTOSTm	-65 † D009 %CARBKCAL	61 † D086 LYS/ARG	59 † Q174 dFISH
-36 * M060 RHEUMHDb	-28 P047 COTIN>20m	49 † D010 RETINOL	25 D087 %MUFA	65 † Q175 dMEAT
-36 * M061 RHEUMHDc	-37 * R004 MUFA	-28 D011 TOTCAROT	-33 * D088 %PUFA	24 Q176 dEGGS
-32 * M066 VASC-STRb	39 † R006 TOTn3	-39 † D014 VITC	33 * D089 %SATFA	31 * Q177 dMILK
-42 † M069 ALLRESPc	30 R007 PUFA	-28 D019 Fe	-32 * D090 P/S	34 * Q184 dBLACKTEA
-33 * M071 PNEUMONc	-29 R009 14:0	-30 D020 Cu	28 D091 M/P	34 * Q201 eDOCVIS
-39 * M072 COPDc	-27 R010 16:0	-26 D021 K	43 † D094 TOTn9	-24 Q227 e%DIARRH
-33 * M073 DIGESTIVb	34 * R013 22:0	-30 D022 Mg	-35 * D096 %TOTn6	27 Q245 fHTadj
-41 † M074 DIGESTIVc	56 † R014 24:0	-26 D024 TOTNa	47 † D104 14:0	-31 * G003 ELEVATION

- Analysis by colourimetry, using a ferric ammonium sulfate colour developing reagent that is suitable for ascorbate-preserved plasma samples. The same methods were used in the 1983 and 1989 surveys.
- Substantial variation among counties (range 127-180 mg/dL [3.3-4.7 mmol/L]).
- Geographical distribution of high values mainly along coast with the highest values matching the mean value of 182 mg/dL (4.7 mmol/L) in Taiwan.
- Reliability of measurement supported by good correlations between men and women, and between xiangs I and II.
- Increase of 16% in mean value between 1983 and 1989 (rising from 127 to 147 mg/dL [3.3 to 3.8 mmol/L) represents a major change, most likely mirroring changes in diet. The change involves increases both in HDL cholesterol (see P002: HDLCHOL and P004: APOA1) and in LDL cholesterol (see P003: NONHDL and P005:APOB).
- Simultaneous (side-by-side) remeasurements in 1997 of samples stored from 1983 and from 1989 confirm the reality of the increase (see text).
- Strong correlation with dietary fat intake (60%† D005: %FATKCAL).
- Representative value in UK men (Parish et al. BMJ 311:471-477, 1995) vs. 1989 survey men: 214 mg/dL vs. 148 mg/dL [5.5 vs. 3.8 mmol/L].

(P001的中文注释在P020页)

Conversion of blood lipids *to* SI Units (血脂换算-*到*国际单位):	mg/dL * 0.0259 = mmol/L
Conversion of blood lipids *from* SI Units (血脂换算-*从*国际单位):	mmol/L * 38.61 = mg/dL

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methods: pages 10-11

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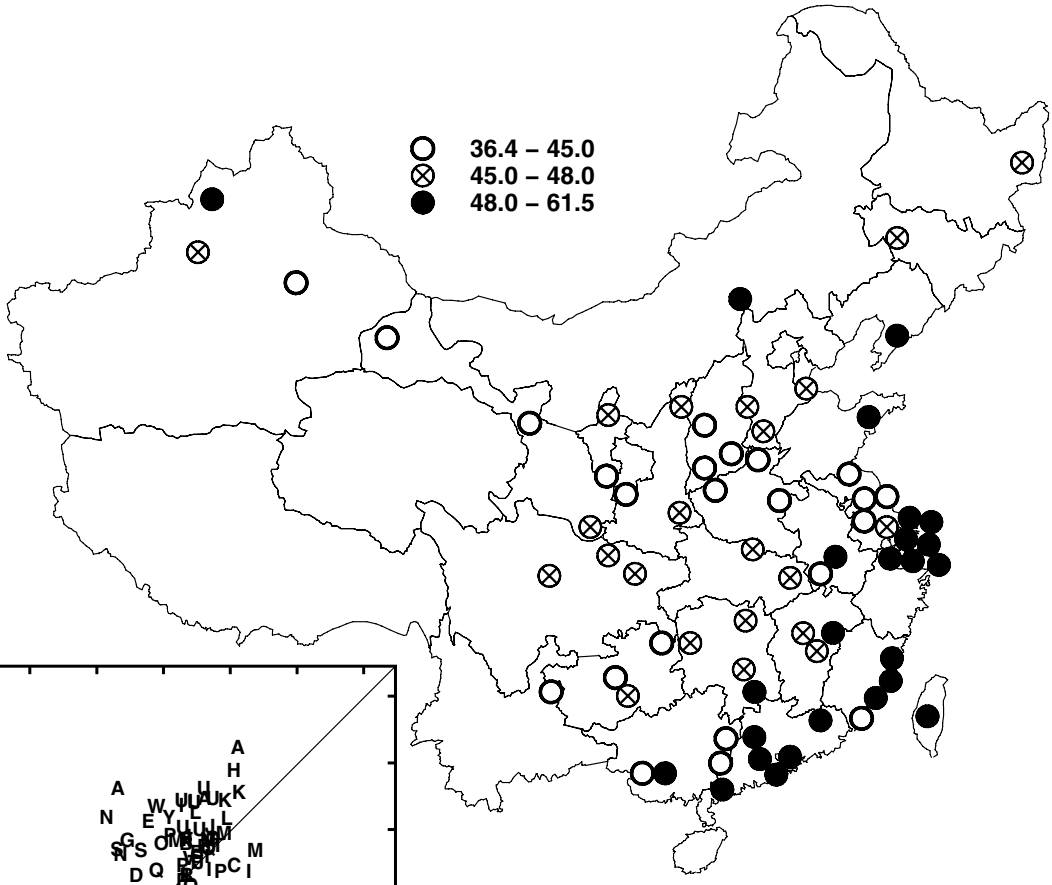
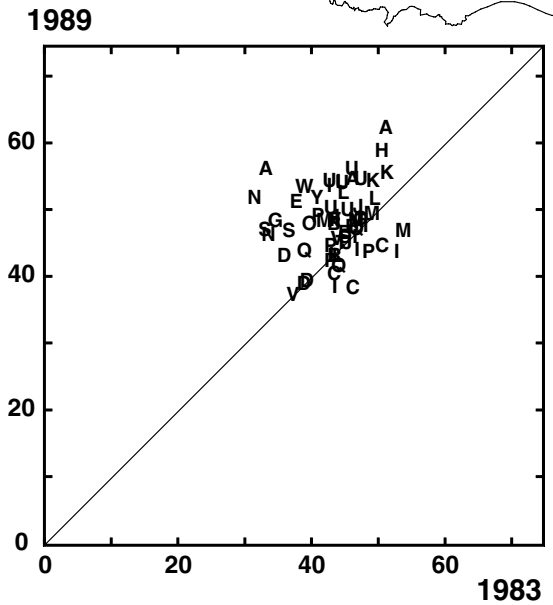
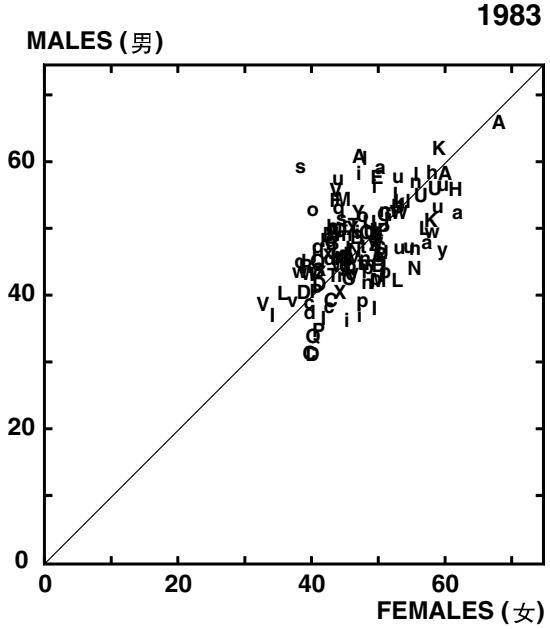
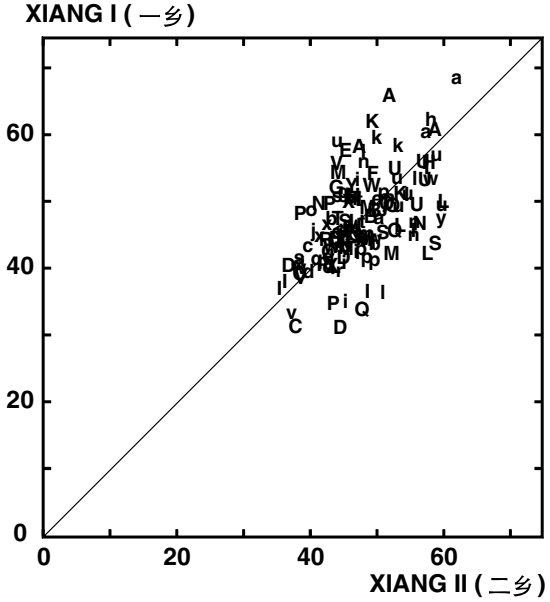
P002 HDLCHOL – plasma HIGH DENSITY LIPOPROTEIN CHOLESTEROL (mg/dL)





- 用硫酸铁铵显色剂（适用于抗坏血酸保护的血浆样品）进行比色测定。HDL胆固醇在用磷钨酸盐和Mg2＋将LDL粒子进行选择性沉淀后进行测定。在1983年和1989年调查中用同样方法进行测定。
- 各县差异和地理分布模式与总胆固醇相似（P001: TOTCHOL）。
- 从1983年到1989年，HDL胆固醇平均水平升高了8%（从43.6mg/dL [1.1 mmol/L]增加到47.2 mg/dL [1.2 mmol/L]），最可能反映了膳食的变化。
- HDL粒子的主要表面蛋白是阿朴脂蛋白A1，两者具有很强的相关性（62%†, P004: APOA1），证实了两者测定结果的可靠性。
- 男性和女性之间以及一乡和二乡之间的良好相关性支持了测定结果的可靠性。





P002 HDLCHOL – 血浆：高密度脂蛋白胆固醇 (毫克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	34.0	41.0	QA	40.2	41.3	AA	58.3	64.8	KC	51.8	55.3	ZA	47.7	51.0
CC	42.1	45.5	QB	45.3	40.7	AB	59.1	48.5	LA	41.4	43.2	ZB	46.5	51.3
CD	38.3	41.0	QC	48.5	44.3	AC	52.2	58.5	LB	49.4	54.1	ZC	50.3	49.0
DA	37.3	39.1	RA	42.8	41.7	BA	47.9	46.2	LC	49.4	52.3	ZD	42.2	46.3
DB	38.0	39.1	SA	50.7	39.5	BB	43.6	47.8	LD	54.4	52.3	ZE	45.1	47.5
DC	42.7	41.8	SB	45.5	46.9	BC	48.6	44.8	PA	38.6	44.6	ZF	42.8	48.3
FA	51.3	44.2	SC	47.5	44.7	EA	51.0	49.8	PC	42.8	44.8	ZG	48.8	53.3
GA	47.4	47.8	TA	48.0	47.0	HA	56.3	59.7	PD	45.8	50.8	ZH	52.6	54.5
JA	49.2	50.2	TC	45.3	48.5	IA	42.1	44.3	PE	40.7	45.0	ZI	42.4	48.1
JB	45.8	42.6	TD	44.0	44.4	IB	35.7	39.7	UA	48.2	50.8	ZJ	49.3	52.8
MB	48.3	43.7	VA	43.5	46.1	IC	43.4	42.5	UB	53.3	57.5	ZK	44.9	47.6
MC	46.6	50.6	VB	38.0	34.8	ID	36.7	48.3	UC	56.0	51.1	ZL	42.6	45.8
MD	48.7	46.4	VC	49.3	45.6	IE	55.9	49.8	UD	46.0	52.5	ZM	49.2	48.2
NA	51.1	50.9	WA	50.1	55.2	IF	50.1	46.3	UE	54.8	52.9	ZN	45.4	43.2
NB	45.3	49.8	WB	45.5	46.6	IG	45.1	45.2	UF	52.3	54.2	ZO	50.1	48.8
NC	45.0	45.9	WC	42.6	38.6	KB	55.0	54.4				ZP	48.8	53.5
ND	44.0	51.6	XA	47.3	44.2									
OA	50.3	44.0	XB	41.3	42.7									
OB	50.0	45.7	YA	48.8	53.2									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	45.2	44.9†	48.6	50.0†	46.8	49.3

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	46.7	5.6	47.2	5.6	70	8.0	†
Xiang (乡) I	vs	Xiang (乡) II	69	46.4	6.3	47.6	4.9	69	7.7	†
1983	vs	1989	65	43.6	4.9	47.2	5.2	18	1.4	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-29 M005 ALL35-69	25 M114 LOWBTHWTa	-42 † D004 SOLCARB	59 † D052 FISH	31 * Q093 dPEPULCER
-25 M006 ALL70-79	56 † P001 TOTCHOL	55 † D005 %FATKCAL	25 D055 ADDEDFAT	29 Q094 dHEPATIT
-32 * M008 MEDICALc	62 † P004 APOA1	57 † D007 %ANPRKCAL	-42 † D059 TOTNDF	31 * Q095 dSCHISTO
-25 M015 PULMTBb	43 † P005 APOB	-38 * D008 %PLPRKCAL	-34 * D067 GLUTAMINE	26 Q117 dDIARRH
-41 † M018 OTHERTBc	-26 P011 Z-CAROT	-58 † D009 %CARBKCAL	48 † D072 LYSINE	31 * Q149 dALCEVER
32 * M021 SCHISTOc	34 * P013 RBP	46 † D010 RETINOL	50 † D082 MUFA	43 † Q151 dBEERday
26 M029 COLRECCAc	-41 † P015 G-TOCOPH	-30 D015 THIAMINE	44 † D084 SATFA	29 Q156 dALCOday
35 * M031 LIVERCAc	-24 P017 LUTEIN	-33 * D020 Cu	63 † D085 CHOL	33 * Q157 dRICE
28 M032 PANCRSCAc	-25 P019 A-CRYPT	-27 D021 K	36 * D086 LYS/ARG	-37 * Q158 dWHEAT
54 † M035 LUNGCAmc	-25 P022 PHYTOFLU	-24 D022 Mg	32 * D087 %MUFA	-30 Q161 dMILLET
34 * M036 LUNGCAfc	-24 P023 PHYTOENE	-25 D028 PLNTFOOD	-29 D088 %PUFA	25 Q165 dSMOKFOOD
28 M039 BRAINCAc	27 P030 Se	54 † D029 ANIMFOOD	-26 D090 P/S	59 † Q166 dSALTFISH
-26 M052 NERVOUSb	45 † P037 BUN	-54 † D031 %PLNTFOOD	50 † D094 TOTn9	60 † Q167 dSALTFKID
-25 M056 EPILEPSYb	-33 * P043 HBsAb	54 † D032 %ANIMFOOD	-30 D096 %TOTn6	28 Q172 dGRNVEG
-38 * M058 ALLVASCb	-30 R011 18:0	-46 † D033 PLNTPROT	30 D097 %TOTn9	25 Q173 dFRUIT
-28 M059 ALLVASCc	-29 R013 22:0	58 † D034 ANIMPROT	26 D104 14:0	50 † Q174 dFISH
-27 M060 RHEUMHDb	48 † R014 24:0	-57 † D035 %PLNTPROT	43 † D141 %16:1	29 Q175 dMEAT
-28 M061 RHEUMHDc	41 † R021 20:5n3	57 † D036 %ANIMPROT	26 D145 %18:0	25 Q176 dEGGS
-25 M063 IHDc	-25 R022 22:6n3	31 D037 RICE	29 D146 %18:1	51 † Q201 eDOCVIS
-35 * M066 VASC-STRb	-26 R025 20:3n6	-36 * D038 WHTFLOUR	-31 D147 %18:2	25 Q245 fHTadj
-33 * M067 VASC-STRc	-34 * U001 Cl/cre	-27 D039 OTHCEREAL	-34 * Q017 aPRIMARY	-28 Q247 fBMIadj
-32 * M075 PEPULCERc	-29 U003 Na/cre	-29 D042 LIGHTVEG	29 Q019 dCANREAD	31 * G002 LONGITUDE
-24 M076 ENTCOLc	25 U008 CREAT	33 * D046 NUTS	38 * Q031 aINCOME	-36 * G003 ELEVATION
-25 M078 CIRRHOSb	50 † U009 TAUR/cre	37 * D048 EGGS	44 † Q052 c%TOILET	-43 † G004 ARIDITY
25 M081 TOTLIVRc	-32 * U011 COT/cre	45 † D049 MEAT	-30 Q057 dCOALKID	
40 † M082 GALLBILc	26 U023 NO3mn	42 † D050 REDMEAT	-26 Q064 dCOALNOW	
28 M110 CONGENITa	48 † D002 TOTFAT	31 * D051 POULTRY	-29 Q068 dCOOKf	

- Analysis by colourimetry, using a ferric ammonium sulfate colour developing reagent that is suitable for ascorbate-preserved plasma samples. HDL cholesterol was measured after selective precipitation of LDL particles by phosphotungstate and Mg2+ ions. The same methods were used in the 1983 and 1989 surveys.
- Similar pattern of variation and geographic distribution as for total cholesterol (P001: TOTCHOL).
- Increase of 8% in mean values between 1983 and 1989 (rising from 43.6 to 47.2 mg/dL [1.1 to 1.2 mmol/L]) most likely mirroring changes in diet.
- A major surface protein on HDL particles is apolipoprotein A1, with which this correlates strongly (62%†, P004: APOA1), supporting reliability of both measurements.
- Reliability of measurement supported by good correlations between men and women, and between xiangs I and II.

Conversion of blood lipids *to* SI Units (血脂换算-*到*国际单位):	mg/dL * 0.0259 = mmol/L
Conversion of blood lipids *from* SI Units (血脂换算-*从*国际单位):	mmol/L * 38.61 = mg/dL

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methods: pages 10-11

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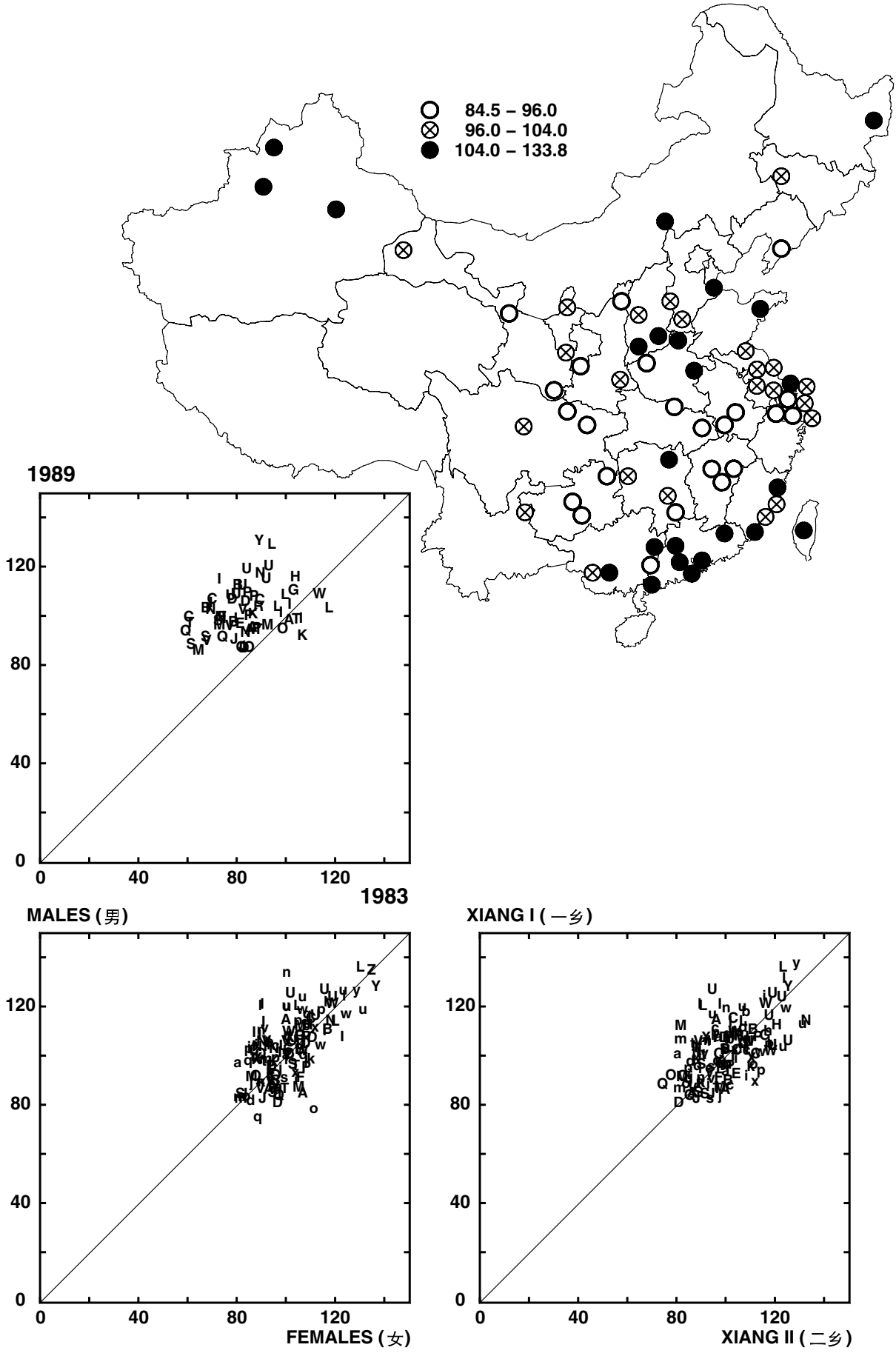
方法: 第 10-11 页

P003 NONHDL – plasma NON-HDL CHOLESTEROL (mg/dL)



P003 NONHDL – 血浆：非高密度脂蛋白胆固醇 (毫克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	108.1	102.6	QA	97.8	86.7	AA	104.2	89.8	KC	92.3	88.7	ZA	144.3	152.5
CC	105.5	104.4	QB	80.2	91.3	AB	84.4	101.5	LA	109.6	104.3	ZB	137.5	136.2
CD	102.3	94.0	QC	83.4	96.3	AC	91.8	96.1	LB	110.7	93.9	ZC	132.8	139.0
DA	102.3	108.5	RA	105.7	98.8	BA	100.2	103.3	LC	128.7	126.7	ZD	150.9	131.1
DB	105.0	103.9	SA	92.3	100.6	BB	94.4	97.8	LD	104.6	98.7	ZE	126.9	137.6
DC	79.8	90.8	SB	87.0	87.1	BC	109.9	112.2	PA	109.4	106.4	ZF	153.7	144.8
FA	93.2	102.8	SC	86.0	93.8	EA	97.6	93.3	PC	95.7	101.7	ZG	136.8	144.2
GA	111.1	106.8	TA	100.5	93.6	HA	115.7	112.8	PD	109.8	103.3	ZH	123.4	125.4
JA	84.3	87.9	TC	96.3	95.1	IA	108.4	99.3	PE	97.8	89.0	ZI	124.7	115.0
JB	88.2	89.9	TD	90.5	95.1	IB	105.3	89.9	UA	121.3	100.7	ZJ	109.3	124.7
MB	85.7	83.3	VA	85.5	91.5	IC	100.6	106.0	UB	110.7	103.0	ZK	133.6	141.4
MC	95.9	93.5	VB	106.9	95.3	ID	104.9	94.8	UC	116.1	121.4	ZL	151.4	136.3
MD	91.3	98.2	VC	96.3	92.4	IE	94.2	100.8	UD	122.5	112.6	ZM	117.8	117.4
NA	95.0	88.7	WA	108.9	105.8	IF	107.4	119.2	UE	114.8	112.7	ZN	129.2	147.8
NB	104.2	97.7	WB	105.6	106.9	IG	107.0	87.9	UF	109.8	104.9	ZO	124.9	127.7
NC	106.6	89.7	WC	117.5	120.9	KB	96.5	102.2				ZP	133.7	130.4
ND	122.6	109.0	XA	98.7	102.3									
OA	83.7	103.1	XB	103.7	99.8									
OB	86.0	85.3	YA	125.8	132.4									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	97.9*	98.0	105.7*	102.4	133.2	134.5

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	101.4	11.4	100.0	10.0	69	7.8	†
Xiang (乡) I	vs	Xiang (乡) II	69	101.2	10.6	100.2	11.1	64	6.9	†
1983	vs	1989	65	83.6	13.2	100.3	9.8	30	2.5	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

25 M002 ALL5-14	-41 † M079 CIRRHOSc	-29 R015 16:1n7	48 † D029 ANIMFOOD	43 † D136 %14:0
-26 M005 ALL35-69	-27 M085 GENITURfc	-30 R016 18:1n9	-55 † D031 %PLNTFOOD	49 † D141 %16:1
-32 * M006 ALL70-79	-27 M089 ALLSKINc	-39 * R018 22:1n9	55 † D032 %ANIMFOOD	26 D145 %18:0
-32 * M010 NONMEDc	40 * M095 ROADACCb	-44 † R019 24:1n9	-29 D033 PLNTPROT	-26 D147 %18:2
-33 * M012 INFECTc	27 M096 ROADACCc	25 R021 20:5n3	52 † D034 ANIMPROT	40 † Q019 dCANREAD
-28 M014 INTESTINc	-28 M099 SUICIDEb	51 † R022 22:6n3	-53 † D035 %PLNTPROT	34 * Q031 dINCOME
-28 M024 MOUTHCAc	-33 * M100 SUICIDEc	-41 † U001 Cl/cre	53 † D036 %ANIMPROT	25 Q050 c%H2OPIPE
25 M035 LUNGCAmc	90 † P001 TOTCHOL	-39 † U003 Na/cre	-30 D041 LEGUME	25 Q051 c%FLUSHWC
39 * M036 LUNGCAfc	75 † P005 APOB	54 † U009 TAUR/cre	-25 D043 GREENVEG	29 Q090 dHEIGHT
27 M037 BREASTCAc	36 * P013 RBP	-28 D001 KCAL	-26 D044 SALTVEG	28 Q091 dWEIGHT
-30 M047 MALNUTRlc	-32 * P017 LUTEIN	26 D002 TOTFAT	43 † D049 MEAT	-33 * Q096 dMALARIA
34 * M050 MENTALb	24 P026 CERULO	-43 † D004 SOLCARB	46 † D050 REDMEAT	27 Q108 dSBP
-38 * M053 NERVOUSc	48 † P030 Se	42 † D005 %FATKCAL	37 * D052 FISH	26 Q109 dDBP
-27 M056 EPILEPSYb	37 * P033 FERRITIN	34 * D006 %PROTKCAL	-32 * D057 ADDEDSALT	28 Q110 dMIDBP
-40 † M057 EPILEPSYc	31 P037 BUN	55 † D007 %ANPRKCAL	31 D072 LYSINE	40 † Q113 dMMEFadj
-28 M060 RHEUMHDb	-36 * P040 B2-MGLOB	-48 † D009 %CARBKCAL	27 D082 MUFA	28 Q135 dSMOK<25f
-28 M061 RHEUMHDc	32 * P041 TESTOSTm	34 * D010 RETINOL	36 * D084 SATFA	-26 Q171 dSALTVEG
-37 * M069 ALLRESPc	-27 P047 COTIN>20m	-36 * D011 TOTCAROT	43 † D085 CHOL	42 † Q173 dFRUIT
-28 M071 PNEUMONc	27 R003 SATFA	-31 * D012 VITA	54 † D086 LYS/ARG	44 † Q174 dFISH
-35 * M072 COPDc	-47 † R004 MUFA	-43 † D014 VITC	-24 D088 %PUFA	62 † Q175 dMEAT
-29 M073 DIGESTIVb	55 † R006 TOTn3	-33 * D018 Ca	30 D089 %SATFA	34 * Q177 dMILK
-36 * M074 DIGESTIVc	34 * R007 PUFA	-32 * D024 TOTNa	-25 D090 P/S	35 * Q184 dBLACKTEA
-27 M075 PEPULCERc	26 R011 18:0	-27 D025 Na	26 D094 TOTn9	-32 * Q227 e%DIARRH
-27 M076 ENTCOLc	56 † R013 22:0	38 * D026 SeCARRY	-26 D096 %TOTn6	
-40 † M078 CIRRHOSb	41 † R014 24:0	-50 † D028 PLNTFOOD	43 † D104 14:0	

- LDL cholesterol was not measured directly. The values were calculated by subtracting HDL (P002: HDLCHOL) from total cholesterol (P001: TOTCHOL), leaving mainly, but not entirely, LDL cholesterol.
- Increase of 19% in mean values between 1983 and 1989 surveys (rising from 84 to 100 mg/dL [2.2 to 2.6 mmol/L) represents a major change, most likely mirroring changes in diet (see comment on P001: TOTCHOL).
- Higher in coastal than in inland provinces, consistent with richer diet in areas of greater prosperity.
- In general, positive correlations with indicators of meat and fish intake, e.g., intake of fat (D002: TOTFAT, D005: %FATKCAL, D084: SATFA) animal food (D007: %ANPRKCAL, D029: ANIMFOOD, D034: ANIMPROT, D036: %ANIMPROT) red meat (D050: REDMEAT, Q175:dMEAT), dietary cholesterol (D085: CHOL), and negative with plant food intake, e.g., intake of soluble carbohydrates (D004: SOLCARB), vitamin C (D014: VITC), plant food (D028: PLNTFOOD, D031: %PLNTFOOD) and plant protein (D033: PLNTPROT, D035: %PLNTPROT).
- The major surface protein on LDL particles is apolipoprotein B with which this correlates strongly (75%†, P005:APOB), supporting the reliability of both measurements.

(P003的中文注释在P025页)

Conversion of blood lipids *to* SI Units (血脂换算-*到*国际单位):	mg/dL * 0.0259 = mmol/L
Conversion of blood lipids *from* SI Units (血脂换算-*从*国际单位):	mmol/L * 38.61 = mg/dL

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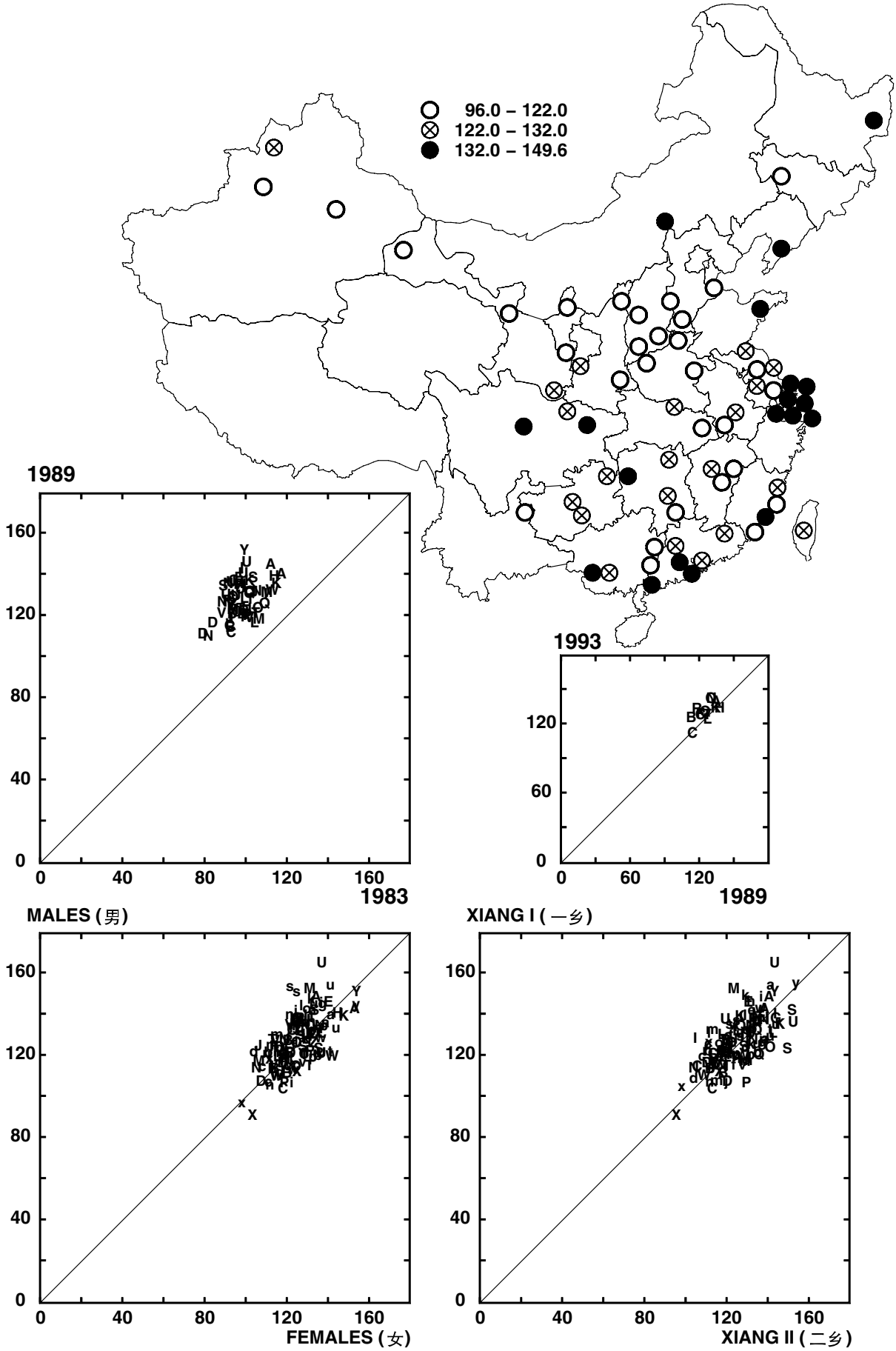
P004 APOA1 – plasma APOLIPOPROTEIN A1 (mg/dL) (non-pooled analysis)



P004 APOA1 – 血浆：阿朴脂蛋白 A1 (毫克/100毫升) (非混合样品测定)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	108.8	117.1	QA	132.1	125.4	AA	139.0	146.7	KC	131.5	138.1	ZA	124.3	139.9
CC	115.6	124.0	QB	129.1	129.9	AB	143.0	132.8	LA	115.0	113.7	ZB	118.7	138.0
CD	107.0	112.6	QC	126.5	121.1	AC	134.1	132.2	LB	135.2	131.5	ZC	116.9	138.4
DA	112.4	105.2	RA	119.1	115.0	BA	111.3	113.0	LC	127.1	125.0	ZD	126.8	140.7
DB	117.8	119.7	SA	145.6	126.9	BB	113.4	127.1	LD	122.5	119.9	ZE	123.1	128.5
DC	112.0	116.8	SB	125.0	126.7	BC	122.1	115.3	PA	116.8	124.8	ZF	120.5	127.3
FA	122.4	118.2	SC	134.9	129.5	EA	136.9	135.8	PC	134.1	131.8	ZG	124.5	130.4
GA	139.4	130.5	TA	121.8	115.9	HA	136.3	137.9	PD	118.7	131.6	ZH	131.6	136.0
JA	130.7	127.9	TC	117.4	125.1	IA	123.7	121.3	PE	114.5	121.5	ZI	117.5	122.0
JB	121.0	112.5	TD	116.1	135.8	IB	115.3	121.4	UA	127.2	128.9	ZJ	133.4	134.1
MB	121.6	110.3	VA	113.8	120.1	IC	127.3	129.6	UB	134.6	127.5	ZK	127.1	129.2
MC	119.3	122.5	VB	122.0	115.8	ID	133.1	130.3	UC	152.9	134.8	ZL	116.8	126.5
MD	136.4	121.7	VC	127.4	119.4	IE	137.9	128.1	UD	129.8	138.4	ZM	126.9	132.8
NA	107.5	108.1	WA	122.1	138.3	IF	140.7	141.5	UE	143.0	134.0	ZN	127.3	133.6
NB	131.8	135.2	WB	112.0	120.5	IG	117.5	116.5	UF	119.3	136.4	ZO	122.7	124.1
NC	128.9	120.1	WC	107.9	114.2	KB	139.2	127.4				ZP	126.9	137.9
ND	136.5	122.9	XA	112.9	117.7									
OA	131.1	122.5	XB	91.7	100.3									
OB	122.8	119.9	YA	145.8	153.4									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	122.3	121.5*	128.8	128.8*	124.1	132.5

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	125.2	11.5	124.8	9.7	71	8.2	†
Xiang (乡) I	vs	Xiang (乡) II	69	124.9	10.8	125.1	10.2	74	9.0	†
1983	vs	1989	65	98.0	7.7	126.0	9.1	42	3.7	†
1989	vs	1993	13	124.6	7.9	127.3	8.2	68	3.1	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-27	M003 ALL15-34	30	M097 DROWNb	-30	U011 COT/cre	46 †	D052 FISH	29	Q094 dHEPATIT
-27	M005 ALL35-69	34 *	M098 DROWNc	33 *	U023 NO3mn	30	D054 VEGOIL	27	Q095 dSCHISTO
-38 *	M006 ALL70-79	24	M107 NONMEDa	54 †	D002 TOTFAT	32 *	D055 ADDEDFAT	33 *	Q109 dDBP
-28	M008 MEDICALc	-27	M109 ALLGIa	-41 †	D004 SOLCARB	-31 *	D059 TOTNDF	28	Q110 dMIDBP
-38 *	M013 INTESTINb	-25	M115 BTHTRAUMa	58 †	D005 %FATKCAL	-42 †	D067 GLUTAMINE	27	Q117 dDIARRH
-41 †	M018 OTHERTBc	33	M119 DROWNa	51 †	D007 %ANPRKCAL	41 †	D072 LYSINE	37 *	Q149 dALCEVER
26	M019 VIRALHEPb	47 †	P001 TOTCHOL	-41 †	D008 %PLPRKCAL	52 †	D082 MUFA	26	Q151 dBEERday
28	M021 SCHISTOc	62 †	P002 HDLCHOL	-60 †	D009 %CARBKCAL	35 *	D083 PUFA	28	Q155 dLIQRday
24	M029 COLRECCAc	41 †	P005 APOB	43 †	D010 RETINOL	45 †	D084 SATFA	28	Q156 dALCOday
29	M031 LIVERCAc	26	P009 B-CAROT	26	D016 RIBOFLAV	55 †	D085 CHOL	36 *	Q157 dRICE
26	M032 PANCRSCAc	28	P013 RBP	-27	D019 Fe	25	D086 LYS/ARG	-42 †	Q158 dWHEAT
50 †	M035 LUNGCAmc	-29	P015 G-TOCOPH	-29	D020 Cu	30	D087 %MUFA	-25	Q162 dLEGUME
31	M036 LUNGCAfc	32 *	P033 FERRITIN	-33 *	D021 K	-24	D088 %PUFA	31 *	Q165 dSMOKFOOD
31 *	M037 BREASTCAc	29	P037 BUN	-30	D022 Mg	34 *	D092 TOTn3	36 *	Q166 dSALTFISH
27	M039 BRAINCAc	31 *	P041 TESTOSTm	-24	D028 PLNTFOOD	35 *	D093 TOTn6	36 *	Q167 dSALTFKID
-35 *	M049 BLOODc	-29	R001 Hb	46 †	D029 ANIMFOOD	52 †	D094 TOTn9	37 *	Q172 dGRNVEG
-26	M052 NERVOUSb	-27	R003 SATFA	-49 †	D031 %PLNTFOOD	-25	D096 %TOTn6	41 †	Q174 dFISH
-34 *	M058 ALLVASCb	-33 *	R006 TOTn3	49 †	D032 %ANIMFOOD	29	D097 %TOTn9	41 †	Q175 dMEAT
-27	M059 ALLVASCc	-30	R009 14:0	-46 †	D033 PLNTPROT	26	D104 14:0	25	Q176 dEGGS
-32 *	M062 HYPTENSc	-33 *	R010 16:0	53 †	D034 ANIMPROT	27	D141 %16:1	-24	Q192 dLIVEBRTH
-25	M064 STROKEb	-32 *	R011 18:0	-51 †	D035 %PLNTPROT	28	D146 %18:1	43 †	Q201 eDOCVIS
-31	M066 VASC-STRb	-33 *	R013 22:0	51 †	D036 %ANIMPROT	-26	D147 %18:2	29	G002 LONGITUDE
-38 *	M067 VASC-STRc	42 †	R014 24:0	38 *	D037 RICE	-28	Q017 aPRIMARY	-36 *	G003 ELEVATION
-34 *	M074 DIGESTIVc	33 *	R018 22:1n9	-44 †	D038 WHTFLOUR	41 †	Q031 aINCOME	-47 †	G004 ARIDITY
-41 †	M075 PEPULCERc	-37 *	R022 22:6n3	-26	D039 OTHCEREAL	39 †	Q052 c%TOILET		
-27	M079 CIRRHOSc	-26	U001 Cl/cre	35 *	D048 EGGS	-31 *	Q057 dCOALKID		
26	M082 GALLBILc	-27	U006 UREA/cre	50 †	D049 MEAT	-42 †	Q064 dCOALNOW		
-29	M084 GENITURmc	32 *	U009 TAUR/cre	49 †	D050 REDMEAT	-29	Q068 dCOOKf		

- Analysis (as "user-defined chemistry") by turbidimetric assay of binding to a specific antibody (from Immuno Ltd.). Analyser: Beckman Synchron CX4/5CE.
- Samples stored from the 1983 and 1989 surveys were reanalysed in 1997 in side-by-side analyses.
- The 1983 samples analysed were standard pools, but for 1989, each individual sample was analysed.
- Apolipoprotein A1 is chiefly found on the surface of HDL particles.
- Increase in mean of values of 29% between 1983 and 1989 (rising from 98 to 126 mg/dL) is larger than would be expected, based on the 8% increase in HDL cholesterol. The ApoA1 analytical procedures are reliable, but degradation of the 1983 samples during storage may have altered the ApoA1 content.
- The good correlation with HDL cholesterol (62%†, P002: HDLCHOL) supports the reliability of both measurements.
- The validity of the measurement is further supported by the excellent correlation of 1989 values with 1993 reliability survey values (68%).
- Representative value in UK men (Parish et al. BMJ 311:471-477, 1995) vs. 1989 survey men: 113 mg/dL vs. 127 mg/dL.

(P004的中文注释在P026页)

Conversion of ApoA1 *to* SI Units (阿朴脂蛋白A1换算-*到*国际单位):	mg/dL * 10 = mg/L
Conversion of ApoA1 *from* SI Units (阿朴脂蛋白A1换算-*从*国际单位):	mg/L/10 = mg/dL

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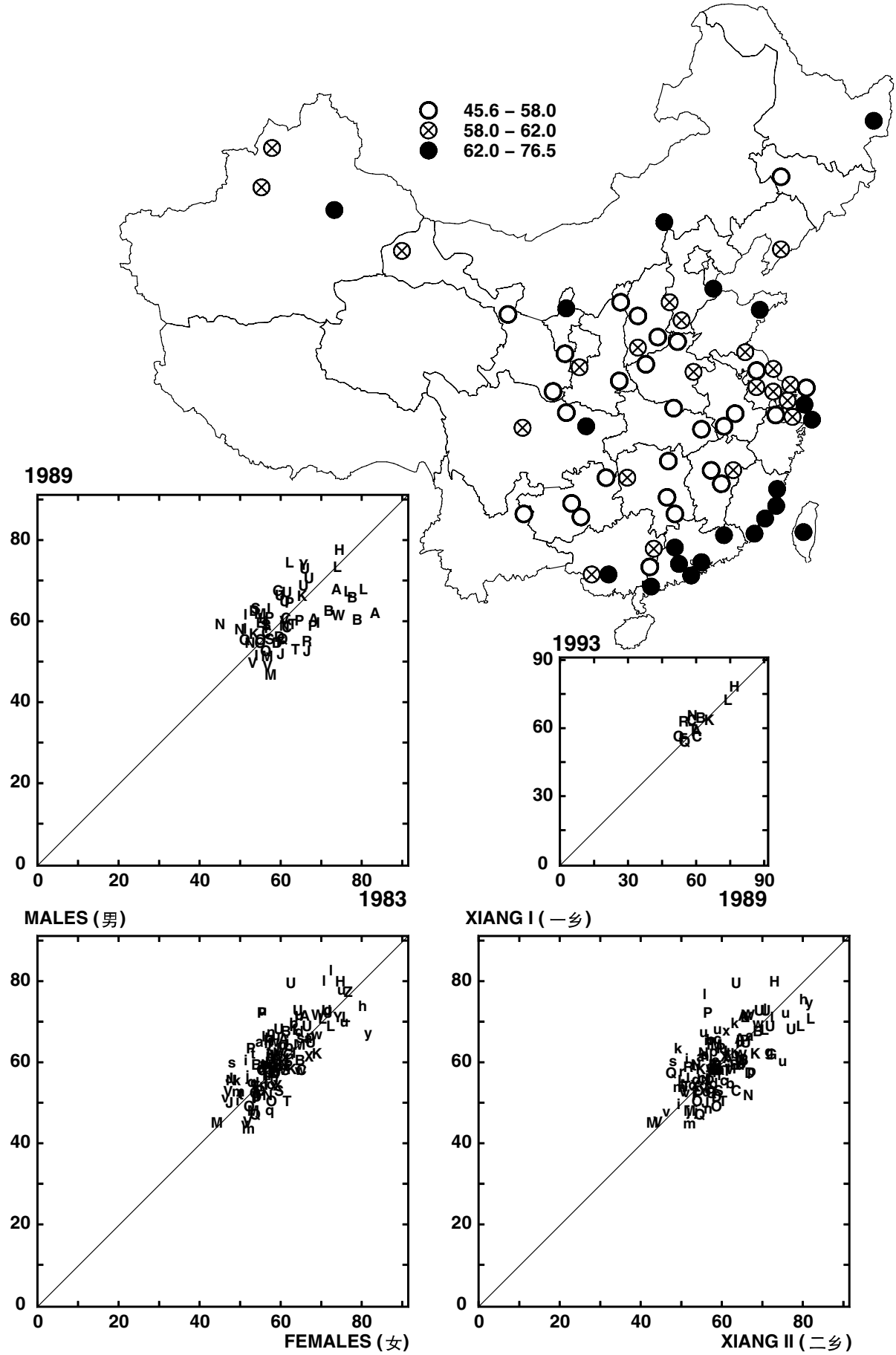
方法: 第 10-11 页

P005 APOB – plasma APOLIPOPROTEIN B (mg/dL) (non-pooled analysis)



P005 APOB – 血浆：阿朴脂蛋白 B (毫克/100毫升) (非混合样品测定)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	57.5	61.8	QA	54.2	54.3	AA	67.7	66.1	KC	55.9	55.8	ZA	83.8	81.2
CC	57.6	57.4	QB	51.7	57.5	AB	64.4	57.5	LA	68.6	63.7	ZB	82.5	81.8
CD	57.3	55.0	QC	50.1	53.0	AC	60.5	58.3	LB	73.5	71.3	ZC	78.6	75.0
DA	61.5	61.4	RA	54.6	53.3	BA	62.2	60.8	LC	75.6	71.2	ZD	75.6	76.6
DB	53.0	54.1	SA	57.9	58.2	BB	60.6	57.8	LD	67.7	65.8	ZE	79.7	76.3
DC	54.5	55.8	SB	55.5	53.5	BC	67.6	62.0	PA	58.3	59.7	ZF	79.8	77.6
FA	52.2	55.5	SC	62.4	61.7	EA	58.0	58.9	PC	63.8	56.0	ZG	80.8	80.9
GA	66.3	66.5	TA	52.0	51.9	HA	75.8	77.3	PD	64.9	62.0	ZH	76.4	78.5
JA	52.9	50.3	TC	58.9	55.7	IA	60.2	57.5	PE	61.0	54.8	ZI	70.4	71.3
JB	52.3	49.4	TD	54.7	61.5	IB	52.0	49.0	UA	70.8	61.3	ZJ	63.0	69.9
MB	43.3	48.0	VA	44.1	51.3	IC	64.1	59.8	UB	69.8	60.9	ZK	74.6	78.8
MC	60.8	60.8	VB	59.5	58.3	ID	61.8	57.6	UC	71.2	64.3	ZL	77.7	76.9
MD	49.4	51.2	VC	51.0	46.4	IE	58.7	55.5	UD	70.3	73.3	ZM	73.7	68.8
NA	55.1	52.0	WA	62.3	58.3	IF	61.0	60.0	UE	72.0	67.1	ZN	76.3	78.6
NB	58.3	57.9	WB	57.1	62.0	IG	61.0	55.9	UF	64.8	63.0	ZO	71.0	73.4
NC	55.9	58.1	WC	68.3	68.6	KB	64.5	65.8				ZP	77.3	78.3
ND	58.6	57.0	XA	60.4	63.8									
OA	51.5	57.4	XB	53.1	58.6									
OB	53.2	53.9	YA	68.2	77.6									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	56.0†	57.1*	64.8†	61.6*	76.3	76.5

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	59.9	7.2	59.1	6.4	84	12.6	†
Xiang (乡) I	vs	Xiang (乡) II	69	59.1	6.8	59.9	7.0	77	9.9	†
1983	vs	1989	65	61.3	8.2	59.4	6.6	48	4.4	†
1989	vs	1993	13	60.2	7.5	60.5	6.9	87	5.8	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-37 * M003 ALL15-34	-46 † M078 CIRRHOSb	35 * R013 22:0	31 * D026 SeCARRY	-30 Q017 aPRIMARY
-25 M004 ALL0-34	-41 † M079 CIRRHOSc	60 † R014 24:0	-44 † D028 PLNTFOOD	39 † Q019 dCANREAD
-26 M006 ALL70-79	33 M095 ROADACCb	-24 R015 16:1n7	47 † D029 ANIMFOOD	44 † Q031 aINCOME
-31 * M010 NONMEDc	30 M096 ROADACCc	-39 † R016 18:1n9	-53 † D031 %PLNTFOOD	26 Q050 c%H2OPIPE
-25 M011 INFECTb	-29 M100 SUICIDEc	-38 * R017 20:1n9	53 † D032 %ANIMFOOD	-32 * Q068 dCOOKf
-34 * M012 INFECTc	-30 M109 ALLGIa	-35 * R018 22:1n9	-36 * D033 PLNTPROT	30 Q094 dHEPATIT
-37 * M014 INTESTINc	82 † P001 TOTCHOL	-48 † R019 24:1n9	55 † D034 ANIMPROT	-29 Q096 dMALARIA
-25 M015 PULMTBb	43 † P002 HDLCHOL	40 † R021 20:5n3	-56 † D035 %PLNTPROT	30 Q108 dSBP
25 M025 NASOPCAc	75 † P003 NONHDL	33 * R022 22:6n3	56 † D036 %ANIMPROT	28 Q109 dDBP
43 † M031 LIVERCAc	41 † P004 APOA1	34 * R026 20:4n6	-27 D041 LEGUME	31 * Q110 dMIDBP
50 † M035 LUNGCAmc	47 † P013 RBP	-51 † U001 Cl/cre	-29 D044 SALTVEG	34 * Q113 dMIMEFadj
51 † M036 LUNGCAfc	-26 P015 G-TOCOPH	-33 * U002 K/cre	34 * D046 NUTS	29 Q151 dBEERday
25 M037 BREASTCAc	-45 † P017 LUTEIN	-51 † U003 Na/cre	27 D048 EGGS	-25 Q159 dMAIZE
32 * M039 BRAINCAc	50 † P030 Se	67 † U009 TAUR/cre	42 † D049 MEAT	45 † Q166 dSALTFISH
25 M045 DIABETESc	24 P031 Zn	-27 D001 KCAL	40 † D050 REDMEAT	46 † Q167 dSALTFKID
-30 M053 NERVOUSc	24 P033 FERRITIN	30 D002 TOTFAT	27 D051 POULTRY	43 † Q173 dFRUIT
-30 M058 ALLVASCb	28 P037 BUN	-43 † D004 SOLCARB	48 † D052 FISH	55 † Q174 dFISH
-26 M060 RHEUMHDb	-37 * P040 B2-MGLOB	45 † D005 %FATKCAL	-38 * D057 ADDEDSALT	55 † Q175 dMEAT
-32 * M061 RHEUMHDc	52 † P041 TESTOSTm	27 D006 %PROTKCAL	-34 * D059 TOTNDF	26 Q176 dEGGS
-27 M066 VASC-STRb	-27 P047 COTIN>20m	58 † D007 %ANPRKCAL	32 * D072 LYSINE	26 Q184 dBLACKTEA
-32 * M069 ALLRESPc	27 R003 SATFA	-25 D008 %PLPRKCAL	30 D082 MUFA	36 * Q201 eDOCVIS
-40 † M071 PNEUMONc	-53 † R004 MUFA	-49 † D009 %CARBKCAL	31 * D084 SATFA	-24 Q227 e%DIARRH
-28 M072 COPDc	31 R005 TOTn6	37 * D010 RETINOL	52 † D085 CHOL	31 * Q245 fHTadj
-41 † M073 DIGESTIVb	38 * R006 TOTn3	-25 D014 VITC	44 † D086 LYS/ARG	-37 * G003 ELEVATION
-44 † M074 DIGESTIVc	40 † R007 PUFA	-32 * D019 Fe	29 D094 TOTn9	
-39 * M075 PEPULCERc	26 R008 P/S	-29 D021 K	30 D104 14:0	
-34 * M076 ENTCOLc	-32 * R009 14:0	-29 D022 Mg	28 D136 %14:0	
-38 * M077 INTESTOBc	-25 R010 16:0	-32 * D024 TOTNa	42 † D141 %16:1	

- Analysis (as "user-defined chemistry") by turbidimetric assay of binding to a specific antibody (from Immuno Ltd.). Analyser: Beckman Synchron CX4/5CE.
- Samples stored from the 1983 and 1989 surveys were reanalysed in 1997 in side-by-side analyses.
- The 1983 samples analysed were standard pools, but for 1989, each individual sample was analysed.
- Higher coastal than inland, and higher in Taiwan than coastal, consistent with richer diet in areas of greater prosperity leading to higher values.
- The lack of increase between 1983 and 1989 is unexpected, based on the change in total cholesterol, which is reliable. The ApoB laboratory procedures are reliable.
- The good correlation with non-HDL cholesterol (75%†, P003: NONHDL) supports the reliability of both measurements.
- The validity of the measurement is further supported by the excellent correlation of 1989 values with 1993 reliability survey values (87%†).
- In general, positive correlations with indicators of meat and fish intake, similar to those listed for non-HDL cholesterol (P003:NONHDL).
- Representative value in UK men (Parish et al. BMJ 311:471-477, 1995) vs. 1989 survey men: 110 mg/dL vs. 60 mg/dL.

(P005的中文注释在P027页)

Conversion of ApoB *to* SI Units (阿朴脂蛋白B换算-*到*国际单位):	mg/dL * 10 = mg/L
Conversion of ApoB *from* SI Units (阿朴脂蛋白B换算-*从*国际单位):	mg/L/10 = mg/dL

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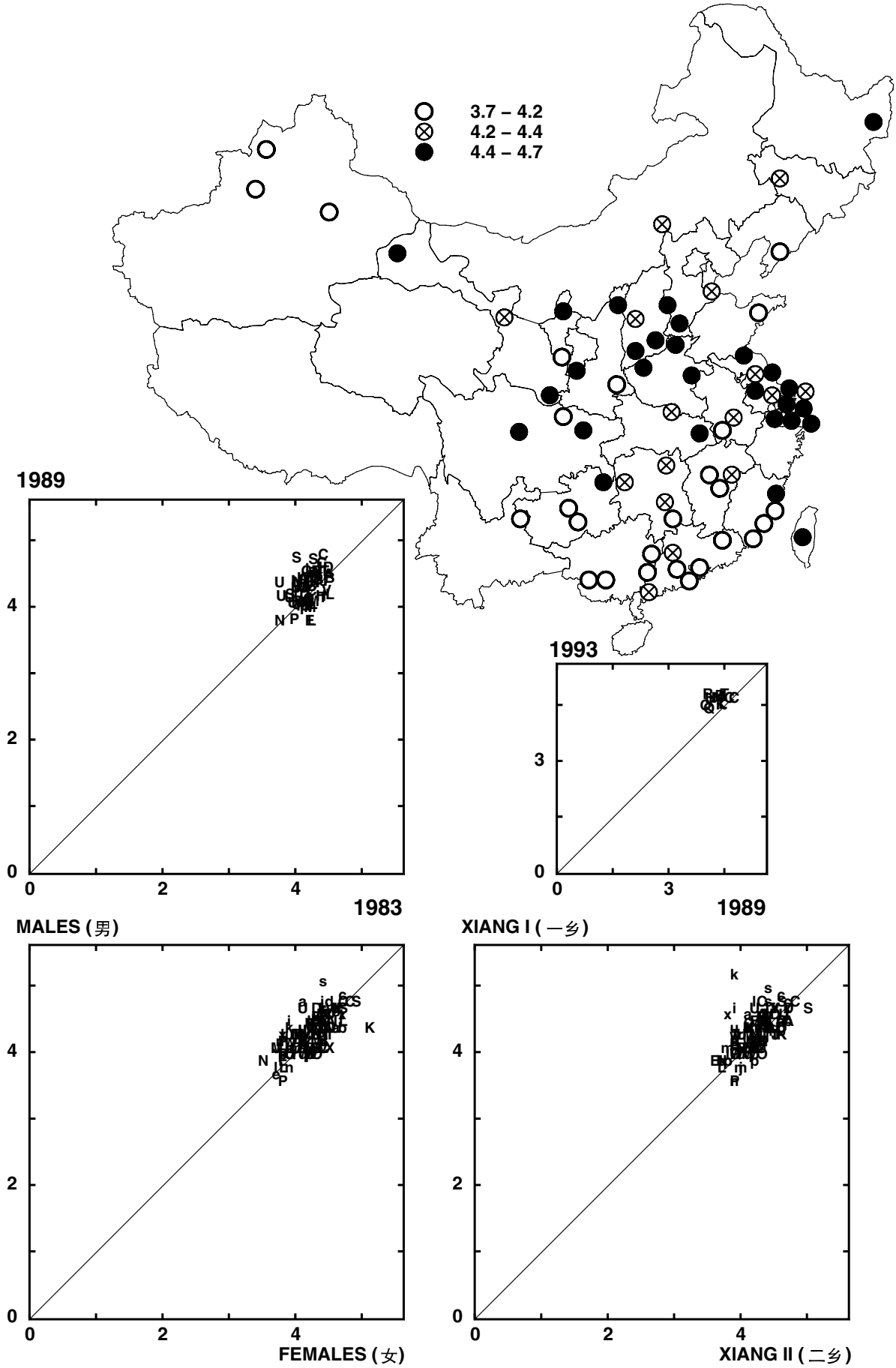
methods: pages 10-11

实验室测定 表述格式: 第 332-333 页

方法: 第 10-11 页

P006 ALBUMIN – plasma ALBUMIN (g/dL) (non-pooled analysis)



P006 ALBUMIN – 血浆：白蛋白 (克/100毫升) (非混合样品测定)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	4.5	4.7	QA	3.9	4.0	AA	4.4	4.5	KC	4.3	4.5	ZA	4.5	4.4
CC	4.8	4.7	QB	4.4	4.4	AB	4.6	4.3	LA	4.2	4.1	ZB	4.7	4.4
CD	4.1	4.3	QC	4.1	4.1	AC	4.4	4.4	LB	4.1	3.9	ZC	4.5	4.5
DA	4.5	4.5	RA	4.0	4.1	BA	4.4	4.4	LC	4.4	4.4	ZD	4.5	4.5
DB	4.7	4.4	SA	4.7	4.7	BB	4.2	4.6	LD	3.7	3.8	ZE	4.5	4.4
DC	4.5	4.4	SB	4.1	4.2	BC	4.3	4.2	PA	3.7	3.8	ZF	4.4	4.3
FA	4.2	4.2	SC	4.8	4.6	EA	3.7	3.8	PC	4.0	3.8	ZG	4.4	4.6
GA	4.5	4.5	TA	4.1	4.1	HA	4.0	4.2	PD	3.9	4.0	ZH	4.3	4.3
JA	4.3	4.3	TC	4.4	4.4	IA	4.4	4.4	PE	4.0	4.0	ZI	4.5	4.3
JB	4.1	3.9	TD	4.3	4.6	IB	4.2	4.5	UA	4.4	4.2	ZJ	4.4	4.3
MB	4.0	3.9	VA	4.0	4.4	IC	4.5	4.6	UB	4.2	4.1	ZK	4.6	4.4
MC	4.2	4.3	VB	4.6	4.4	ID	4.6	4.5	UC	4.2	4.0	ZL	4.5	4.5
MD	4.2	3.9	VC	4.5	4.3	IE	4.4	4.3	UD	4.3	4.2	ZM	4.5	4.5
NA	3.8	3.7	WA	4.0	4.1	IF	4.6	4.5	UE	4.1	4.0	ZN	4.4	4.5
NB	4.2	4.5	WB	4.2	4.1	IG	4.3	4.2	UF	4.1	4.1	ZO	4.3	4.4
NC	4.4	4.3	WC	3.9	4.2	KB	4.4	4.4				ZP	4.6	4.4
ND	4.2	4.4	XA	4.6	4.7									
OA	4.1	4.4	XB	4.1	4.2									
OB	4.4	4.4	YA	4.2	4.2									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	4.3	4.3	4.2	4.2	4.5	4.4

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	4.2	0.2	4.2	0.2	82	11.6	†
Xiang (乡) I	vs	Xiang (乡) II	69	4.2	0.3	4.2	0.2	77	9.9	†
1983	vs	1989	65	4.2	0.2	4.2	0.2	41	3.6	†
1989	vs	1993	13	4.3	0.2	4.5	0.1	34	1.2	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-31 M001 ALL0-4	-29 M080 TOTLIVRb	-25 R026 20:4n6	30 D059 TOTNDF	36 * Q092 dBMI
-40 † M002 ALL5-14	-32 * M084 GENITURmc	29 U001 Cl/cre	27 D067 GLUTAMINE	-25 Q093 dPEPULCER
-26 M003 ALL15-34	-35 * M086 RENALc	29 U003 Na/cre	32 * D074 METH+CYS	35 * Q109 dDBP
-35 * M004 ALL0-34	-29 M099 SUICIDEb	28 U005 P/cre	31 * D079 TRYPTOPH	29 Q110 dMIDBP
-36 * M007 MEDICALb	-26 M100 SUICIDEc	38 * U006 UREA/cre	29 D083 PUFA	33 * Q111 dFEV1adj
-31 M011 INFECTb	-30 M103 INFANT	24 U007 URIC/cre	-44 † D087 %MUFA	-27 Q117 dDIARRH
-38 * M012 INFECTc	-31 M105 ALLCUMa	38 * U012 VOLURINE	45 † D088 %PUFA	25 Q132 dSMOKAGEm
-44 † M016 PULMTBc	-36 * M106 MEDICALa	39 * U014 VOLURmn	-37 * D089 %SATFA	-25 Q142 dTOBCONSm
32 * M023 ALLCAc	-32 * M108 RESPINFa	35 * D001 KCAL	44 † D090 P/S	27 Q158 dWHEAT
-33 * M025 NASOPCAc	-39 * M109 ALLGIa	30 D003 TOTPROT	-38 * D091 M/P	26 Q161 dMILLET
39 * M028 STOMCAc	-29 M117 NEOTETANa	36 * D004 SOLCARB	33 * D092 TOTn3	-28 Q165 dSMOKFOOD
24 M029 COLRECCAc	-37 * M118 MALNUTRIa	43 † D013 VITE	29 D093 TOTn6	-25 Q166 dSALTFISH
24 M032 PANCRSCAc	31 * P011 Z-CAROT	36 * D015 THIAMINE	39 * D095 %TOTn3	-25 Q167 dSALTFKID
-34 * M043 ENDOCRINb	38 * P015 G-TOCOPH	34 * D020 Cu	44 † D096 %TOTn6	-43 † Q168 dANIMFAT
28 M045 DIABETESc	27 P016 LYCOPENE	33 * D023 Mn	-43 † D097 %TOTn9	26 Q176 dEGGS
-36 * M046 MALNUTRIb	-31 * P041 TESTOSTm	31 * D027 Zn	-24 D136 %14:0	-41 † Q192 dLIVEBRTH
-40 † M048 BLOODb	-27 P042 HBsAg	29 D028 PLNTFOOD	-28 D140 %16:0	-29 Q231 e%FEVER
-32 * M068 ALLRESPb	-25 R001 Hb	25 D031 %PLNTFOOD	-24 D141 %16:1	42 † Q243 fWTadj
-32 * M070 PNEUMONIb	44 † R002 RIBOFDEF	-25 D032 %ANIMFOOD	-40 † D145 %18:0	28 Q245 fHTadj
-42 † M073 DIGESTIVb	-25 R005 TOTn6	34 * D033 PLNTPROT	-43 † D146 %18:1	38 * Q247 fBMIadj
-29 M074 DIGESTIVc	-26 R007 PUFA	33 * D042 LIGHTVEG	44 † D147 %18:2	32 * G001 LATITUDE
-26 M075 PEPULCERc	-27 R008 P/S	-27 D049 MEAT	40 † D148 %18:3	24 G004 ARIDITY
-33 * M076 ENTCOLc	-24 R014 24:0	-27 D050 REDMEAT	-44 † Q007 cHHSIZE	-39 † G005 HEAT
-27 M078 CIRRHOSb	27 R018 22:1n9	-32 * D053 ANIMFAT	24 Q090 dHEIGHT	
-25 M079 CIRRHOSc	27 R019 24:1n9	33 * D054 VEGOIL	34 * Q091 dWEIGHT	

- Analysis based on albumin combining with bromocresol purple to form a coloured product. Analyser: Beckman Synchron CX4/5CE.
- Generally higher values in northern provinces, lower in southern provinces.
- The 1983 samples analysed were standard pools, but each individual 1989 sample was analysed and means calculated by averaging individual values.
- The outliers (high in xiang I in Jiashan, county K; low in xiang II in Wenjiang, county S) are probably due to measurement problems. Albumin levels are tightly controlled biologically, and values as far off the average as this are implausible. Laboratory methods for measuring albumin are prone to produce such outliers even with careful quality control.
- Other than the outliers, the 1989 measurements appear to be reliable, with good correlations between males and females (82%†) and between xiangs (77%†).
- Correlation with 1983 values is poor, suggesting that the 1983 measurements are not reliable.
- A number of geographic correlations appear, but none is strong (although some are statistically significant). Little is known about the determinants of plasma albumin.
- Representative value in UK men (Parish et al. BMJ 311:471-477, 1995) vs 1989 survey men: 38 g/L vs 42 g/L.

(P006的中文注释在P028页)

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实验室测定 表述格式: 第 332-333 页

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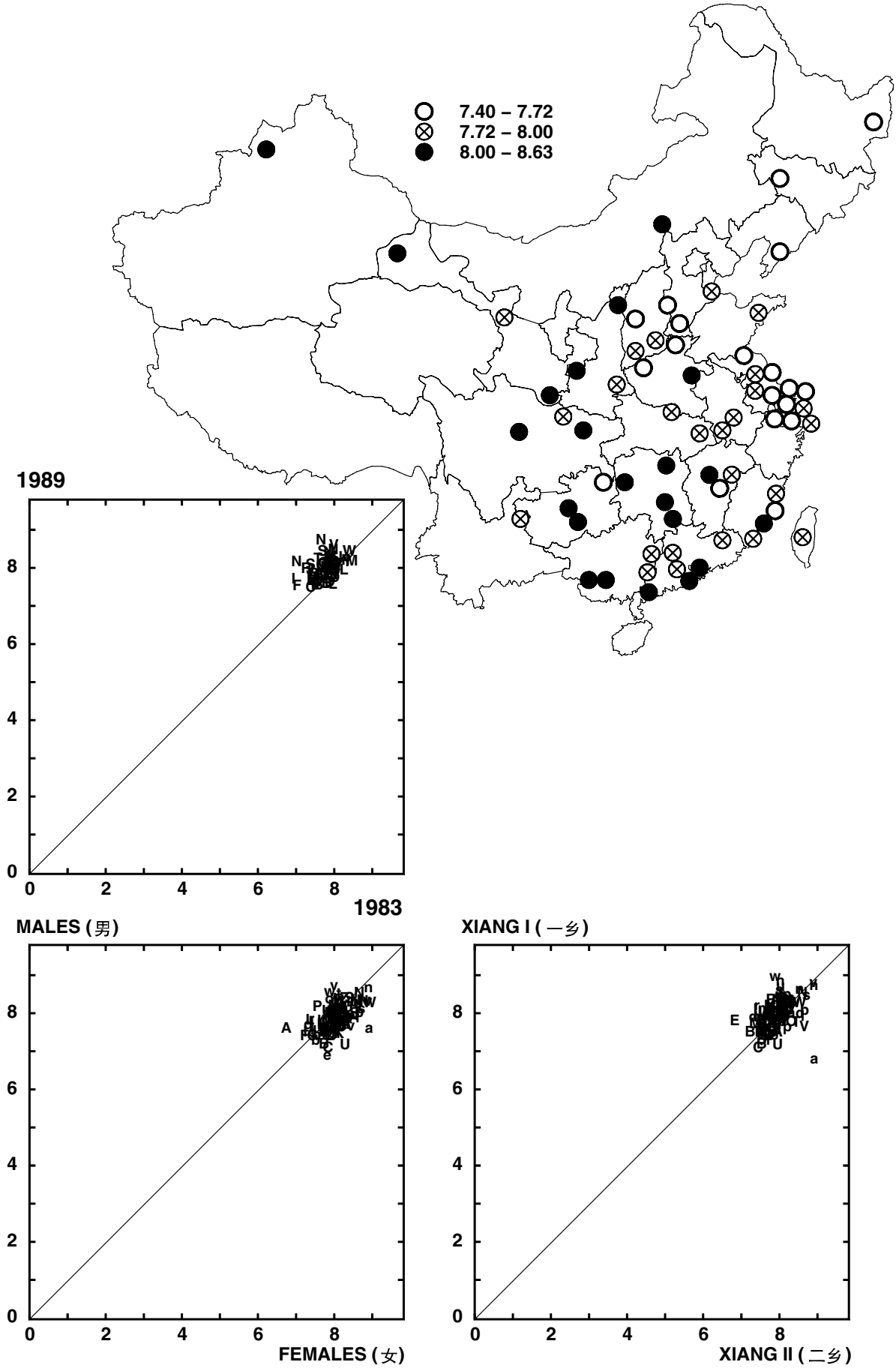
P007 TOTPROT – plasma 1989 TOTAL PROTEIN (g/dL)



P007 TOTPROT – 血浆：1989年 总蛋白 (克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	7.55	7.90	QA	7.84	8.22	AA	7.75	8.10	KC	7.47	7.93	ZA	8.41	8.48
CC	7.70	7.95	QB	7.49	7.94	AB	7.65	7.75	LA	7.66	8.03	ZB	8.41	8.12
CD	7.20	7.60	QC	7.76	8.25	AC	7.50	7.80	LB	8.23	8.20	ZC	8.35	8.20
DA	8.00	8.10	RA	8.01	7.76	BA	7.30	7.60	LC	7.76	8.15	ZD	8.23	8.49
DB	7.50	7.55	SA	7.81	8.23	BB	7.30	7.70	LD	7.61	7.33	ZE	8.35	8.34
DC	7.50	7.80	SB	7.68	8.27	BC	7.60	7.90	PA	8.09	7.86	ZF	8.09	8.24
FA	7.40	7.45	SC	8.16	8.53	EA	7.25	7.90	PC	7.83	8.31	ZG	7.89	8.07
GA	7.45	7.62	TA	7.57	7.88	HA	7.80	8.05	PD	7.90	8.29	ZH	8.65	8.62
JA	7.68	8.12	TC	8.03	8.23	IA	7.40	7.75	PE	7.92	8.05	ZI	8.84	8.55
JB	7.75	7.93	TD	7.85	8.14	IB	7.85	7.80	UA	7.73	8.01	ZJ	7.76	7.80
MB	7.48	7.81	VA	7.65	8.31	IC	7.68	8.05	UB	7.90	8.11	ZK	8.69	8.37
MC	7.84	7.96	VB	8.08	7.97	ID	7.56	7.74	UC	8.03	8.32	ZL	8.15	8.41
MD	8.02	8.14	VC	8.22	8.78	IE	7.44	7.45	UD	8.15	8.22	ZM	8.17	7.97
NA	8.08	8.05	WA	8.32	8.35	IF	7.65	7.57	UE	7.85	7.88	ZN	8.17	8.45
NB	8.51	8.76	WB			IG	7.48	7.42	UF	7.50	8.14	ZO	8.12	7.95
NC	8.22	8.53	WC			KB	7.78	8.08				ZP	8.40	7.95
ND	8.23	8.38	XA											
OA	7.98	8.00	XB											
OB	7.66	8.21	YA	8.07	8.04									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	7.83	8.08	7.70	7.92	8.29	8.25

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	65	7.77	0.29	8.00	0.30	72	8.3	†
Xiang (乡) I	vs	Xiang (乡) II	57	7.86	0.31	7.90	0.29	55	4.9	†
1983	vs	1989	65	7.76	0.31	7.89	0.27	42	3.7	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

52 † M001 ALL0-4	35 * M054 MENINGITb	42 † M118 MALNUTRIa	28 D032 %ANIMFOOD	27 Q140 %16:0
38 * M002 ALL5-14	28 M060 RHEUMHDb	29 P013 RBP	-33 * D033 PLNTPROT	32 * Q141 %16:1
34 * M003 ALL15-34	29 M061 RHEUMHDc	-34 * P017 LUTEIN	-25 D035 %PLNTPROT	41 † Q145 %18:0
50 † M004 ALL0-34	36 * M068 ALLRESPb	-25 P019 A-CRYPT	25 D036 %ANIMPROT	34 * Q146 %18:1
49 † M007 MEDICALb	37 * M070 PNEUMONIb	24 P020 B-CRYPT	-31 D039 OTHCEREAL	-39 * Q147 %18:2
27 M009 NONMEDb	28 M071 PNEUMONIc	36 * P034 TIBC	37 * D049 MEAT	-32 * Q148 %18:3
46 † M011 INFECTb	35 * M073 DIGESTIVb	25 R001 Hb	40 * D050 REDMEAT	31 Q007 cHHSIZE
39 * M012 INFECTc	31 M074 DIGESTIVc	34 * R016 18:1n9	24 D053 ANIMFAT	-31 Q091 dWEIGHT
35 * M013 INTESTINb	38 * M075 PEPULCERc	-29 R023 18:2n6	-31 D059 TOTNDF	-31 Q092 dBMI
27 M014 INTESTINc	36 * M084 GENITURmc	-32 * U004 Ca/cre	30 D082 MUFA	-30 Q159 dMAIZE
35 * M016 PULMTBc	42 † M085 GENITURfc	-32 * U006 UREA/cre	37 * D084 SATFA	-44 † Q162 dLEGUME
-25 M023 ALLCAc	44 † M086 RENALc	-32 * U007 URIC/cre	36 * D087 %MUFA	32 * Q165 dSMOKFOOD
25 M025 NASOPCAc	42 † M087 PREGBRTHb	-25 D003 TOTPROT	-40 * D088 %PUFA	26 Q168 dANIMFAT
-26 M027 OESOPHCAc	25 M091 ILL-DEFb	-36 * D008 %PLPRKCAL	38 * D089 %SATFA	-25 Q169 dVEGFAT
-35 * M032 PANCRSCAc	45 † M103 INFANT	-25 D011 TOTCAROT	-39 * D090 P/S	35 * Q175 dMEAT
-35 * M033 BLADDCAc	34 * M104 MATERNAL	-30 D013 VITE	37 * D091 M/P	-25 Q176 dEGGS
-34 * M035 LUNGCAmc	52 † M105 ALLCUMa	-31 D015 THIAMINE	30 D094 TOTn9	-30 G001 LATITUDE
-36 * M036 LUNGCAfc	52 † M106 MEDICALa	-29 D016 RIBOFLAV	-32 * D095 %TOTn3	-53 † G002 LONGITUDE
41 * M043 ENDOCRINb	38 * M108 RESPINFa	-26 D017 NIACIN	-40 * D096 %TOTn6	25 G005 HEAT
-27 M045 DIABETESc	42 † M109 ALLGIa	-30 D020 Cu	35 * D097 %TOTn9	
42 † M046 MALNUTRIb	41 † M113 PERINATa	26 D029 ANIMFOOD	36 * D104 14:0	
33 * M052 NERVOUSb	29 M115 BTHTRAUMa	-28 D031 %PLNTFOOD	30 D136 %14:0	

- Analysis by timed endpoint biuret method. Peptide bonds in protein sample bind to cupric ions in alkaline medium to form coloured complexes. Analyser: Beckman Synchron CX4/5CE.
- Increase in mean values between 1983 and 1989 (from 7.76 to 7.89 g/dL) may be due to the use of a different laboratory analytic method. The 1989 method is more accurate than the earlier method. The obvious outliers on the male vs. female and xiang I vs. xiang II pictograms are probably unreliable.

- 用定时缩二脲方法测定。在碱性环境中，蛋白样品中的肽键与Cu2＋结合生成显色物质。仪器：Beckman Synchron CX4/5CE。
- 从1983年到1989年，总蛋白平均含量升高（从 7.76增加到7.89 g/dL），可能是由采用不同测定方法造成的。1989年的测定方法比1983年更准确。男性-女性和乡I-乡II图中明显的偏离可能缺乏可信性。

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methods: pages 10-11

实验室测定表述格式: 第 332-333 页

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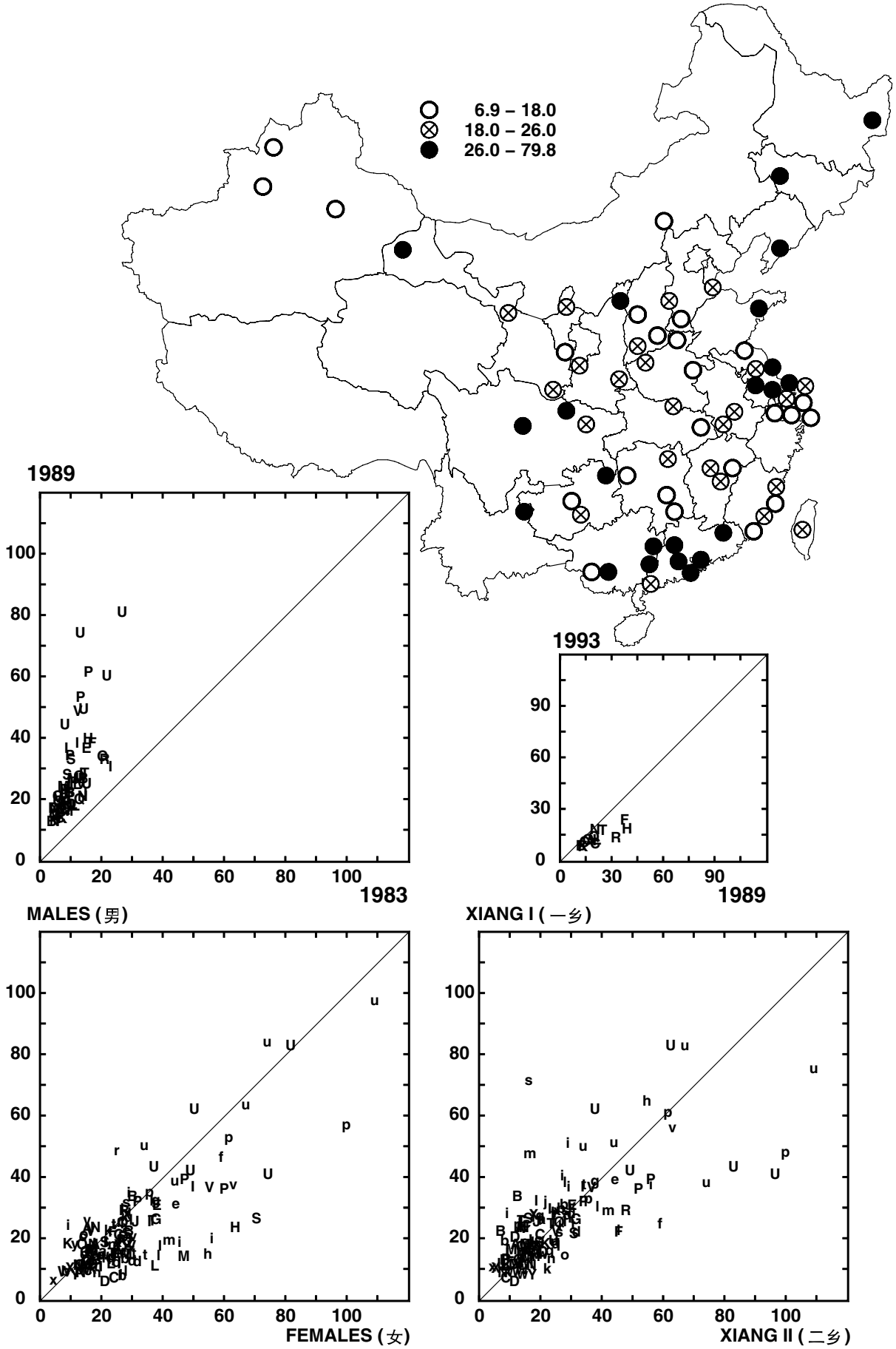
P009 B-CAROT – plasma BETA CAROTENE (μg/dL)



P009 B-CAROT – 血浆：β 胡萝卜素 (微克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	19.6	19.5	QA	11.9	18.8	AA	14.0	17.0	KC	19.1	15.4	ZA	13.3	28.2
CC	7.0	19.5	QB	24.7	27.5	AB	14.4	22.6	LA	11.7	22.2	ZB	14.6	31.4
CD	11.8	13.3	QC	14.6	22.9	AC	17.5	16.5	LB	13.4	33.8	ZC	31.0	27.6
DA	10.5	20.8	RA	37.6	26.0	BA	9.8	13.0	LC	8.8	32.5	ZD	25.0	29.1
DB	7.9	26.1	SA	20.4	43.0	BB	22.2	28.6	LD	8.6	24.5	ZE	14.9	25.3
DC	15.3	28.3	SB	25.4	27.9	BC	13.9	27.6	PA	46.8	73.3	ZF	15.2	32.4
FA	33.0	41.1	SC	18.3	23.3	EA	29.7	41.0	PC	10.2	17.9	ZG	18.9	44.2
GA	28.0	37.4	TA	13.9	26.9	HA	18.0	59.0	PD	32.2	33.5	ZH	18.0	22.4
JA	16.9	24.6	TC	18.9	35.3	IA	13.7	21.7	PE	43.2	60.5	ZI	14.6	19.1
JB	21.2	26.1	TD	23.2	25.3	IB	17.3	33.3	UA	49.1	46.9	ZJ	12.6	20.3
MB	14.0	31.5	VA	17.7	29.7	IC	21.0	33.0	UB	71.8	74.2	ZK	14.1	32.8
MC	12.4	17.3	VB	35.8	58.8	ID	34.5	39.3	UC	44.9	41.3	ZL	14.1	27.4
MD	15.9	34.9	VC	22.8	15.6	IE	25.6	17.9	UD	21.0	26.4	ZM	15.6	28.0
NA	13.3	17.8	WA	10.9	17.0	IF	24.8	46.1	UE	68.0	91.6	ZN	14.6	27.1
NB	15.6	17.3	WB	12.2	15.5	IG	26.1	32.3	UF	62.3	55.4	ZO	16.1	21.4
NC	7.4	15.6	WC	9.0	10.4	KB	9.3	15.6				ZP	22.2	49.5
ND	18.3	21.1	XA	21.9	26.6									
OA	15.5	20.5	XB	7.0	6.8									
OB	17.2	14.2	YA	11.9	11.2									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	17.3*	24.1*	26.5*	35.9*	17.2	29.1

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	21.5	13.9	29.4	16.1	82	11.7	†
Xiang (乡) I	vs	Xiang (乡) II	69	24.8	13.4	26.0	17.3	74	9.0	†
1983	vs	1989	65	10.4	4.8	26.1	14.4	68	7.5	†
1989	vs	1993	13	21.5	9.0	11.2	4.5	79	4.3	*

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-26 M010 NONMEDc	57 † R005 TOTn6	-33 * D004 SOLCARB	-24 D059 TOTNDF	-26 Q069 dUNVENT
-27 M013 INTESTINb	51 † R007 PUFA	43 † D005 %FATKCAL	-32 * D067 GLUTAMINE	-26 Q092 dBMI
51 † M025 NASOPCAc	53 † R008 P/S	25 D007 %ANPRKCAL	-31 D074 METH+CYS	29 Q094 dHEPATIT
-25 M051 MENTALc	-47 † R009 14:0	-30 D008 %PLPRKCAL	-31 * D078 THREONINE	-26 Q099 dBRTHFAST
36 * M114 LOWBTHWTa	-45 † R010 16:0	-37 * D009 %CARBKCAL	-24 D079 TRYPTOPH	-26 Q158 dWHEAT
26 P004 APOA1	46 † R014 24:0	-33 * D019 Fe	35 * D082 MUFA	27 Q166 dSALTFISH
25 P008 A-CAROT	-33 * R015 16:1n7	-47 † D020 Cu	24 D084 SATFA	27 Q167 dSALTFKID
79 † P010 G-CAROT	-35 * R016 18:1n9	-38 * D023 Mn	25 D087 %MUFA	34 * Q172 dGRNVEG
-31 P015 G-TOCOPH	-27 R019 24:1n9	-24 D025 Na	36 * D094 TOTn9	37 * Q173 dFRUIT
38 * P017 LUTEIN	26 R025 20:3n6	-28 D026 SeCARRY	26 D097 %TOTn9	29 Q174 dFISH
56 † P018 ANHYDLUT	62 † R026 20:4n6	-34 * D027 Zn	28 D146 %18:1	24 Q231 e%FEVER
31 P024 FOLATE	-36 * U001 Cl/cre	-35 * D033 PLNTPROT	-25 Q017 aPRIMARY	-24 Q243 fWTadj
-31 * P026 CERULO	-37 * U003 Na/cre	-26 D035 %PLNTPROT	27 Q019 dCANREAD	-39 † Q247 fBMIadj
-28 P035 TRANSFE	-24 U012 VOLURINE	26 D036 %ANIMPROT	39 † Q031 aINCOME	-31 * G001 LATITUDE
-25 P036 GLUCOSE	36 * U023 NO3mn	-28 D038 WHTFLOUR	25 Q050 c%H2OPIPE	-25 G004 ARIDITY
-28 R002 RIBOFDEF	30 D002 TOTFAT	47 † D043 GREENVEG	-27 Q064 dCOALNOW	42 † G005 HEAT
-34 * R004 MUFA	-29 D003 TOTPROT	32 * D052 FISH	-34 * Q068 dCOOKf	

RELIABILITY STUDY SIDE-BY-SIDE ANALYSIS
可靠性研究：并排分析

	AC	BA	CB	CC	FA	HA	KB	LC	ND	QA	QC	RA	TD
1989	7.8	6.2	7.5	6.7	24.8	17.8	6.4	11.7	12.2	9.7	10.7	11.6	11.7
1993	9.3	6.3	7.4	8.3	21.1	15.9	5.9	9.5	13.6	9.6	11.2	10.8	15.3

r%: 94 **t-test: 8.9** **P: †** **ND: Male only (仅含男性)**

- Analysed by HPLC (Khachik et al., Methods in Enzymology 213(A): 205-219, 1992).
- Large increase in mean values between 1983 and 1989 (from 10.4 to 26.1 μg/dL) is due to the use of different laboratory analytic methods, and no conclusions about trends can be drawn from the comparison. The 1989 values are reliable in absolute terms.
- Although 1983 measurements are much lower than 1989 values, the two sets of data are well correlated, so the relative values in both years are likely to be reliable.
- Strong positive correlations with intake of green vegetables (47%†, D043), plasma gamma carotene (79%†, P010: G-CAROT), red blood cell polyunsaturated fatty acids (51%†, R007: PUFA) as well as one saturate (46%†, R014: 24:0); and negative correlation with plasma gamma tocopherol (-31%, P015: G-TOCOPH).
- In a separate study of the reliability of 1989 data, a sample of individuals in 13 counties were resurveyed in 1993. Side-by-side laboratory analyses were carried out on the 1989 and 1993 samples, independent of the main laboratory. The average values for each county in 1989 and 1993 are reported in the table above.

(P009的中文注释在P029页)

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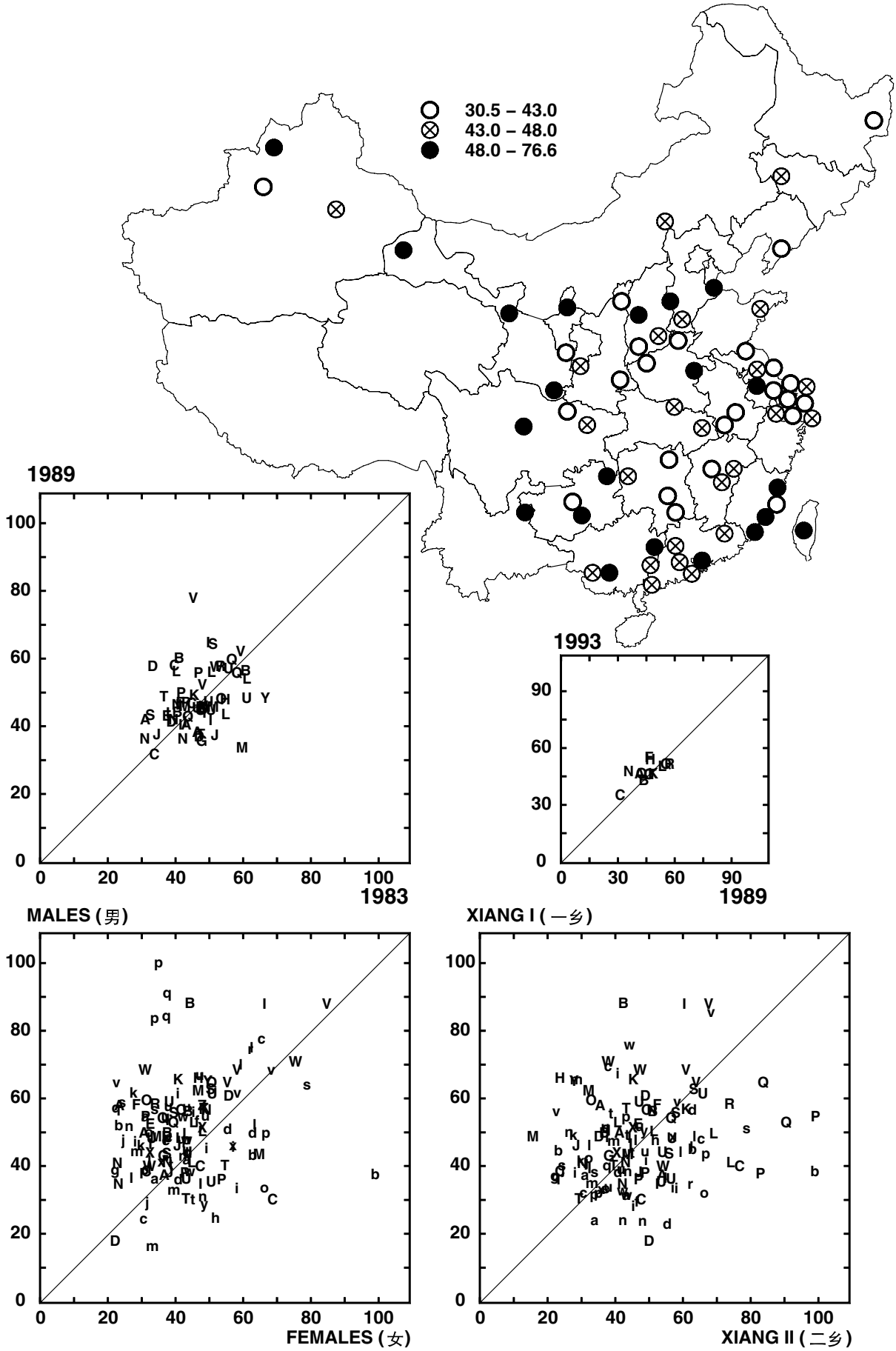
methods: pages 10-11

实验室测定表述格式: 第 332-333 页

方法: 第 10-11 页

P012 RETINOL – plasma RETINOL (μg/dL)



P012 RETINOL – 血浆：维生素 A (微克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	30.3	30.7	QA	54.5	29.0	AA	45.9	28.3	KC	54.6	35.1	ZA	40.3	57.5
CC	38.0	53.0	QB	73.3	43.7	AB	44.8	33.5	LA	56.8	53.4	ZB	45.0	42.6
CD	57.6	56.0	QC	70.8	38.1	AC	44.7	36.7	LB	58.5	51.1	ZC	61.1	48.9
DA	54.0	59.0	RA	65.3	47.9	BA	52.9	33.2	LC	50.0	55.5	ZD	52.5	43.5
DB	33.1	38.5	SA	62.2	64.3	BB	64.5	53.3	LD	46.0	38.6	ZE	45.1	27.8
DC	41.2	38.8	SB	49.0	35.3	BC	42.5	68.0	PA	42.7	54.5	ZF	56.8	47.2
FA	54.5	37.3	SC	56.0	31.5	EA	48.9	34.6	PC	59.6	32.0	ZG	63.1	47.3
GA	39.8	28.9	TA	29.1	44.0	HA	44.2	49.1	PD	76.2	32.8	ZH	66.5	48.5
JA	36.4	35.8	TC	39.1	46.5	IA	42.9	42.4	PE	40.8	48.2	ZI	84.1	54.8
JB	41.8	31.1	TD	49.4	45.8	IB	45.0	44.7	UA	45.6	43.1	ZJ	69.3	54.7
MB	42.8	46.4	VA	77.0	76.2	IC	73.6	53.4	UB	62.8	48.8	ZK	51.0	49.0
MC	46.4	42.9	VB	63.8	57.9	ID	46.2	32.4	UC	43.8	43.6	ZL	55.2	53.3
MD	31.4	33.5	VC	63.5	38.6	IE	45.6	44.8	UD	51.8	35.3	ZM	62.4	51.7
NA	41.3	40.4	WA	53.4	59.3	IF	35.3	45.1	UE	48.3	46.0	ZN	50.8	39.4
NB	53.0	37.5	WB	46.1	36.7	IG	45.0	36.0	UF	52.3	39.8	ZO	42.6	49.5
NC	34.8	35.2	WC	56.8	36.6	KB	58.0	37.8				ZP	61.3	47.3
ND	37.7	32.5	XA	47.5	52.2									
OA	45.3	48.5	XB	41.4	33.9									
OB	52.0	36.5	YA	45.7	48.8									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	48.8	42.8	50.6	42.9	56.7	47.7

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	49.6	11.0	42.9	10.0	29	2.5	
Xiang (乡) I	vs	Xiang (乡) II	69	45.9	10.8	46.7	11.0	19	1.6	
1983	vs	1989	65	46.2	7.9	46.4	8.6	29	2.5	
1989	vs	1993	13	45.2	7.3	45.6	5.1	69	3.2	*

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

25	M018 OTHERTBc	27	P010 G-CAROT	28	P028 K	25	R001 Hb
-29	M024 MOUTHCAc	28	P013 RBP	32 *	P033 FERRITIN	-31 *	D018 Ca
25	M063 IHDc	58 †	P014 A-TOCOPH	-25	P039 THYROXINE	-25	D022 Mg
-26	M107 NONMEDa	24	P026 CERULO	31	P043 HBsAb	-29	D027 Zn

28	Q050 c%H2OPIPE		
31 *	Q184 dBLACKTEA		
-30	G002 LONGITUDE		
29	G003 ELEVATION		

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	AC	BA	CB	CC	FA	HA	KB	LC	ND	QA	QC	RA	TD
1989	43.6	37.3	36.7	40.2	53.4	54.5	47.5	50.8	48.9	42.0	50.2	48.0	44.2
1993	44.5	41.0	33.2	44.0	52.8	51.7	44.5	48.4	52.0	44.3	49.3	49.5	43.9

r%: 89 **t-test: 6.6** **P: †** **ND: Male only (仅含男性)**

- Analysed by HPLC (Khachik et al., Methods in Enzymology 213(A): 205-219, 1992).
- The data do not appear to be reliable measures of retinol, but instead vary widely, presumably due to artifacts of storage or analysis. Retinol levels in the body are tightly controlled, and pooled samples, in particular, would never vary as much as the data seen here. The unreliability of the data is supported by the poor correlations between xiangs and between males and females.
- As the poor reproducibility indicates that the results are untrustworthy indicators of the usual retinol levels, the geographic correlations are uninformative.
- This variable is, unfortunately, chiefly of interest as a warning against methodological errors, despite the good reproducibility of the laboratory assays in the 1989/1993 reliability survey (table above).
- Conversion to SI units: μg/dL * 0.0349 = μmol/L.
- 测定：HPLC方法（Khachik et al., Methods in Enzymology 213（A）: 205-219, 1992）。
- 维生素A的数据似乎并不可信，变化很大，可能是由样品保存或测定造成的。机体的维生素A被严格控制在一定水平，尤其在混合样品中，不应该出现象现在数据这样的差异。两乡之间以及男性和女性之间缺乏相关性，说明该数据不可信。
- 较差的可重复性说明本次维生素A水平的测量结果缺乏可信性，因此地理相关性也没有参考价值。
- 尽管在1989/1993可靠性调查中的实验室测定具有很好的可重复性（见上表），但遗憾的是，该指标的主要意义只是说明方法学上的错误。
- 转化成标准国际单位：μg/dL * 0.0349 = μmol/L。

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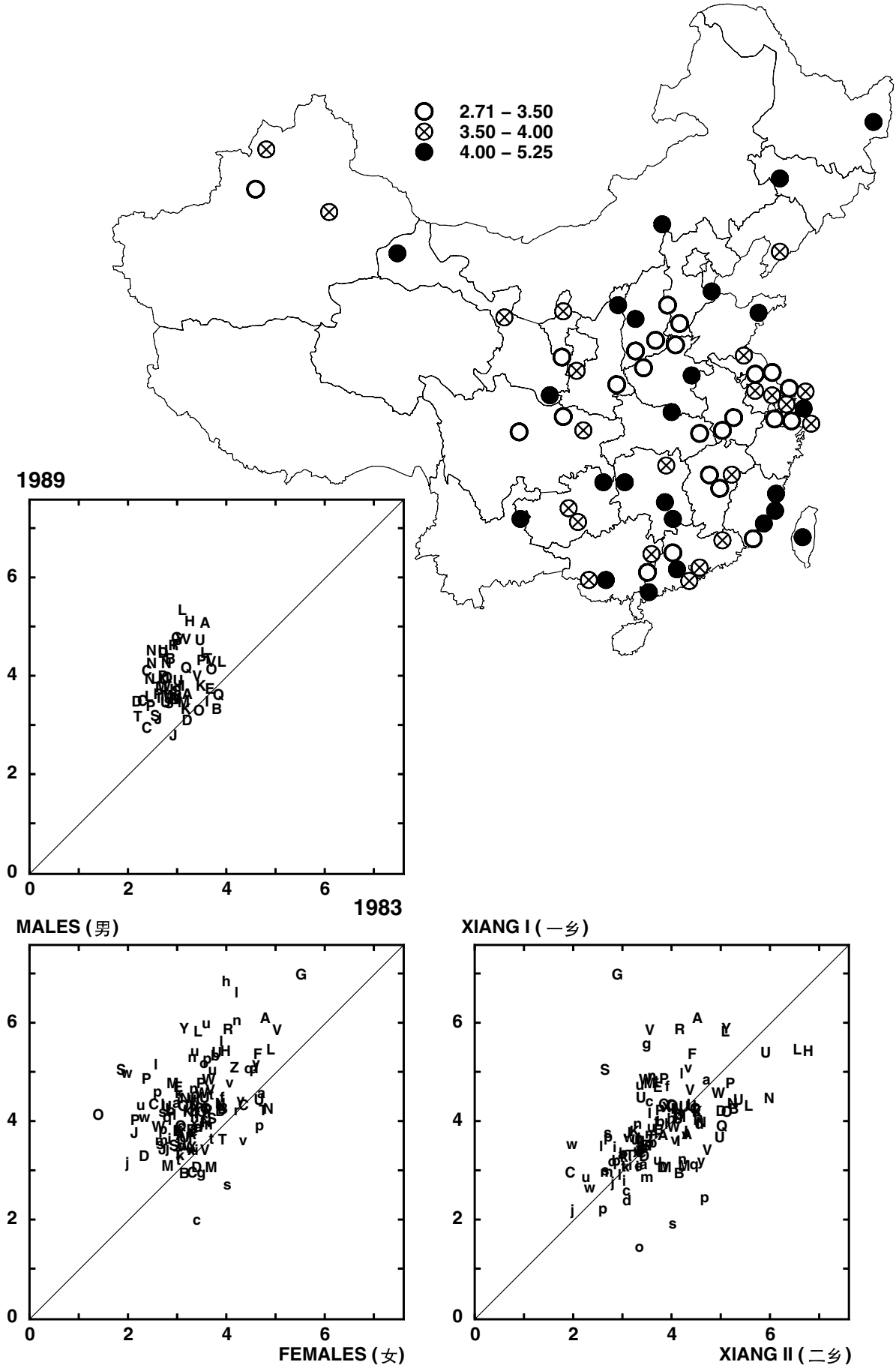
P013 RBP – plasma RETINOL BINDING PROTEIN (mg/dL)



P013 RBP – 血浆：维生素 A 结合蛋白 (毫克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	2.39	3.34	QA	4.11	2.93	AA	5.25	4.73	KC	3.46	3.03	ZA	4.99	3.94
CC	4.04	2.79	QB	4.40	3.74	AB	3.97	3.12	LA	4.11	2.88	ZB	5.09	3.60
CD	4.10	3.93	QC	4.31	3.45	AC	3.71	3.23	LB	5.95	4.54	ZC	4.28	4.22
DA	4.55	4.20	RA	4.96	4.11	BA	3.73	3.13	LC	4.89	3.88	ZD	4.77	4.28
DB	3.32	2.69	SA	3.78	2.92	BB	3.49	2.99	LD	5.40	2.98	ZE	4.74	3.55
DC	3.38	3.39	SB	3.44	2.77	BC	4.70	3.83	PA	3.94	3.15	ZF	4.80	3.33
FA	4.84	4.26	SC	4.03	3.18	EA	4.15	3.16	PC	4.31	3.51	ZG	5.18	4.28
GA	4.88	4.48	TA	3.18	3.01	HA	6.05	3.98	PD	4.93	3.54	ZH	4.76	4.76
JA	3.38	2.04	TC	4.29	4.22	IA	4.00	3.14	PE	4.22	2.36	ZI	5.79	5.30
JB	3.36	2.74	TD	3.55	3.80	IB	3.82	3.12	UA	4.22	2.51	ZJ	5.27	4.51
MB	3.62	3.14	VA	4.01	3.80	IC	4.04	3.39	UB	4.30	3.32	ZK	4.55	3.94
MC	3.41	3.63	VB	4.45	3.96	ID	3.45	3.33	UC	4.27	3.42	ZL	5.63	4.14
MD	4.11	2.78	VC	4.64	4.67	IE	4.12	3.30	UD	4.84	4.00	ZM	5.45	4.73
NA	5.17	3.68	WA	4.69	2.70	IF	3.82	3.09	UE	5.61	3.68	ZN	4.93	4.34
NB	4.74	3.58	WB	3.89	2.44	IG	4.30	2.87	UF	3.88	3.40	ZO	4.57	3.55
NC	4.13	4.21	WC	4.09	3.36	KB	4.30	3.11				ZP	5.32	3.93
ND	4.24	3.45	XA	4.03	3.35									
OA	4.60	3.50	XB	3.36	3.28									
OB	4.08	2.35	YA	5.45	3.86									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	4.08	3.41	4.36	3.35	5.01	4.15

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	4.21	0.67	3.38	0.57	53	5.2	†
Xiang (乡) I	vs	Xiang (乡) II	69	3.79	0.67	3.80	0.61	46	4.3	†
1983	vs	1989	65	2.97	0.43	3.81	0.55	26	2.2	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-28	M024 MOUTHCAc	29	P007 TOTPROT	27	P041 TESTOSTm	-25	D016 RIBOFLAV
-28	M027 OESOPHCAc	-24	P008 A-CAROT	28	R001 Hb	-34 *	D018 Ca
29	M035 LUNGCAmc	28	P012 RETINOL	-38 *	R002 RIBOFDEF	-26	D019 Fe
26	M036 LUNGCAfc	25	P014 A-TOCOPH	24	R006 TOTn3	-36 *	D023 Mn
25	M037 BREASTCAc	49 †	P026 CERULO	-30	R018 22:1n9	-32 *	D024 TOTNa
-25	M056 EPILEPSYb	24	P028 K	-28	R019 24:1n9	-27	D027 Zn
-24	M092 ILL-DEFc	29	P029 INORG-P	-27	U001 Cl/cre	-25	D028 PLNTFOOD
41 *	M095 ROADACCb	33 *	P030 Se	-29	U004 Ca/cre	-24	D031 %PLNTFOOD
43 †	M096 ROADACCc	35 *	P032 Fe	32 *	U009 TAUR/cre	24	D032 %ANIMFOOD
45 †	P001 TOTCHOL	38 *	P033 FERRITIN	-32 *	D001 KCAL	-25	D033 PLNTPROT
34 *	P002 HDLCHOL	42 †	P034 TIBC	-37 *	D004 SOLCARB	26	D034 ANIMPROT
36 *	P003 NONHDL	39 *	P036 GLUCOSE	25	D005 %FATKCAL	-27	D035 %PLNTPROT
28	P004 APOA1	30	P037 BUN	30	D007 %ANPRKCAL	27	D036 %ANIMPROT
47 †	P005 APOB	-42 †	P040 B2-MGLOB	-29	D009 %CARBKCAL	-29	D043 GREENVEG

-34 *	D057 ADDEDSALT		
-26	D079 TRYPTOPH		
26	D085 CHOL		
31	D086 LYS/ARG		
24	D087 %MUFA		
-26	D088 %PUFA		
-24	D090 P/S		
-28	D095 %TOTn3		
-25	D096 %TOTn6		
25	D145 %18:0		
-25	D147 %18:2		
-30	D148 %18:3		
26	Q166 dSALTFISH		
27	Q175 dMEAT		

- Analysis of complex with antibody was by nephelometry using N RBP Kit, Behring Diagnostics.
- The values appear to be somewhat more reliable than those for retinol, but the scatter of values is too wide to represent reliable absolute values.
- The consistently higher values in males than in females are probably reliable, given the reasonably good correlation of male/female values.
- Although average values were higher in 1989 than in 1983, the differences may be due entirely or in part to differences in sample preparation and analytical methods. No inference about a trend can be made from these data.
- 用N RBP试剂盒（Behring Diagnostics公司），通过悬液测定分析维生素A结合蛋白与抗体结合的复合物。
- 数据似乎比维生素A的数据显得可靠些，但数据太过分散以至于不能代表可靠的绝对值。
- 男性与女性数值之间较为合理的相关性表明男性数值略高于女性的一贯性也许是可靠的。
- 尽管1989年的均值比1983年的高些，但这些差异也许全部或部分是由于样品准备和分析方法的不同而造成的。无法对这些数据的趋势做出推测。

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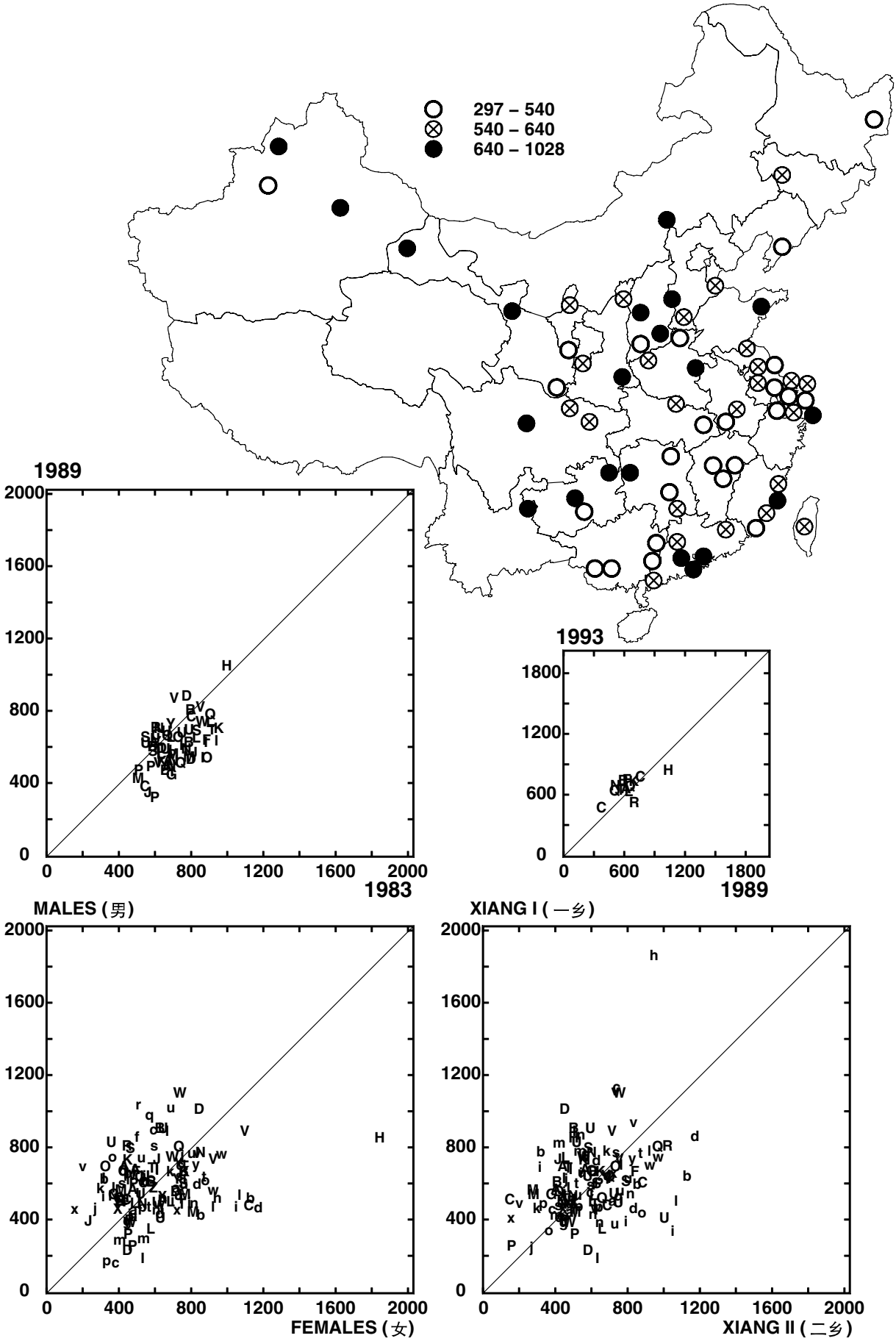
P014 A-TOCOPH – plasma ALPHA TOCOPHEROL (μg/dL)



P014 A-TOCOPH – 血浆：α维生素 E (微克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	315	406	QA	653	626	AA	550	449	KC	629	368	ZA	462	775
CC	568	923	QB	870	644	AB	470	473	LA	488	589	ZB	499	739
CD	729	558	QC	572	405	AC	605	596	LB	537	720	ZC	827	585
DA	716	1002	RA	900	473	BA	622	533	LC	491	772	ZD	546	541
DB	390	634	SA	600	739	BB	690	872	LD	585	838	ZE	386	441
DC	474	665	SB	686	580	BC	494	711	PA	401	542	ZF	449	608
FA	739	494	SC	675	434	EA	482	413	PC	193	399	ZG	640	736
GA	444	401	TA	539	807	HA	664	1391	PD	608	462	ZH	598	584
JA	560	530	TC	471	653	IA	527	588	PE	411	489	ZI	658	614
JB	406	244	TD	565	547	IB	513	578	UA	660	540	ZJ	632	452
MB	461	612	VA	787	908	IC	686	489	UB	737	592	ZK	467	533
MC	403	404	VB	730	871	ID	397	487	UC	693	655	ZL	457	508
MD	395	647	VC	648	331	IE	568	652	UD	619	518	ZM	638	658
NA	466	668	WA	633	798	IF	528	680	UE	607	703	ZN	550	435
NB	672	693	WB	414	532	IG	553	480	UF	597	648	ZO	436	546
NC	453	506	WC	909	843	KB	642	719				ZP	590	639
ND	501	503	XA	469	676									
OA	619	645	XB	436	269									
OB	697	338	YA	642	769									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	585	600	557	611	552	587

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	572	134	605	187	33	2.9	*
Xiang (乡) I	vs	Xiang (乡) II	69	586	168	591	146	41	3.7	†
1983	vs	1989	64	707	116	583	116	46	4.1	†
1989	vs	1993	12	591	104	621	90	54	2.0	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-26	M022 ALLCAb	-27	M103 INFANT	30	P033 FERRITIN	-25	D048 EGGS	31 *	Q158 dWHEAT
-30	M048 BLOODb	-32 *	M113 PERINATa	-31 *	P039 THYROXINE	30	D086 LYS/ARG	-26	Q170 dLEGUMyr
33 *	M063 IHDc	58 †	P012 RETINOL	-24	R025 20:3n6	-25	D146 %18:1	41 †	Q184 dBLACKTEA
-28	M078 CIRRHOSb	25	P013 RBP	26	U006 UREA/cre	-26	Q093 dPEPULCER	-36 *	Q205 eHRSWORK
-28	M079 CIRRHOSc	28	P021 NEURSPOR	26	D026 SeCARRY	38 *	Q109 dDBP	-28	G002 LONGITUDE
-27	M080 TOTLIVRb	-25	P024 FOLATE	-27	D027 Zn	26	Q110 dMIDBP	31 *	G004 ARIDITY
-28	M081 TOTLIVRc	39 †	P026 CERULO	-34 *	D037 RICE	25	Q112 dFVCadj		
-26	M097 DROWNb	30	P029 INORG-P	30	D038 WHTFLOUR	-31	Q157 dRICE		

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	AC	BA	CB	CC	FA	HA	KB	LC	ND	QA	QC	RA	TD
1989	571	551	438	617	689	745	670	627	716	619	567	450	544
1993	622	699	433	735	710	803	689	590	670	642	595	482	604

r%: 85 **t-test: 5.3** **P: †** **ND: Male only (仅含男性)**

- Analysed by HPLC (Khachik et al., Methods in Enzymology 213(A): 205-219, 1992).
- The wide scatter and somewhat low correlations between xiangs and between males and females suggest that the data are not very reliable.
- The one outlier (high in both 1983 and 1989) is in Laoshan (county HA), where large quantities of nuts are consumed. The 1989 survey coincided with the nut harvest, which may explain the extremely high values, particularly in women.
- The resurvey of 13 counties tabulated above indicates, however, some reliability.
- 测定：HPLC方法（Khachik et al., Methods in Enzymology 213（A）: 205-219, 1992）。
- 数据很分散，而且两乡之间和男性与女性之间的相关性很弱，说明数据不很可靠。
- 崂山县（HA）是一个例外（1983年和1989年的测定值均很高），该地坚果的消费量很大。1989年的调查时间与坚果收获季节相同，这可能是α维生素E水平很高（尤其在女性中）的原因。
- 13县的再调查数据列于上表，表明具有一定的可靠性。

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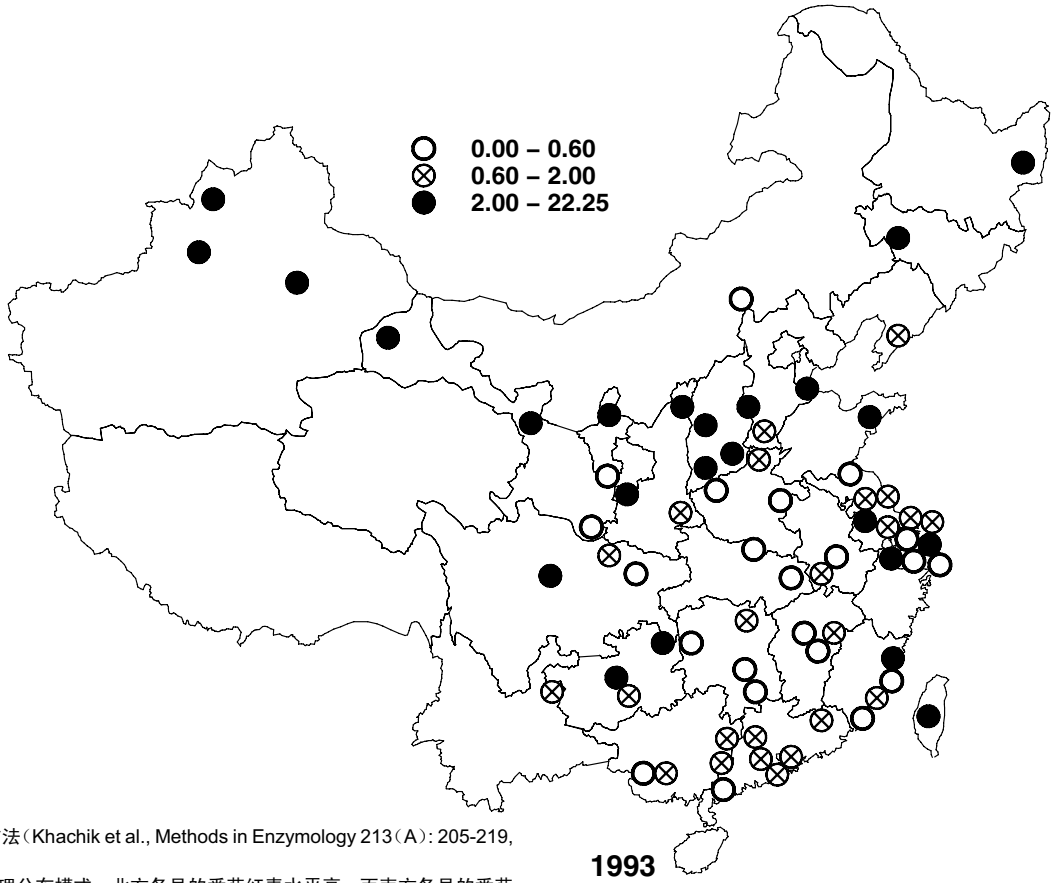
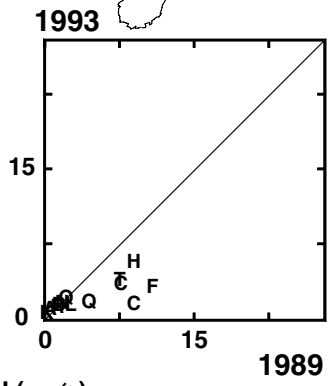
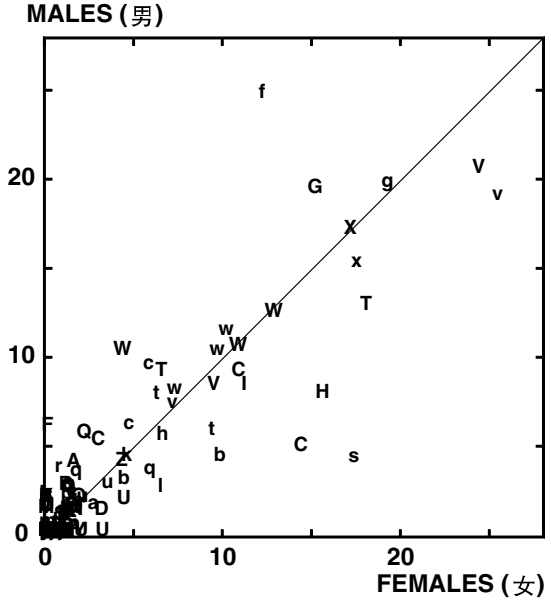
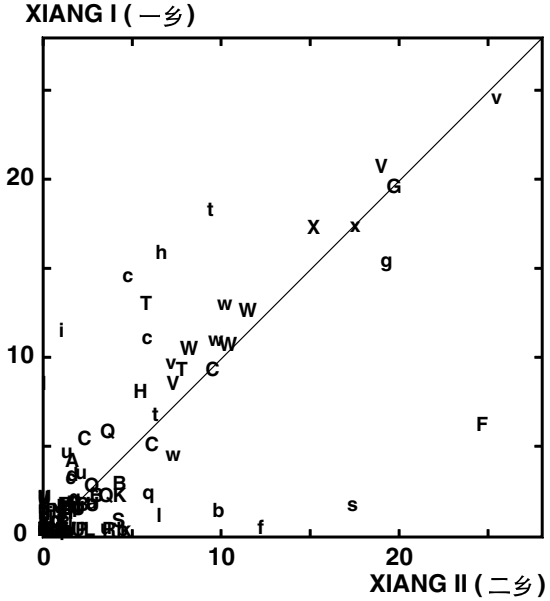
P016 LYCOPENE – plasma LYCOPENE (μg/dL)



- 测定：HPLC方法（Khachik et al., Methods in Enzymology 213（A）: 205-219, 1992）。
- 存在明显的地理分布模式，北方各县的番茄红素水平高，而南方各县的番茄红素水平低（包括许多“0”值或接近“0”的值），明显符合膳食来源的模式。
- 两乡之间和男性与女性之间的相关性很强，但是主要表现为低水平时具有很好的相关性。
- 与大量同样存在南北分布模式的指标存在相关性，包括与植物性食物呈正相关，与动物性食品呈负相关。有些是直接相关，但大部分是间接相关，反映了南方和北方在经济文化上的差异。
- 1989年和1993年数据的相关性很差。







P016 LYCOPENE – 血浆：番茄红素 (微克/100毫升)

Inland Provinces (内地)

Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	9.20	8.30	QA	4.50	3.97
CC	5.40	9.50	QB	2.65	1.75
CD	3.65	2.20	QC	2.55	1.25
DA	0.00	0.35	RA	1.80	0.40
DB	1.25	2.35	SA	2.33	9.35
DC	0.00	0.65	SB	0.90	0.95
FA	15.25	6.15	SC	0.00	0.25
GA	19.45	17.15	TA	0.50	0.70
JA	0.00	0.65	TC	9.20	13.70
JB	0.45	1.00	TD	8.35	6.40
MB	0.25	0.25	VA	7.70	8.25
MC	1.20	0.60	VB	19.65	24.85
MD	0.00	0.60	VC	0.70	0.00
NA	0.00	0.00	WA	10.30	10.15
NB	0.00	0.00	WB	11.80	11.40
NC	0.25	0.00	WC	9.10	5.70
ND	1.45	1.75	XA	16.05	17.30
OA	0.00	0.60	XB	0.00	0.00
OB	0.00	0.00	YA	0.00	0.95

Coastal Provinces (沿海)

Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
AA	2.70	2.10	KC	3.05	2.30
AB	0.00	0.65	LA	0.00	0.45
AC	0.00	0.55	LB	0.00	1.25
BA	1.75	0.75	LC	1.25	3.65
BB	3.40	5.45	LD	0.25	0.00
BC	2.40	2.20	PA	1.50	0.60
EA	1.25	1.30	PC	0.00	0.40
HA	6.58	11.07	PD	1.05	0.60
IA	0.25	0.80	PE	0.75	1.65
IB	0.67	1.10	UA	0.70	1.00
IC	4.10	6.10	UB	0.95	2.65
ID	0.45	1.20	UC	0.90	2.85
IE	0.85	1.20	UD	0.30	0.65
IF	0.30	1.05	UE	2.05	1.80
IG	0.55	0.90	UF	1.55	0.60
KB	0.00	0.00			

Taiwan (台湾)

Area 地区	Male 男	Fem. 女
ZA	6.00	5.50
ZB	5.80	6.45
ZC	6.85	4.50
ZD	2.60	2.80
ZE	1.35	1.65
ZF	4.10	5.80
ZG	5.20	6.80
ZH	2.45	2.25
ZI	5.20	3.85
ZJ	4.70	5.15
ZK	2.55	3.20
ZL	2.75	2.15
ZM	3.80	4.75
ZN	1.50	3.40
ZO	2.20	2.75
ZP	5.65	7.45

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	4.37*	4.46	1.28*	1.83	3.92	4.28

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	2.98	4.66	3.28	4.86	91	18.1	†
Xiang (乡) I	vs	Xiang (乡) II	69	3.03	4.94	3.23	4.86	80	11.1	†
1989	vs	1993	13	4.30	3.78	1.65	1.46	74	3.7	*

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

29 M006 ALL70-79	-30 M097 DROWNb	44 † U005 P/cre	-31 * D091 M/P	-28 Q163 dSWEETPOT
25 M008 MEDICALc	35 * M101 HOMICIDEb	-48 † U023 NO3mn	33 * D092 TOTn3	-24 Q166 dSALTFISH
-27 M012 INFECTc	28 M104 MATERNAL	-44 † U026 SUMNITa	28 D093 TOTn6	-24 Q167 dSALTFKID
-27 M016 PULMTBc	26 M108 RESPINFa	32 * D003 TOTPROT	33 * D095 %TOTn3	25 Q169 dVEGFAT
40 † M018 OTHERTBc	29 M110 CONGENITa	25 D006 %PROTKCAL	28 D096 %TOTn6	-32 * Q172 dGRNVEG
-31 M019 VIRALHEPb	44 † M111 NTDa	34 * D008 %PLPRKCAL	-40 † D097 %TOTn9	32 * Q173 dFRUIT
-25 M020 VIRALHEPc	-26 M119 DROWNa	-32 * D011 TOTCAROT	-40 † D146 %18:1	-24 Q174 dFISH
-25 M025 NASOPCAc	27 P006 ALBUMIN	-32 * D012 VITA	28 D147 %18:2	40 † Q176 dEGGS
32 * M041 LEUKEMIAb	53 † P010 G-CAROT	31 D013 VITE	34 * D148 %18:3	33 * Q177 dMILK
28 M050 MENTALb	80 † P011 Z-CAROT	25 D021 K	29 Q019 dCANREAD	25 Q184 dBLACKTEA
39 * M052 NERVOUSb	-24 P021 NEURSPOR	47 † D026 SeCARRY	30 Q021 eCANREAD	-34 * Q185 dAGEMENS
45 † M059 ALLVASCc	75 † P022 PHYTOFLU	31 * D033 PLNTPROT	24 Q050 c%H2OPIPE	33 * Q195 eMOTHERS
28 M061 RHEUMHDc	75 † P023 PHYTOENE	-48 † D037 RICE	40 † Q064 dCOALNOW	-27 Q205 eHRSWORK
60 † M063 IHDc	-31 * P024 FOLATE	47 † D038 WHTFLOUR	43 † Q090 dHEIGHT	-25 Q231 e%FEVER
33 * M065 STROKEc	25 P032 Fe	35 * D042 LIGHTVEG	58 † Q091 dWEIGHT	-28 Q234 eWORMS
54 † M067 VASC-STRc	30 P033 FERRITIN	-27 D044 SALTVEG	58 † Q092 dBMI	41 † Q243 fWTadj
24 M068 ALLRESPb	-33 * P040 B2-MGLOB	24 D047 MILK	-28 Q096 dMALARIA	27 Q245 fHTadj
24 M069 ALLRESPc	-26 R004 MUFA	28 D054 VEGOIL	41 † Q109 dDBP	35 * Q247 fBMIadj
24 M070 PNEUMONIb	24 R006 TOTn3	47 † D067 GLUTAMINE	32 * Q110 dMIDBP	62 † G001 LATITUDE
26 M072 COPDc	39 † R011 18:0	30 D074 METH+CYS	-35 * Q117 dDIARRH	-31 * G002 LONGITUDE
28 M087 PREGBRTHb	27 R013 22:0	29 D083 PUFA	30 Q143 dTOBCONSf	40 † G003 ELEVATION
-27 M089 ALLSKINc	-35 * R016 18:1n9	-38 * D087 %MUFA	-24 Q156 dALCOday	51 † G004 ARIDITY
53 † M095 ROADACCb	27 R022 22:6n3	30 D088 %PUFA	-48 † Q157 dRICE	-52 † G005 HEAT
51 † M096 ROADACCc	30 R023 18:2n6	25 D090 P/S	49 † Q158 dWHEAT	

RELIABILITY STUDY SIDE-BY-SIDE ANALYSIS
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	AC	BA	CB	CC	FA	HA	KB	LC	ND	QA	QC	RA	TD
1989	1.86	1.02	1.74	2.95	5.23	2.70	1.20	2.70	1.36	2.05	1.82	0.40	2.40
1993	0.46	0.80	0.90	2.92	2.63	5.15	0.00	0.82	1.21	1.11	1.55	0.68	3.39

r%: 54 **t-test: 2.1** **P:** **ND: Male only (仅含男性)**

- Analysed by HPLC (Khachik et al., Methods in Enzymology 213(A): 205-219, 1992).
- Strong geographic pattern of high levels in the north and low (including many values of zero or close to zero) in the south, clearly of dietary origin.
- Correlations between xiangs and between males and females are strong, but reflect mainly the good correlation of lower values.
- Large number of correlations with variables that are also distributed north to south, including positive correlations with plant food and negative correlations with animal food. Some correlations are direct but a large number are indirect, reflecting economic and cultural north-south differences.
- Poor correlation between 1989 and 1993.

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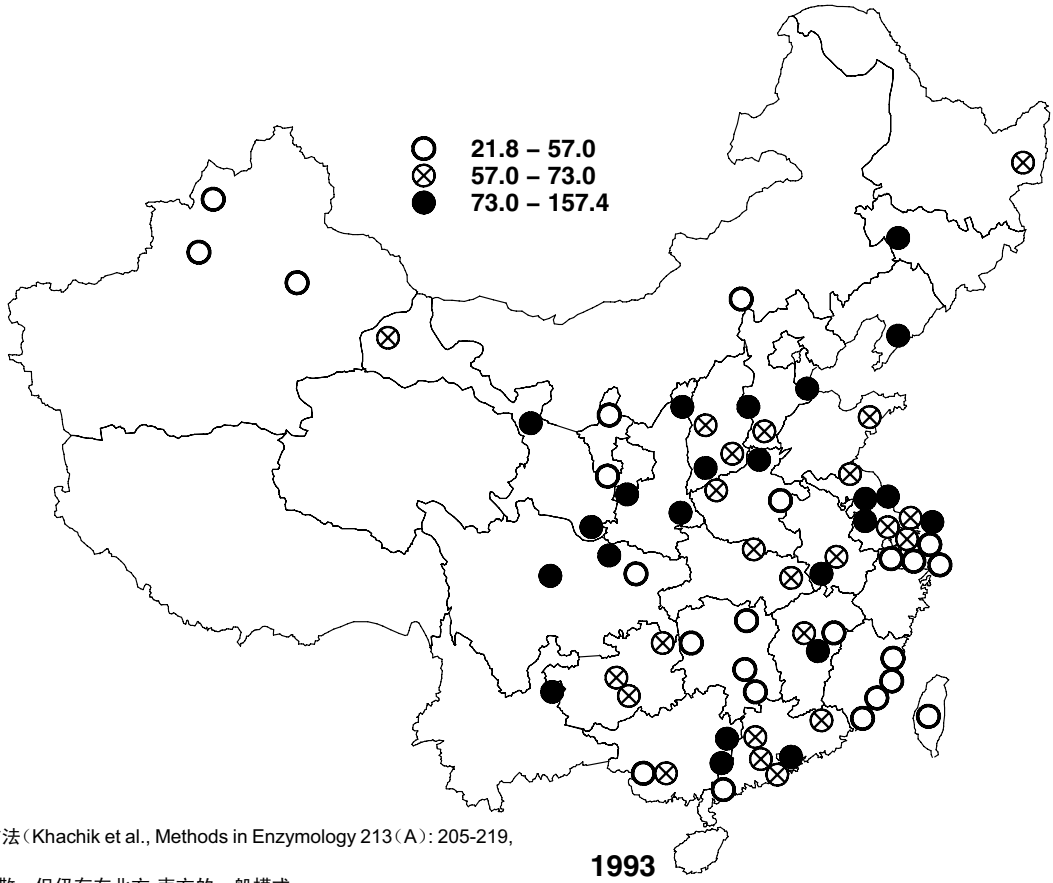
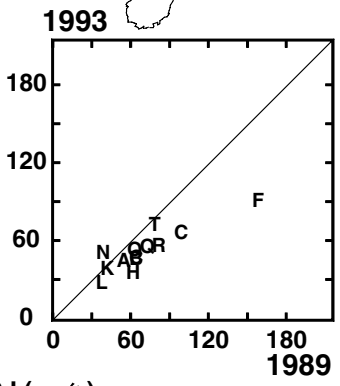
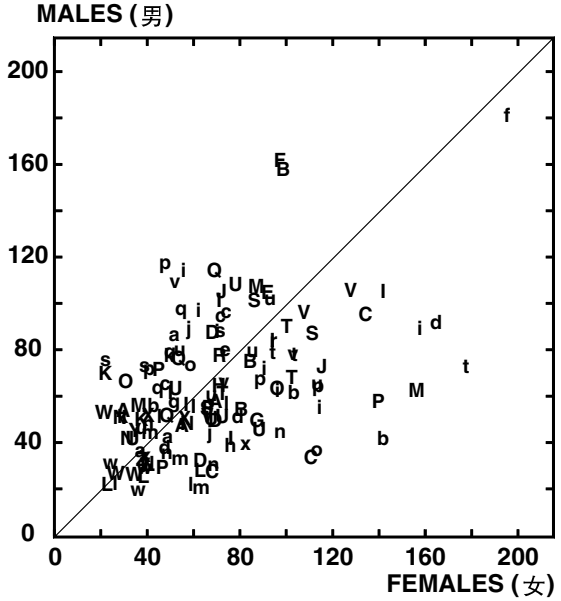
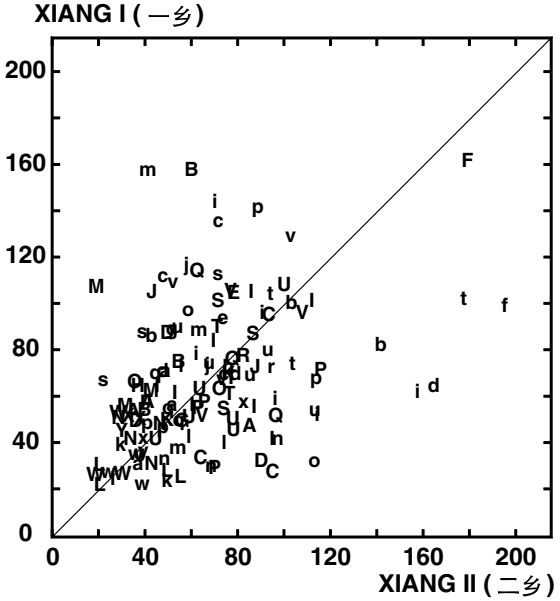
P017 LUTEIN – plasma LUTEIN (μg/dL)



- 测定：HPLC方法（Khachik et al., Methods in Enzymology 213（A）: 205-219, 1992）。
- 各地数值很分散，但仍存在北方-南方的一般模式。
- 两乡之间和男性与女性之间仅存在中度相关。
- 长岭县（FA）男性和女性、两个乡以及1983年和1989年的黄体素水平都很高。
- 与大量同样存在南北分布模式的指标存在相关性，包括与植物性食物呈正相关，与动物性食品呈负相关。有些是直接相关，但大部分是间接相关，反映了南方和北方在经济文化上的差异。
- 1989年和1993年样品的最初分析结果和并排再分析结果均具有很好的相关性。







P017 LUTEIN – 血浆：黄体素 (微克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	92.6	102.3	QA	86.8	56.0	AA	42.8	32.7	KC	71.3	35.2	ZA	22.9	49.2
CC	47.0	78.5	QB	75.2	51.0	AB	64.6	52.7	LA	38.8	55.9	ZB	21.9	28.3
CD	59.6	70.4	QC	72.4	50.8	AC	47.6	58.5	LB	37.1	53.6	ZC	34.2	33.6
DA	41.2	57.9	RA	78.5	82.6	BA	63.0	63.0	LC	23.8	49.4	ZD	40.8	35.2
DB	59.7	113.2	SA	84.9	61.9	BB	107.3	100.4	LD	19.6	24.0	ZE	25.4	26.7
DC	67.0	73.0	SB	85.1	90.7	BC	45.5	110.7	PA	57.5	89.6	ZF	31.1	24.7
FA	169.0	145.8	SC	62.7	43.1	EA	90.0	82.3	PC	48.0	43.3	ZG	27.3	32.9
GA	51.1	68.8	TA	79.1	138.6	HA	49.2	73.1	PD	92.1	45.9	ZH	19.6	37.8
JA	72.6	69.0	TC	71.1	97.9	IA	66.9	68.9	PE	60.3	113.8	ZI	45.1	41.2
JB	78.5	86.1	TD	67.2	87.7	IB	70.1	108.5	UA	53.7	69.7	ZJ	34.7	37.1
MB	50.9	98.3	VA	89.7	114.7	IC	94.3	105.8	UB	102.7	85.2	ZK	28.7	46.3
MC	42.0	44.8	VB	56.6	68.9	ID	105.4	63.2	UC	60.6	70.8	ZL	24.1	40.3
MD	61.6	74.7	VC	100.5	79.3	IE	75.5	92.1	UD	41.7	35.3	ZM	37.8	65.6
NA	35.3	68.3	WA	20.6	34.2	IF	56.0	82.0	UE	62.8	76.1	ZN	26.5	30.0
NB	45.8	48.4	WB	26.5	24.1	IG	57.2	76.3	UF	62.0	82.3	ZO	27.1	27.1
NC	38.1	48.0	WC	38.9	29.0	KB	48.2	33.0				ZP	34.0	38.3
ND	36.3	39.4	XA	42.6	68.8									
OA	49.2	71.3	XB	40.8	39.4									
OB	66.0	76.6	YA	36.0	36.5									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	62.6	70.8	61.8	68.8	30.1	37.1

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	62.2	24.7	69.9	26.8	61	6.3	†
Xiang (乡) I	vs	Xiang (乡) II	69	65.4	26.4	66.7	27.1	49	4.6	†
1989	vs	1993	13	69.3	31.8	48.2	16.6	88	6.1	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-30	M002 ALL5-14	61 †	P019 A-CRYPT	31	D008 %PLPRKCAL	47 †	D059 TOTNDF	27	D148 %18:3
-25	M016 PULMTBc	32 *	P022 PHYTOFLU	26	D009 %CARBKCAL	-48 †	D072 LYSINE	-37 *	Q007 cHHSIZE
-27	M043 ENDOCRINb	36 *	P023 PHYTOENE	-50 †	D010 RETINOL	-31 *	D078 THREONINE	-40 †	Q093 dPEPULCER
-25	M046 MALNUTRIb	27	P024 FOLATE	25	D015 THIAMINE	-26	D079 TRYPTOPH	-32 *	Q097 dARTHRIT
-29	M050 MENTALb	-26	P026 CERULO	34 *	D022 Mg	-27	D082 MUFA	-26	Q102 dPHLEGMw
-24	M051 MENTALc	-27	P029 INORG-P	-46 †	D026 SeCARRY	-36 *	D084 SATFA	28	Q112 dFVCadj
46 †	M064 STROKEb	-31 *	P030 Se	-51 †	D029 ANIMFOOD	-51 †	D085 CHOL	-40 †	Q117 dDIARRH
-25	M091 ILL-DEFb	-25	P036 GLUCOSE	47 †	D031 %PLNTFOOD	-27	D086 LYS/ARG	-26	Q151 dBEERday
-27	M118 MALNUTRIa	-41 †	P041 TESTOSTm	-47 †	D032 %ANIMFOOD	31 *	D088 %PUFA	56 †	Q159 dMAIZE
-37 *	P001 TOTCHOL	-25	P044 HPYLORI	-49 †	D034 ANIMPROT	-32 *	D089 %SATFA	34 *	Q161 dMILLET
-24	P002 HDLCHOL	-25	R014 24:0	46 †	D035 %PLNTPROT	30	D090 P/S	-24	Q167 dSALTFKID
-32 *	P003 NONHDL	-37 *	R021 20:5n3	-46 †	D036 %ANIMPROT	-30	D091 M/P	26	Q171 dSALTVEG
-45 †	P005 APOB	38 *	U001 Cl/cre	61 †	D039 OTHCEREAL	-25	D094 TOTn9	-28	Q174 dFISH
-34 *	P007 TOTPROT	30	U002 K/cre	-24	D045 FRUIT	33 *	D096 %TOTn6	-37 *	Q175 dMEAT
51 †	P008 A-CAROT	37 *	U003 Na/cre	-32 *	D047 MILK	-45 †	D104 14:0	-35 *	Q177 dMILK
38 *	P009 B-CAROT	34 *	U007 URIC/cre	-48 †	D049 MEAT	-45 †	D136 %14:0	-25	Q184 dBLACKTEA
43 †	P010 G-CAROT	-36 *	U009 TAUR/cre	-45 †	D050 REDMEAT	-56 †	D141 %16:1	-28	Q192 dLIVEBRTH
39 †	P011 Z-CAROT	-24	D002 TOTFAT	-37 *	D051 POULTRY	-32 *	D145 %18:0	25	Q218 eHBV1st
30	P018 ANHYDLUT	-45 †	D007 %ANPRKCAL	-28	D052 FISH	33 *	D147 %18:2	24	Q219 eHBV2nd

RELIABILITY STUDY SIDE-BY-SIDE ANALYSIS
可靠性研究：并排分析

	AC	BA	CB	CC	FA	HA	KB	LC	ND	QA	QC	RA	TD
1989	43.1	40.7	74.1	39.2	114.4	52.0	32.3	32.6	41.3	50.7	48.4	52.5	53.7
1993	39.9	42.3	62.0	43.0	86.2	30.9	34.0	23.0	48.8	50.8	49.0	51.7	68.0

r%: 85 **t-test: 5.3** **P: †** **ND: Male only (仅含男性)**

- Analysed by HPLC (Khachik et al., Methods in Enzymology 213(A): 205-219, 1992).
- Values are very scattered geographically, but with a general north to south pattern.
- Only moderate correlations between xiangs and between males and females.
- High value in Changling (county FA) consistently in males and females, both xiangs, and 1989 and 1993.
- Large number of correlations with variables that are also distributed north to south, including positive correlations with plant food and negative correlations with animal food. Some correlations are direct but a large number are indirect, reflecting economic and cultural north-south differences.
- Good correlation between 1989 and 1993 values, both in original analyses and in side-by-side re-analyses.

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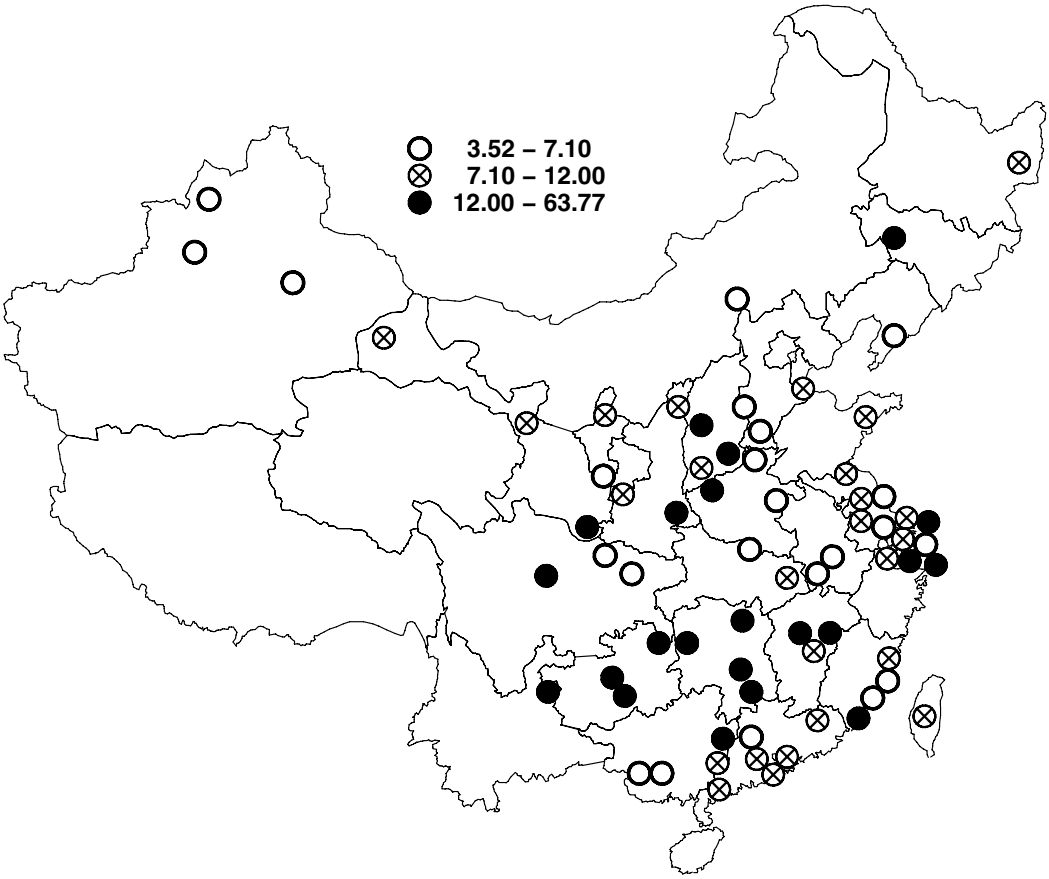
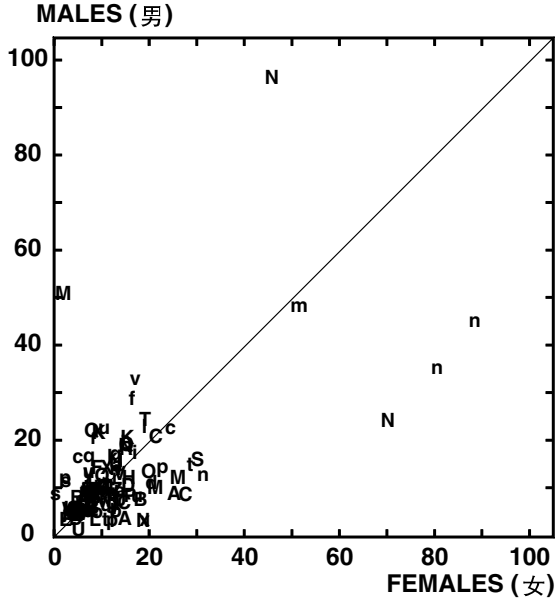
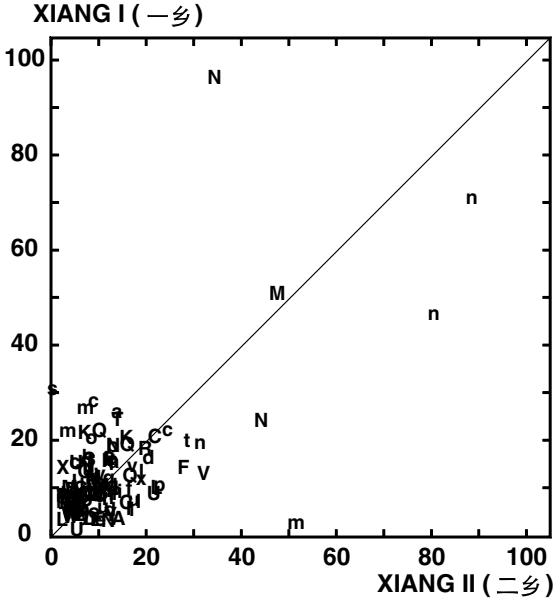
P020 B-CRYPT – plasma BETA CRYPTOXANTHIN (μg/dL)







P020 B-CRYPT – 血浆：β隐黄质 (微克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	10.55	9.55	QA	15.25	8.82	AA	5.95	6.10	KC	13.60	9.75	ZA	11.45	12.90
CC	8.20	17.98	QB	16.75	10.90	AB	8.00	13.75	LA	15.30	15.55	ZB	7.10	7.70
CD	20.45	22.65	QC	13.70	11.15	AC	7.95	19.25	LB	4.50	4.80	ZC	13.60	15.90
DA	6.25	7.75	RA	18.20	11.65	BA	4.55	5.40	LC	4.95	10.45	ZD	6.30	10.25
DB	5.15	8.20	SA	11.20	14.90	BB	5.45	5.55	LD	2.00	10.15	ZE	8.50	14.90
DC	9.65	17.75	SB	9.15	5.00	BC	5.25	15.30	PA	10.45	16.05	ZF	9.30	12.85
FA	20.35	12.50	SC	4.45	4.15	EA	5.75	6.15	PC	4.95	5.60	ZG	8.40	20.85
GA	7.20	11.40	TA	18.40	23.70	HA	9.83	11.52	PD	9.65	4.45	ZH	9.75	10.75
JA	7.05	4.35	TC	4.50	9.85	IA	12.13	11.25	PE	4.60	13.85	ZI	8.00	8.15
JB	6.20	5.45	TD	9.05	9.80	IB	10.32	10.55	UA	2.60	7.85	ZJ	5.90	8.05
MB	6.15	12.20	VA	7.80	11.00	IC	8.15	10.40	UB	9.55	10.20	ZK	9.65	18.65
MC	48.40	26.50	VB	5.85	8.60	ID	3.75	4.15	UC	14.45	8.80	ZL	6.25	10.60
MD	9.75	16.40	VC	21.80	15.10	IE	12.85	13.25	UD	10.75	8.60	ZM	6.95	19.45
NA	6.85	24.80	WA	3.30	4.65	IF	4.50	9.70	UE	6.70	10.65	ZN	6.65	6.35
NB	15.30	13.75	WB	3.25	3.80	IG	5.00	5.80	UF	7.25	11.85	ZO	7.55	10.65
NC	64.60	62.95	WC	3.95	3.30	KB	17.35	13.60				ZP	9.75	17.05
ND	33.45	79.15	XA	7.55	14.78									
OA	4.10	6.25	XB	6.70	7.40									
OB	9.45	13.80	YA	7.65	5.10									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	12.83	14.66	8.00	10.01	8.44	12.82

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	10.66	9.81	12.57	11.49	75	9.3	†
Xiang (乡) I	vs	Xiang (乡) II	69	11.32	9.92	11.91	11.17	79	10.4	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

26	M003 ALL15-34	27	M110 CONGENITa	46 †	D053 ANIMFAT	26	D094 TOTn9	27	Q068 dCOOKf
26	M004 ALL0-34	24	P007 TOTPROT	-26	D054 VEGOIL	-34 *	D095 %TOTn3	31	Q168 dANIMFAT
57 †	M009 NONMEDb	42 †	P015 G-TOCOPH	26	D082 MUFA	-36 *	D096 %TOTn6	-29	Q169 dVEGFAT
29	M010 NONMEDc	24	R001 Hb	25	D084 SATFA	36 *	D097 %TOTn9	-27	Q195 eMOTHERS
-27	M027 OESOPHCAc	28	R012 20:0	37 *	D087 %MUFA	29	D140 %16:0	-30	Q205 eHRSWORK
25	M090 MUSCSKELc	43 †	R016 18:1n9	-37 *	D088 %PUFA	28	D141 %16:1	31 *	Q209 eBIRTHWT
30	M094 ACCIDENTc	-27	D008 %PLPRKCAL	31 *	D089 %SATFA	38 *	D145 %18:0		
32	M100 SUICIDEc	-28	D013 VITE	-32 *	D090 P/S	37 *	D146 %18:1		
33	M102 HOMICIDEc	-30	D015 THIAMINE	49 †	D091 M/P	-35 *	D147 %18:2		
44 †	M107 NONMEDa	59 †	D045 FRUIT	-26	D092 TOTn3	-34 *	D148 %18:3		

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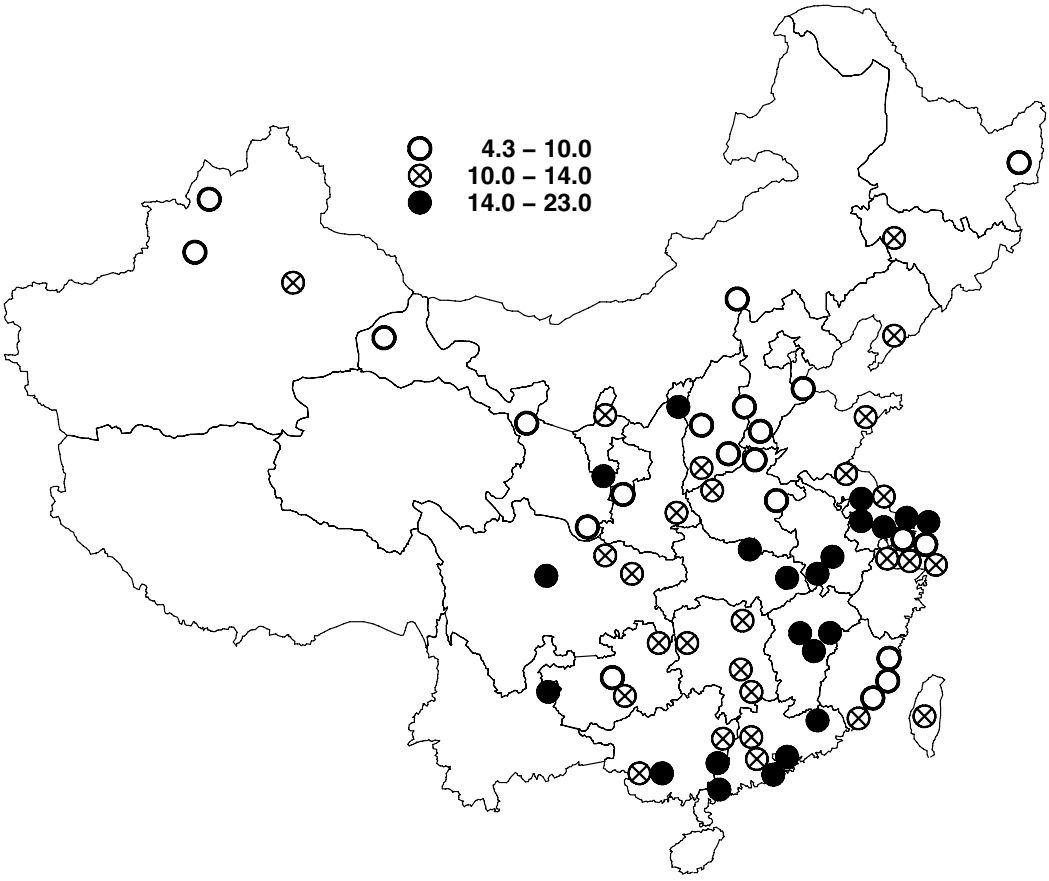
- Analysed by HPLC (Khachik et al., Methods in Enzymology 213(A): 205-219, 1992).
- Quite low in almost all areas, with outliers in Nancheng, Qiyang, and Yuanjiang (counties MC, NC, ND, respectively).
- Correlations are dominated by the few high points, so are uninformative.

- 测定：HPLC方法（Khachik et al., Methods in Enzymology 213（A）: 205-219, 1992）。
- 几乎所有地区的水平都很低，但是南城县（MC）、祁阳县（NC）和沅江县（ND）除外。
- 相关性被几个水平很高的地区（点）所左右，因此不能提供有用信息。

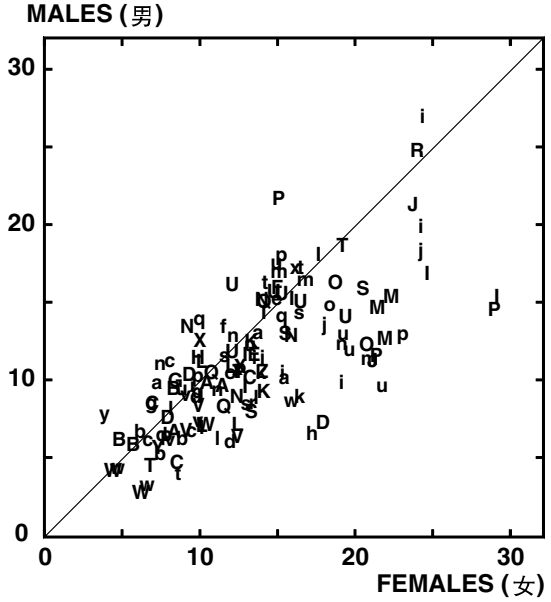
P001中文注释:

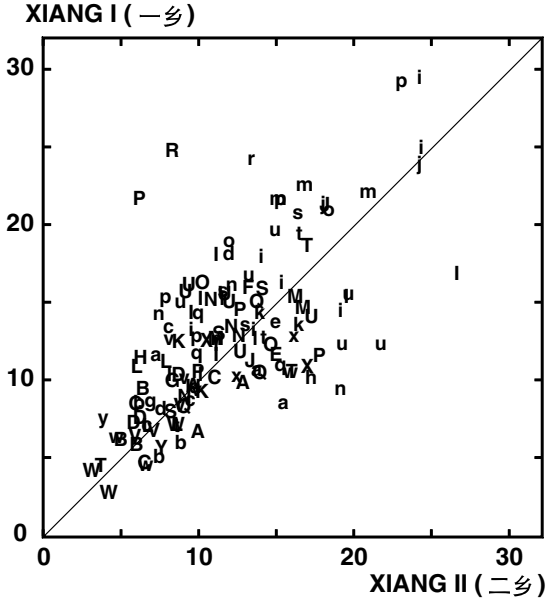
- 用硫酸铁铵显色剂（适用于抗坏血酸保护的血浆样品）进行比色测定。在1983年和1989年调查中用同样方法进行测定。
- 各县之间存在很大的差异（范围：127-180 mg/dL [3.3-4.7 mmol/L]）。
- 高胆固醇水平主要分布在沿海地区，最高水平与台湾的平均胆固醇水平（182 mg/dL [4.7 mmol/L]）一致。
- 男性和女性之间以及一乡和二乡之间的良好相关性支持了测定结果的可靠性。
- 从1983年到1989年，胆固醇平均水平升高了16%（从127 mg/dL [3.3 mmol/L]增加到147 mg/dL [3.8 mmol/L]），这种主要变化很可能反映了膳食的变化。该变化与高密度脂蛋白（HDL）胆固醇（见 P002: HDLCHOL 和 P004: APOA1）以及低密度脂蛋白（LDL）胆固醇（见 P003: NONHDL和 P005:APOB）的增加有关。
- 在1997年对1983年和1989年的样品同时进行重复测定，结果证实了这种升高的真实性（见正文）。
- 与膳食脂肪摄入量呈强相关性（60%† D005: %FATKCAL）。
- 英国男性的代表值为214 mg/dL[5.5 mmol/L] (Parish et al. BMJ 311:471-477, 1995)，而1989年调查的男性平均水平为148 mg/dL[3.8 mmol/L]。

P024 FOLATE – plasma FOLATE (ng/mL)



- 由Douglas Heimburger 博士用乳酸菌酪状碎屑细胞的微生物学方法进行测定。血浆样品与细菌共同孵育，通过分析培养液的浊度并与已知对照比较来定量测定细菌的生长程度（Tamura T. Microbiological assay of folates. Contemporary issues in clinical nutrition. Folic acid metabolism in health and disease. New York: Wiley-Liss, pp. 122-137, 1990）。
- 平均值范围很大（4.3-23.0 ng/mL），具有从北部到南部的梯度变化趋势。
- 两乡之间和男性与女性之间具有很好的相关性（73%†和81%†）。
- 女性叶酸盐水平高于男性。
- 与大量同样存在南北分布模式的指标存在相关性，如与米类膳食呈正相关，与麦类膳食呈负相关。有些是直接相关，但大部分是间接相关，反映了南方和北方在经济文化上的差异。
- 与南方和北方分布的疾病具有相关性，其中许多疾病与其它一些具有地理差异的因素有关。让人感兴趣的是，叶酸盐水平与脑卒中尤其是其它血管疾病呈负相关（-43%† M067:VASC-STRc）。叶酸可能预防血管疾病的假设是目前（2003）在欧洲和北美进行的临床试验的研究主题。
- 与婴儿神经管缺陷死亡率无相关性。





P024 FOLATE – 血浆：叶酸盐 (毫微克/毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	10.4	10.6	QA	8.4	10.6	AA	9.4	9.3	KC	9.5	13.9	ZA	9.0	13.0
CC	7.0	6.7	QB	14.2	11.9	AB	8.1	11.8	LA	7.7	13.0	ZB	8.5	18.3
CD	5.4	8.9	QC	12.0	12.9	AC	11.1	12.0	LB	8.2	11.5	ZC	11.4	14.6
DA	6.7	7.7	RA	16.3	18.6	BA	5.4	6.1	LC	9.3	9.1	ZD	11.2	10.4
DB	9.3	9.4	SA	14.8	18.4	BB	7.7	7.2	LD	6.7	10.1	ZE	8.1	15.8
DC	6.3	14.8	SB	7.9	13.1	BC	5.7	7.2	PA	10.1	11.2	ZF	9.2	14.2
FA	14.4	13.2	SC	11.9	13.4	EA	13.1	14.1	PC	13.7	11.4	ZG	9.9	17.5
GA	8.9	7.6	TA	13.1	13.3	HA	8.7	13.5	PD	14.5	18.3	ZH	10.2	7.8
JA	19.5	23.9	TC	17.6	17.8	IA	9.3	11.2	PE	13.4	26.0	ZI	13.6	18.1
JB	12.1	19.5	TD	3.8	7.7	IB	12.5	15.6	UA	12.2	11.8	ZJ	11.3	9.5
MB	11.7	21.4	VA	6.7	9.4	IC	14.4	15.8	UB	15.5	17.1	ZK	8.0	11.8
MC	15.5	18.2	VB	5.9	10.2	ID	11.2	13.2	UC	13.3	14.8	ZL	11.3	15.6
MD	15.6	19.5	VC	8.4	9.4	IE	17.3	26.7	UD	13.4	17.4	ZM	9.5	10.8
NA	12.6	14.1	WA	3.2	5.3	IF	21.6	24.5	UE	12.1	15.6	ZN	8.3	16.4
NB	8.8	11.7	WB	3.4	5.3	IG	11.8	16.6	UF	12.6	16.9	ZO	10.2	17.9
NC	12.5	14.0	WC	7.6	13.0	KB	10.4	14.8				ZP	13.4	11.9
ND	12.8	10.6	XA	11.3	11.1									
OA	13.0	15.3	XB	13.7	14.3									
OB	13.2	19.5	YA	6.4	5.5									

Mean	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
平均值	10.6	12.8	11.3	14.1	10.2	14.0

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	10.9	3.8	13.4	4.8	81	11.3	†
Xiang (乡) I	vs	Xiang (乡) II	69	12.5	4.6	11.8	4.2	73	8.8	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-26 M018 OTHERTBc	-26 M104 MATERNAL	-47 † U006 UREA/cre	-65 † D038 WHTFLOUR	-30 Q108 dSBP
38 * M022 ALLCAb	38 * M107 NONMEDa	-26 U011 COT/cre	30 D041 LEGUME	-32 * Q109 dDBP
32 * M030 LIVERCAb	51 † M119 DROWNa	-28 U012 VOLURINE	39 † D043 GREENVEG	-33 * Q110 dMIDBP
26 M031 LIVERCAc	31 P009 B-CAROT	-27 U014 VOLURmn	25 D044 SALTVEG	27 Q156 dALCOday
-27 M038 CERVIXCAc	-25 P014 A-TOCOPH	41 † U023 NO3mn	-35 * D047 MILK	54 † Q157 dRICE
25 M040 LYMPHOMAc	-24 P015 G-TOCOPH	24 D002 TOTFAT	24 D055 ADDEDFAT	-63 † Q158 dWHEAT
-25 M050 MENTALb	-31 * P016 LYCOPENE	-36 * D003 TOTPROT	-63 † D067 GLUTAMINE	58 † Q172 dGRNVEG
24 M057 EPILEPSYc	27 P017 LUTEIN	27 D005 %FATKCAL	-40 † D074 METH+CYS	-42 † Q177 dMILK
-39 * M059 ALLVASCc	38 * P025 VITC	-36 * D006 %PROTKCAL	-33 * D078 THREONINE	-36 * Q184 dBLACKTEA
-27 M062 HYPTENSc	-54 † P026 CERULO	-28 D008 %PLPRKCAL	30 D082 MUFA	29 Q205 eHRSWORK
-40 † M063 IHDc	-24 P033 FERRITIN	27 D011 TOTCAROT	-27 D086 LYS/ARG	25 Q219 eHBV2nd
-31 * M065 STROKEc	-39 * P035 TRANSFE	25 D012 VITA	32 * D087 %MUFA	27 Q234 eWORMS
-43 † M067 VASC-STRc	-27 P037 BUN	31 * D014 VITC	32 * D094 TOTn9	-31 * Q247 fBMIadj
27 M079 CIRRHOSc	26 P040 B2-MGLOB	-31 D015 THIAMINE	35 * D097 %TOTn9	-44 † G001 LATITUDE
35 * M080 TOTLIVRb	29 P042 HBsAg	28 D017 NIACIN	-26 D104 14:0	29 G002 LONGITUDE
37 * M081 TOTLIVRc	-27 R003 SATFA	28 D018 Ca	-35 * D136 %14:0	-30 G003 ELEVATION
25 M082 GALLBILc	-25 R006 TOTn3	-31 D020 Cu	37 * D146 %18:1	-47 † G004 ARIDITY
-26 M087 PREGBRTHb	-32 * R009 14:0	-36 * D023 Mn	-24 Q057 dCOALKID	45 † G005 HEAT
-30 M095 ROADACCb	-29 R011 18:0	24 D025 Na	-46 † Q064 dCOALNOW	
51 † M097 DROWNb	-32 * R013 22:0	-54 † D026 SeCARRY	-27 Q090 dHEIGHT	
32 M098 DROWNc	-26 R022 22:6n3	-24 D033 PLNTPROT	-38 * Q091 dWEIGHT	
35 * M100 SUICIDEc	-32 * U005 P/cre	52 † D037 RICE	-39 † Q092 dBMI	

- Analysis by Dr. Douglas Heimburger was by microbiological assay using Lactobacillus casei. After incubation with plasma samples, extent of bacterial growth is quantitated by assessing turbidity compared with known controls (Tamura T. Microbiological assay of folates. Contemporary issues in clinical nutrition. Folic acid metabolism in health and disease. New York: Wiley-Liss, pp. 122-137, 1990).
- Wide range of means (4.3-23.0 ng/mL), with general north to south gradient.
- Good correlations between xiangs (73%†) and between males and females (81%†).
- Higher values in females than in males.
- Large number of correlations with dietary variables that are also distributed north to south, including positive correlations with a rice-based diet and negative with a wheat-based diet. Some correlations are direct but a large number are indirect, reflecting economic and cultural north-south differences.
- Correlations with diseases that are distributed north to south, many of which are associated with other factors that segregate geographically. Of interest is the negative correlation with death from stroke and, particularly, other vascular diseases (-43%† M067:VASC-STRc). The hypothesis that folate might protect against vascular disease is the subject of current (2003) clinical trials in Europe and North America.
- No correlation was found with deaths from neural tube defects in infants.

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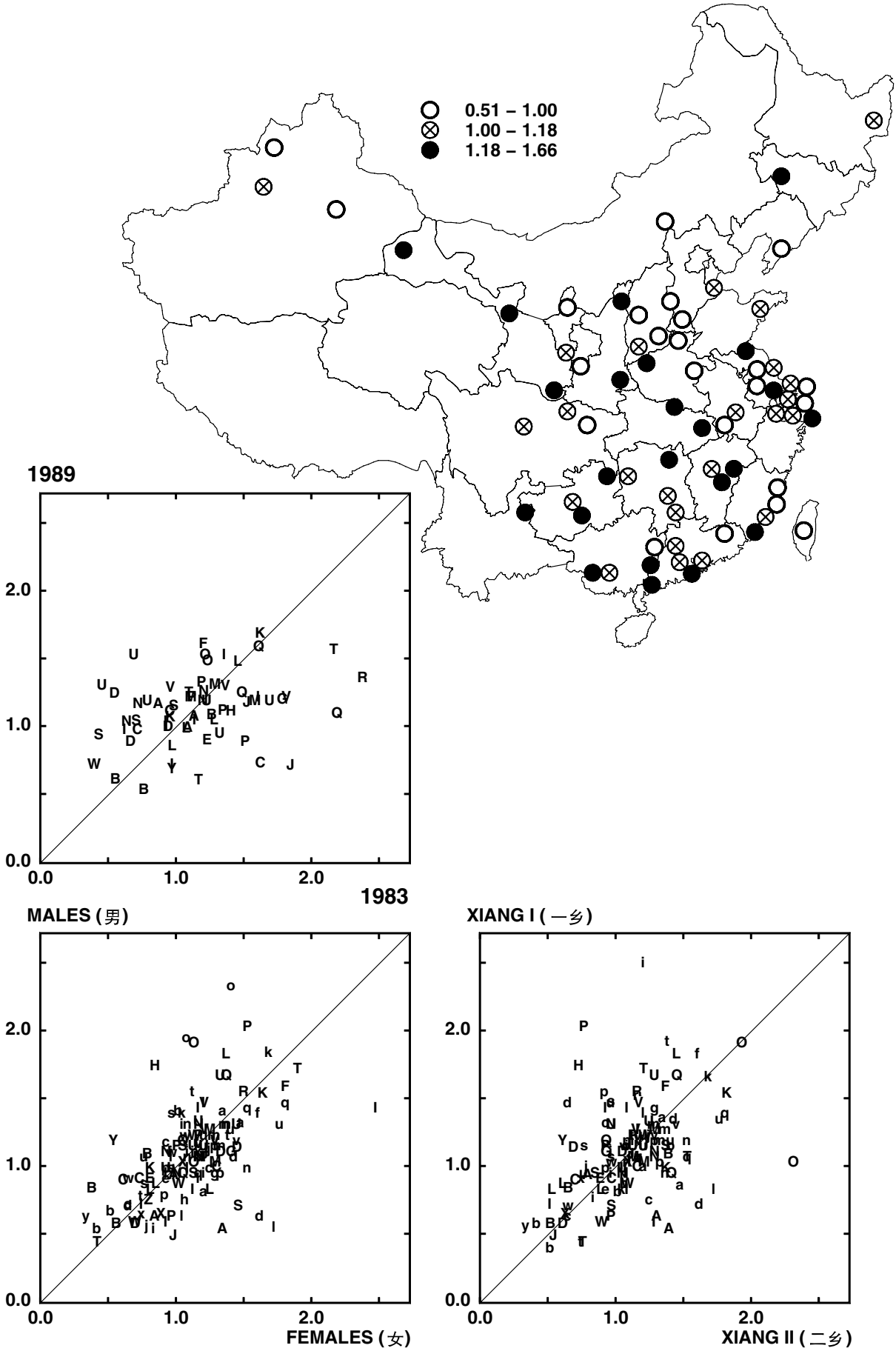
P025 VITC – plasma VITAMIN C (ascorbic acid) (mg/dL)



P025 VITC – 血浆：维生素 C (抗坏血酸) (毫克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	1.06	1.11	QA	1.04	1.10	AA	0.85	1.09	KC	1.16	0.92	ZA	0.59	0.73
CC	0.92	0.98	QB	1.54	1.58	AB	0.94	1.34	LA	1.62	1.28	ZB	0.81	0.75
CD	0.78	0.62	QC	1.16	1.28	AC	0.94	1.15	LB	0.84	1.20	ZC	0.48	0.83
DA	0.90	1.04	RA	1.34	1.32	BA	0.73	0.44	LC	0.72	0.94	ZD	1.13	1.03
DB	0.58	1.15	SA	1.24	1.00	BB	0.53	0.48	LD	0.66	1.26	ZE	0.35	0.65
DC	1.06	1.37	SB	0.82	1.21	BC	1.22	0.89	PA	0.78	0.94	ZF	1.06	0.61
FA	1.46	1.70	SC	0.88	0.94	EA	0.88	0.86	PC	1.38	1.22	ZG	0.69	0.63
GA	1.00	1.34	TA	1.28	1.16	HA	1.22	0.95	PD	1.02	1.16	ZH	0.52	0.72
JA	1.08	1.22	TC	1.45	1.63	IA	1.24	1.14	PE	1.16	1.22	ZI	0.85	0.55
JB	0.50	0.88	TD	0.58	0.57	IB	0.60	0.79	UA	1.12	1.20	ZJ	0.67	0.72
MB	1.26	1.30	VA	1.19	1.18	IC	0.92	0.98	UB	1.12	1.20	ZK	0.75	0.56
MC	1.10	1.28	VB	1.16	1.36	ID	0.94	1.10	UC	1.27	1.28	ZL	0.49	0.93
MD	1.08	1.24	VC	1.30	1.24	IE	1.00	0.94	UD	1.46	1.54	ZM	0.84	1.14
NA	1.16	1.12	WA	0.72	0.66	IF	1.00	1.02	UE	1.16	1.16	ZN	0.61	0.64
NB	1.18	1.14	WB	1.20	1.09	IG	1.16	1.84	UF	1.00	0.84	ZO	1.19	1.06
NC	0.98	1.04	WC	0.96	0.98	KB	1.66	1.65				ZP	0.60	1.11
ND	1.12	1.34	XA	0.62	0.81									
OA	1.90	1.10	XB	1.04	1.10									
OB	1.65	1.26	YA	0.88	0.43									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	1.08	1.13	1.04	1.10	0.73	0.79

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	1.06	0.29	1.11	0.28	63	6.6	†
Xiang (乡) I	vs	Xiang (乡) II	69	1.08	0.31	1.10	0.28	50	4.8	†
1983	vs	1989	65	1.16	0.43	1.10	0.26	33	2.8	*

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

34 *	M003	ALL15-34	25	M071	PNEUMONc	27	M100	SUICIDEc	-33 *	D023	Mn	-38 *	Q108	dSBP
26	M009	NONMEDb	37 *	M074	DIGESTIVc	35 *	M102	HOMICIDEc	-32 *	D038	WHTFLOUR	-36 *	Q109	dDBP
33 *	M010	NONMEDc	33 *	M075	PEPULCERc	26	M117	NEOTETANa	28	D040	STCHTUBER	-40 †	Q110	dMIDBP
36 *	M012	INFECTc	38 *	M079	CIRRHOSc	38 *	P024	FOLATE	-32 *	D067	GLUTAMINE	-28	Q139	dCIGCONSf
29	M016	PULMTBc	33 *	M081	TOTLIVRc	-25	P026	CERULO	25	D087	%MUFA	26	Q143	dTOBCONSf
30	M019	VIRALHEPb	30	M082	GALLBILc	25	P028	K	26	D097	%TOTn9	-29	Q158	dWHEAT
27	M022	ALLCAb	34 *	M085	GENITURfc	-25	R011	18:0	29	D146	%18:1	27	Q174	dFISH
-28	M027	OESOPHCAc	30	M086	RENALc	30	U002	K/cre	-26	Q064	dCOALNOW	-26	G001	LATITUDE
27	M053	NERVOUSc	26	M089	ALLSKINc	-24	U006	UREA/cre	25	Q093	dPEPULCER	-25	G004	ARIDITY
40 †	M055	MENINGITc	31	M099	SUICIDEb	32 *	D014	VITC	26	Q096	dMALARIA	30	G005	HEAT

- Analysis by standard colourimetric method on plasma samples preserved in trichloroacetic acid.
- No clear geographic pattern, but wide variation in mean values (0.51-1.66 mg/dL).
- Good correlations between xiangs (50%†) and between males and females (63%†).
- 1989 measurements are more reliable than 1983 measurements, resulting from greatly improved analytic methods (note differences in standard deviation: 0.43 mg/dL in 1983 vs. 0.26 mg/dL in 1989).
- Because of differences in methods, no inferences about trends from 1983 to 1989 can be drawn.
- Few correlations with other variables, and none of particular interest.

- 用标准比色法测定（血浆样品保存于三氯乙酸中）。
- 没有明显的地理分布模式，但是平均水平存在很大的差异（0.51-1.66 mg/dL）。
- 两乡之间和男性与女性之间具有很好的相关性（50%†和63%†）。
- 由于分析方法有很大的改进，1989年的测定结果比1983年的更可靠（注意标准差的差异：1983年0.43 mg/dL和1989年0.26 mg/dL）。
- 由于测定方法不同，无法推断该指标从1983年到1989年的变化趋势。
- 与极少数其它指标存在相关性，而且这些指标没有特别让人感兴趣的地方。

P003中文注释:

- 未直接测定低密度脂蛋白（LDL）胆固醇。用总胆固醇含量（P001: TOTCHOL）减去HDL胆固醇含量（P002: HDLCHOL）来计算LDL胆固醇含量，剩下的主要（但非全部）是LDL胆固醇。
- 从1983年到1989年，非HDL胆固醇平均水平升高了19％（从84 mg/dL [2.2 mmol/L]增加到100 mg/dL [2.6 mmol/L]），这种主要变化很可能反映了膳食的变化（见 P001: TOTCHOL的注解）。
- 沿海各省的平均水平高于内地各省，这与经济发达地区丰富的膳食相一致。
- 一般来说，该值与肉类和鱼类的摄入呈正相关，如：脂肪摄入（D002: TOTFAT, D005: %FATKCAL, D084: SATFA），动物食品摄入（D007: %ANPRKCAL, D029: ANIMFOOD, D034: ANIMPROT, D036: %ANIMPROT），红肉摄入（D050: REDMEAT, Q175:dMEAT）以及膳食胆固醇摄入（D085: CHOL）；该值与植物性食物的摄入呈负相关，如：可溶性碳水化合物的摄入（D004: SOLCARB）, 维生素C（D014: VITC），植物性食物的摄入（D028: PLNTFOOD, D031: %PLNTFOOD）以及植物蛋白的摄入（D033: PLNTPROT, D035: %PLNTPROT）。
- LDL粒子的主要表面蛋白是阿朴脂蛋白B，两者具有很强的相关性（75%†, P005:APOB），证实了两者测定结果的可靠性。

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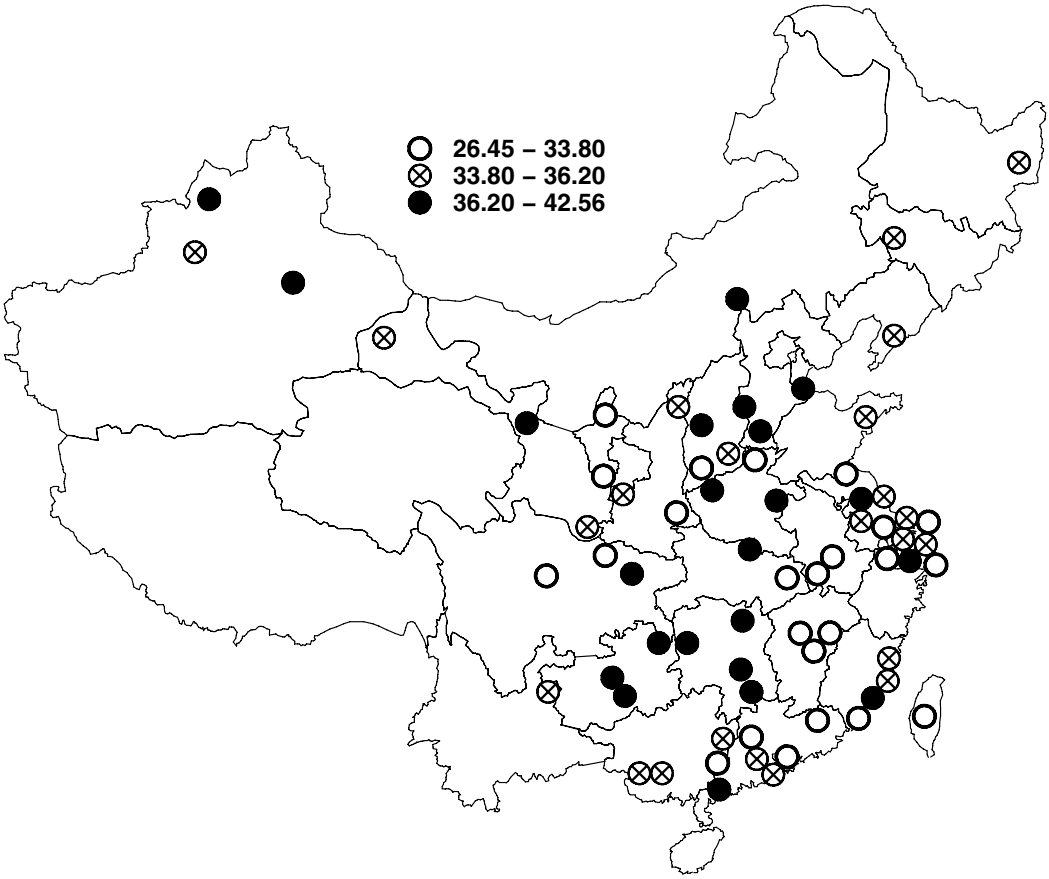
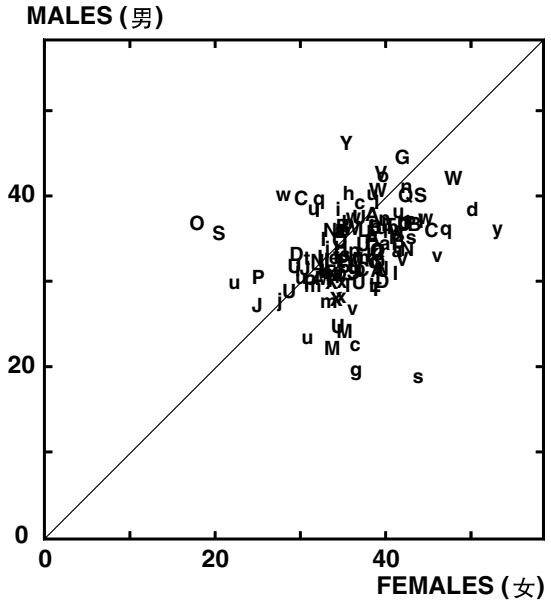
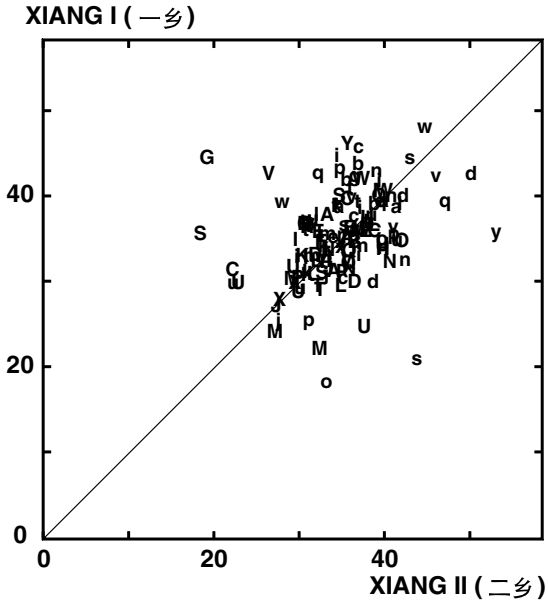
P026 CERULO – plasma CERULOPLASMIN (mg/dL)







P026 CERULO – 血浆：铜蓝蛋白 (毫克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	26.32	36.67	QA	39.27	37.07	AA	32.21	39.30	KC	31.25	36.30	ZA	30.52	30.14
CC	37.23	32.42	QB	33.54	42.86	AB	34.99	36.37	LA	31.77	33.18	ZB	29.67	30.70
CD	36.92	41.01	QC	34.31	39.10	AC	35.10	39.71	LB	37.32	39.42	ZC	29.52	34.17
DA	36.90	45.99	RA	33.27	34.82	BA	33.44	39.99	LC	31.78	40.13	ZD	30.13	31.93
DB	32.10	33.94	SA	26.56	31.94	BB	35.17	38.35	LD	36.46	34.58	ZE	28.07	32.49
DC	32.83	40.73	SB	31.42	35.54	BC	35.70	38.60	PA	32.31	35.51	ZF	30.53	26.73
FA	33.23	36.18	SC	36.92	43.37	EA	33.67	34.27	PC	32.69	37.99	ZG	29.92	33.46
GA	31.41	39.04	TA	30.45	33.06	HA	36.41	35.10	PD	33.23	38.66	ZH	30.33	33.96
JA	26.78	26.11	TC	30.36	37.76	IA	30.58	34.72	PE	29.77	27.97	ZI	31.73	35.58
JB	32.04	31.72	TD	33.40	38.17	IB	37.07	39.24	UA	30.12	25.68	ZJ	31.39	31.62
MB	26.80	35.31	VA	32.16	43.83	IC	30.76	40.21	UB	28.95	29.29	ZK	25.90	32.18
MC	25.22	34.14	VB	33.67	38.31	ID	33.69	37.53	UC	30.77	37.84	ZL	31.59	32.06
MD	29.31	31.92	VC	34.11	37.61	IE	31.87	33.04	UD	36.63	37.82	ZM	32.35	31.90
NA	35.99	36.54	WA	39.75	33.26	IF	32.62	37.87	UE	37.32	34.13	ZN	29.61	32.71
NB	36.05	37.10	WB	36.27	35.81	IG	31.44	30.95	UF	25.99	33.73	ZO	26.78	29.14
NC	33.14	40.67	WC	39.10	46.03	KB	30.45	33.15				ZP	31.86	30.95
ND	33.27	40.06	XA	29.25	34.12									
OA	37.96	36.96	XB	27.35	34.36									
OB	33.24	25.35	YA	40.49	44.10									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	33.11	36.92	32.95	35.83	29.99	31.86

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	33.04	3.50	36.43	4.31	46	4.3	†
Xiang (乡) I	vs	Xiang (乡) II	69	34.63	4.02	34.84	3.96	41	3.7	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-26	M025 NASOPCAc	-54 †	P024 FOLATE	34 *	D038 WHTFLOUR	31	Q108 dSBP	-26	Q187 dBLEED
-24	M029 COLRECCAc	-25	P025 VITC	-42 †	D043 GREENVEG	28	Q109 dDBP	-25	Q205 eHRSWORK
-35 *	M056 EPILEPSYb	30	P029 INORG-P	-28	D044 SALTVEG	32 *	Q110 dMIDBP	-24	Q234 eWORMS
-24	M081 TOTLIVRc	43 †	P035 TRANSFE	28	D067 GLUTAMINE	25	Q131 dSMOKNOWf	35 *	Q247 fBMIadj
-34 *	M100 SUICIDEc	25	P036 GLUCOSE	24	D086 LYS/ARG	24	Q135 dSMOK<25f	28	G001 LATITUDE
24	P003 NONHDL	29	R015 16:1n7	28	D136 %14:0	28	Q139 dCIGCONSf	26	G004 ARIDITY
-31 *	P009 B-CAROT	-27	U004 Ca/cre	27	Q064 dCOALNOW	-35 *	Q157 dRICE	-29	G005 HEAT
24	P012 RETINOL	29	D006 %PROTKCAL	26	Q069 dUNVENT	33 *	Q158 dWHEAT		
49 †	P013 RBP	-36 *	D018 Ca	27	Q091 dWEIGHT	-31 *	Q172 dGRNVEG		
39 †	P014 A-TOCOPH	29	D026 SeCARRY	30	Q092 dBMI	27	Q177 dMILK		
-26	P017 LUTEIN	-35 *	D037 RICE	33 *	Q102 dPHLEGMw	33 *	Q184 dBLACKTEA		

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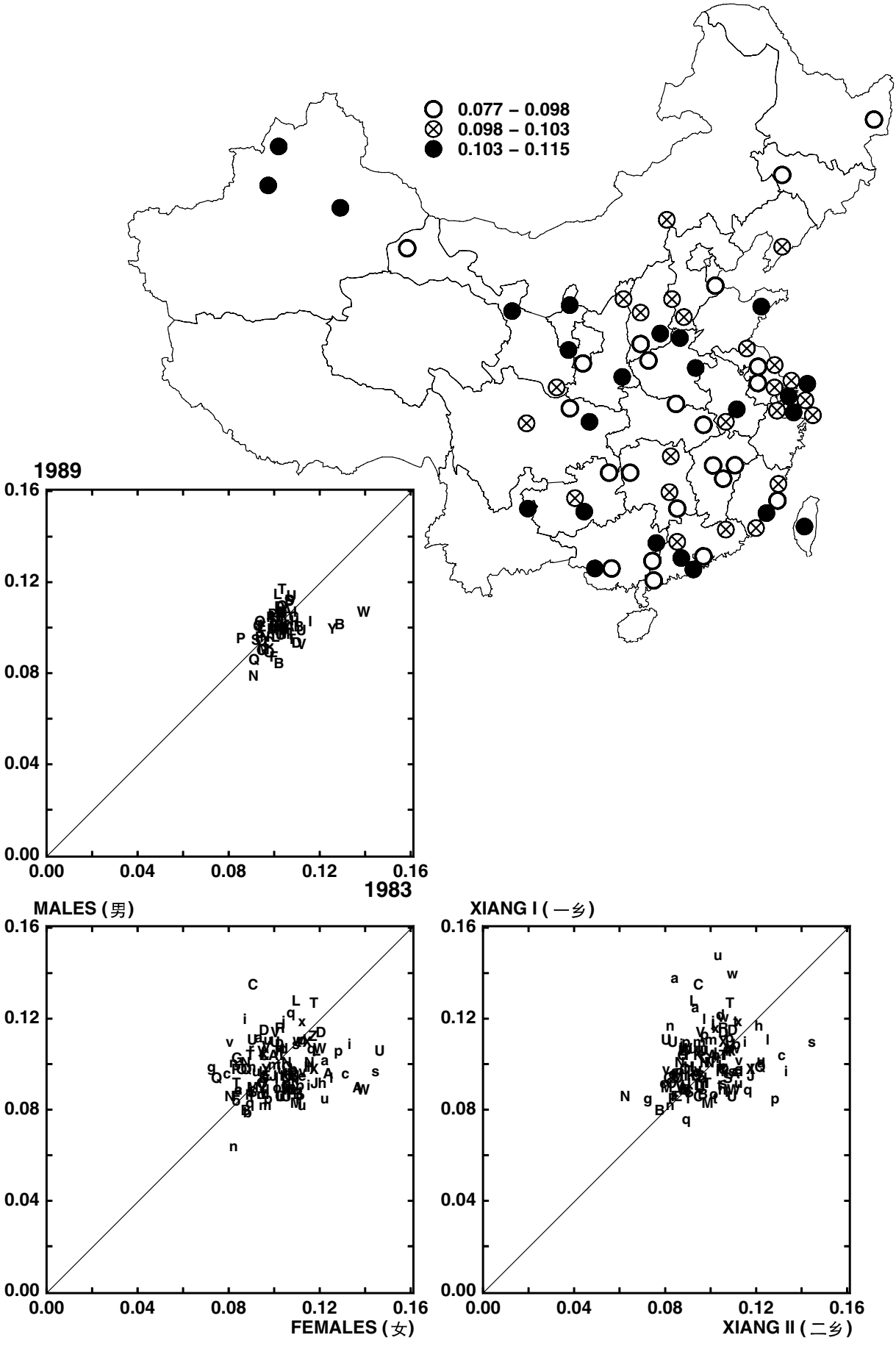
- Analysis of complex with antibody was by nephelometry using N Transport Protein Kit, Behring Diagnostics, Inc.
- No clear geographic pattern.
- Moderate correlation between xiangs (41%†) and between males and females (46%†).
- Few correlations with other variables, and none of particular interest.
- Outlying values may well be largely uninformative.

- 用N转运蛋白试剂盒（Behring Diagnostics公司）通过悬液测定分析铜蓝蛋白-受体复合物。
- 无明显的地理分布模式。
- 两乡之间以及男性与女性之间呈中度相关（41%†和46%†）。
- 与极少数其它指标存在相关性，而且这些指标没有特别让人感兴趣的地方。
- 偏离值在很大程度上不能提供有用信息。

P004中文注释:

- 采用和特异抗体（购自免疫试剂公司）结合的比浊法（分析仪上作为“用户定义的分析法”）进行测定。所用仪器为 Beckman Synchron CX4/5CE。
- 1997年，再次对1983年和1989年的样品进行同时测定。
- 所测定的1983年的样品是标准混合样品，但1989年的所有样品均是个体样品。
- 阿朴脂蛋白A1主要存在于HDL颗粒表面。
- 从1983年到1989年，阿朴脂蛋白A1平均水平增加了29％（从98升高到126 mg/dL），该增加量比预计的要大（根据HDL胆固醇的8%增加量进行预测）。阿朴脂蛋白A1的分析方法是可靠的，但是1983年样品在保存期间的降解可能会影响阿朴脂蛋白A1的含量。
- 与HDL胆固醇（62%†, P002: HDLCHOL）具有很强的相关性，证实了两者测定结果的可靠性。
- 1989年测定值与1993年可信性调查的测量值之间的高度相关性进一步证实了分析方法的正确性（68%）。
- 英国男性的代表值为113 mg/dL（Parish et al. BMJ 311:471-477, 1995），而1989年调查的男性平均水平为127 mg/dL。

P027 Cu – plasma COPPER (mg/dL)



P027 Cu – 血浆：铜 (毫克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	0.094	0.090	QA	0.101	0.101	AA	0.087	0.110	KC	0.092	0.106	ZA	0.105	0.115
CC	0.089	0.116	QB	0.087	0.082	AB	0.101	0.111	LA	0.091	0.106	ZB	0.103	0.111
CD	0.113	0.085	QC	0.109	0.106	AC	0.102	0.108	LB	0.109	0.117	ZC	0.112	0.116
DA	0.109	0.112	RA	0.109	0.096	BA	0.091	0.109	LC	0.095	0.108	ZD	0.102	0.116
DB	0.111	0.104	SA	0.100	0.102	BB	0.088	0.109	LD	0.084	0.104	ZE	0.107	0.102
DC	0.089	0.094	SB	0.088	0.098	BC	0.078	0.087	PA	0.100	0.106	ZF	0.116	0.139
FA	0.084	0.087	SC	0.094	0.126	EA	0.093	0.104	PC	0.106	0.102	ZG	0.105	0.124
GA	0.099	0.078	TA	0.117	0.114	HA	0.094	0.118	PD	0.090	0.099	ZH	0.117	0.109
JA	0.105	0.102	TC	0.104	0.097	IA	0.107	0.097	PE	0.083	0.104	ZI	0.119	0.125
JB	0.090	0.109	TD	0.094	0.093	IB	0.088	0.102	UA	0.097	0.101	ZJ	0.123	0.120
MB	0.089	0.102	VA	0.104	0.106	IC	0.095	0.096	UB	0.091	0.098	ZK	0.116	0.124
MC	0.084	0.093	VB	0.088	0.094	ID	0.102	0.099	UC	0.095	0.111	ZL	0.106	0.109
MD	0.090	0.105	VC	0.107	0.088	IE	0.097	0.114	UD	0.094	0.100	ZM	0.110	0.117
NA	0.093	0.096	WA	0.087	0.123	IF	0.091	0.112	UE	0.100	0.124	ZN	0.113	0.111
NB	0.073	0.081	WB	0.097	0.112	IG	0.095	0.108	UF	0.094	0.101	ZO	0.109	0.109
NC	0.098	0.098	WC	0.098	0.108	KB	0.098	0.101				ZP	0.109	0.122
ND	0.099	0.099	XA	0.106	0.108									
OA	0.092	0.093	XB	0.106	0.115									
OB	0.086	0.089	YA	0.101	0.095									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	0.097	0.100	0.094	0.106	0.111	0.117

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	0.096	0.009	0.102	0.010	20	1.7	
Xiang (乡) I	vs	Xiang (乡) II	69	0.099	0.009	0.099	0.010	22	1.9	
1983	vs	1989	65	0.103	0.009	0.099	0.007	32	2.7	*

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-25	M034 LARYNXCAc	-25	P019 A-CRYPT	25	P034 TIBC	-24	D022 Mg	25	D086 LYS/ARG
-27	M089 ALLSKINc	51	† P031 Zn	27	D006 %PROTKCAL				

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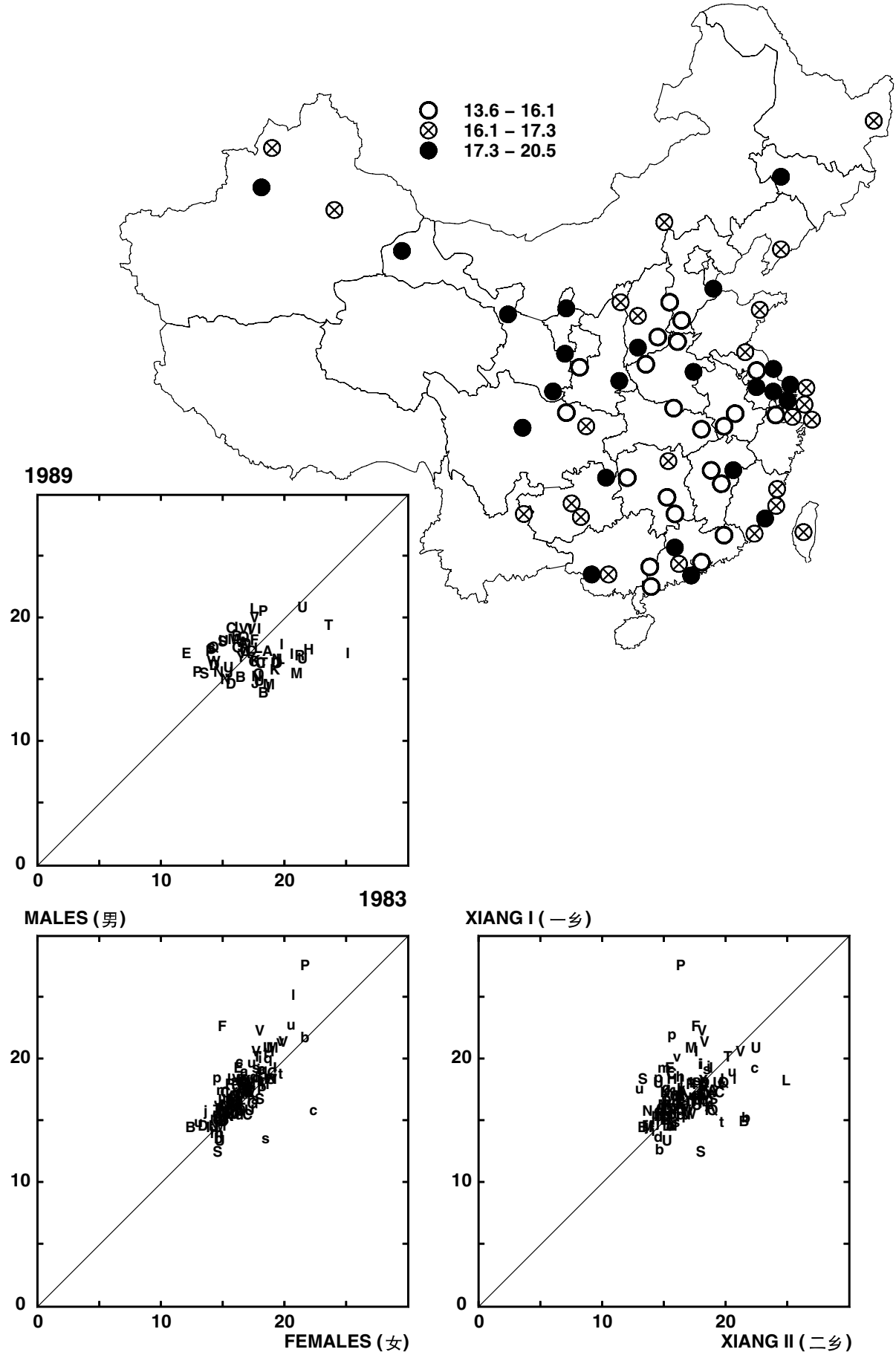
- Analysis by atomic absorption spectrometry.
- Small range of average values (0.077-0.115 mg/dL) because plasma copper levels are very tightly controlled, with relatively little variation possible biologically.
- 1989 values are more reliable than 1983 values, with outliers in 1983 most likely due to measurement errors.
- Because range is so small, correlations between xiangs (22%, not significant) and between males and females (20%, not significant) are predictably poor.
- Correlation with plasma zinc (51%† P031:Zn) reinforces reliability of measurements, as these elements are known to vary together.

- 用原子吸收法测定。
- 由于血浆铜含量被严格控制在一定水平，其生物学可能变异也很小，因此铜的平均含量在很小的范围内（0.077-0.115 mg/dL）。
- 1989年的测定值比1983年的更可信，后者的部分偏差值可能是由测定错误造成的。
- 由于铜含量范围很小，可以预计，两乡之间以及男性和女性之间的相关性很弱（22%和20%，无显著性）。
- 与血浆锌具有相关性（51%† P031:Zn），这进一步证明了分析测定的可靠性，因为这些元素一般是同时变化的。

P005中文注释:

- 采用和特异抗体（购自免疫试剂公司）结合的比浊法（分析仪上作为“用户定义的分析法”）进行测定。所用仪器为 Beckman Synchron CX4/5CE。
- 1997年，再次对1983年和1989年的样品进行同时测定。
- 所测定的1983年的样品是标准混合样品，但1989年的所有样品均是个体样品。
- 沿海各省阿朴脂蛋白B水平高于内地，而台湾又高于沿海各省，这与经济发达地区丰富的膳食相一致。
- 阿朴脂蛋白B水平从1983年到1989年未增加，根据总胆固醇的改变（测定结果是可靠的）来看，这在意料之外。阿朴脂蛋白B的测定方法可靠。
- 与非HDL胆固醇具有很强的相关性（75%†, P003: NONHDL），证实了两者测定结果的可靠性。
- 1989年测定值与1993年测量值之间的高度相关性进一步证实了分析方法的正确性（87%†）。
- 总的来说，阿朴脂蛋白B与肉类和鱼类的摄入量呈正相关，食物种类与非HDL胆固醇中所列出的（P003:NONHDL）相同。
- 英国男性的代表值为110 mg/dL（Parish et al. BMJ 311:471-477, 1995），而1989年调查的男性平均水平为60 mg/dL。

P028 K – plasma POTASSIUM (mg/dL)



P028 K – 血浆：钾 (毫克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	17.0	20.6	QA	17.1	17.3	AA	16.6	17.2	KC	15.6	15.3	ZA	15.3	15.8
CC	15.3	16.6	QB	18.7	17.5	AB	18.0	17.4	LA	16.8	15.8	ZB	14.6	14.1
CD	18.1	15.7	QC	17.5	17.0	AC	17.2	16.4	LB	21.4	19.4	ZC	19.1	18.0
DA	18.0	17.1	RA	17.4	15.8	BA	13.7	13.5	LC	17.0	17.3	ZD	15.1	15.4
DB	14.7	13.9	SA	17.6	17.8	BB	14.9	14.8	LD	17.5	16.8	ZE	15.5	14.9
DC	15.7	15.9	SB	15.0	15.2	BC	18.0	18.3	PA			ZF	14.1	14.1
FA	19.9	15.8	SC	15.6	18.6	EA	17.1	16.3	PC	21.8	18.6	ZG	15.1	13.9
GA	16.0	16.2	TA	20.0	18.1	HA	16.8	17.3	PD	17.6	16.3	ZH	51.5	41.2
JA	14.8	13.9	TC	17.0	17.1	IA	17.2	16.3	PE	15.3	15.2	ZI	14.9	14.8
JB	15.9	14.5	TD	16.1	15.8	IB	14.0	14.0	UA	21.5	19.6	ZJ	16.3	15.6
MB	15.4	14.9	VA	20.0	17.6	IC	18.9	18.6	UB	14.1	14.9	ZK	15.6	14.8
MC	18.8	17.0	VB	20.7	18.6	ID	18.9	18.8	UC	18.5	17.0	ZL	15.0	14.8
MD	13.9	14.6	VC	19.6	17.9	IE	16.6	16.8	UD	15.4	16.6	ZM	18.7	15.4
NA	14.9	14.9	WA	16.0	16.1	IF	17.4	17.5	UE	16.8	15.9	ZN	15.4	14.6
NB	15.4	15.1	WB	17.6	17.9	IG	18.9	18.6	UF	16.1	15.1	ZO	15.9	13.6
NC	14.5	14.8	WC	16.9	16.4	KB	15.9	16.3				ZP	14.6	14.4
ND	16.4	16.1	XA	17.8	16.8									
OA	16.2	15.8	XB	18.0	16.6									
OB	15.2	15.0	YA	16.6	16.3									

Mean	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
平均值	16.9	16.4	17.2	16.7	17.9	16.6

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	68	17.0	1.9	16.5	1.5	77	9.8	†
Xiang (乡) I	vs	Xiang (乡) II	68	16.7	1.9	16.8	1.9	39	3.4	*
1983	vs	1989	64	17.3	2.5	16.7	1.6	10	0.8	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

31	M018 OTHERTBc	-27	M092 ILL-DEFc	25	P025 VITC	24	U002 K/cre	-37 *	Q227 e%DIARRH
-30	M024 MOUTHCAc	27	M116 RDSa	28	P029 INORG-P	-27	U004 Ca/cre	-24	Q231 e%FEVER
39 *	M055 MENINGITc	28	P012 RETINOL	26	P032 Fe	-26	D019 Fe	26	Q243 fWTadj
-27	M057 EPILEPSYc	24	P013 RBP	26	P034 TIBC	-28	Q153 dWINEday		
-29	M091 ILL-DEFb	26	P023 PHYTOENE	-24	P038 PEPSIN	28	Q195 eMOTHERS		

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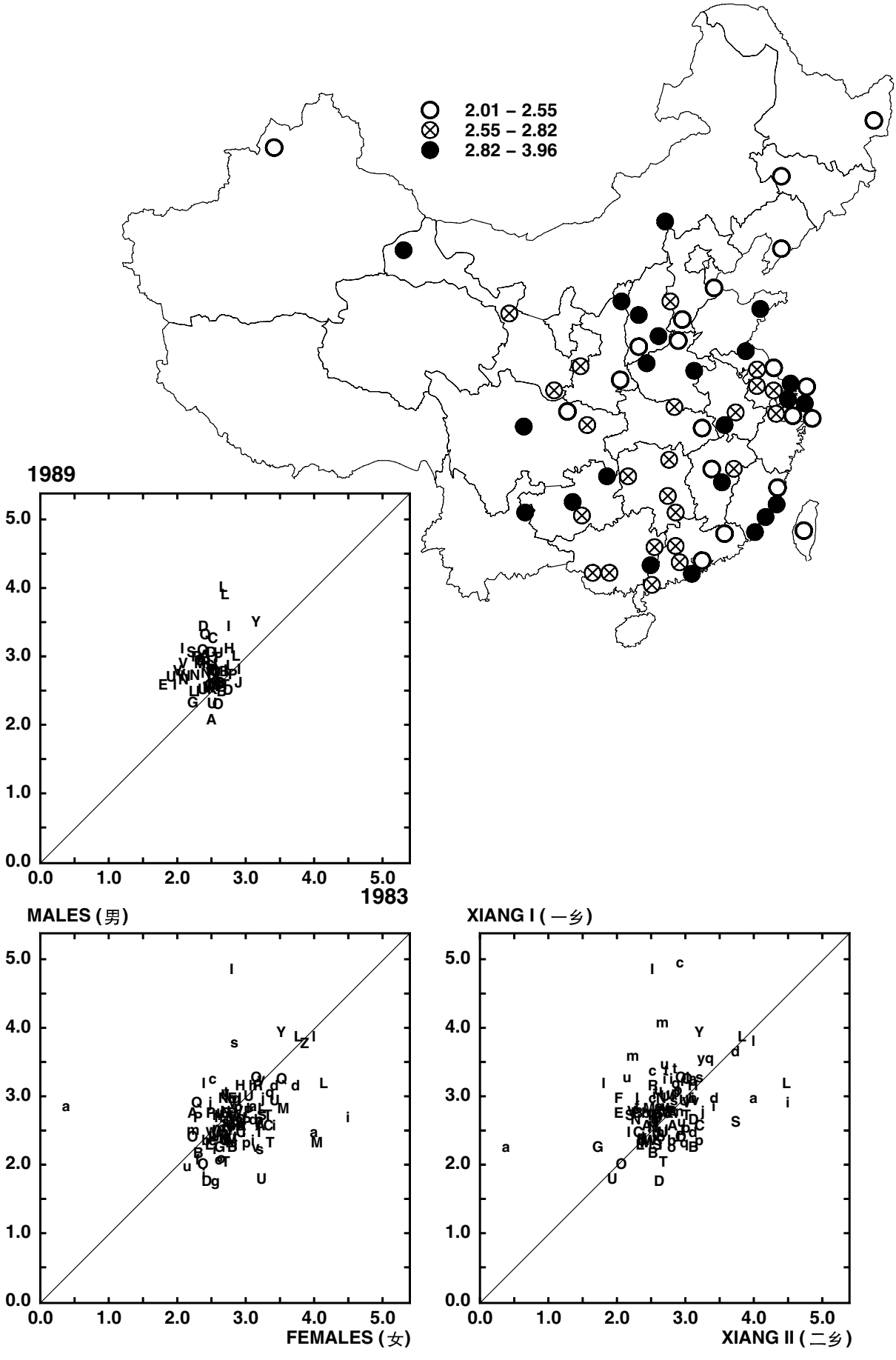
- Analysis by measurement of potential difference between K-selective electrode and reference electrode. Analyser: IL Monarch Chemistry System.
- Considerable variability (range of average values 13.6-20.5 mg/dL) in an element that should be tightly controlled in the blood.
- Strong correlation between males and females (77%†), but only moderate correlation between xiangs (39%*), with no obvious explanation.
- 1989 values more reliable than 1983 values as indicated by the reduction in the standard deviation (2.5 mg/dL in 1983 vs. 1.6 mg/dL in 1989). This means that most of the apparent variation in the 1983 values (and, perhaps, some of the apparent variation in the 1989 values) is uninformative.
- Few correlations with other variables, and none of particular interest.

- 通过分析钾选择电极和参考电极的电势差来测定血浆钾含量。仪器：IL Monarch Chemistry System。
- 变化范围很大（13.6-20.5 mg/dL），而血中钾元素含量应该被严格控制在一定范围之内。
- 男性与女性之间存在强相关（77%†），但是两乡之间仅表现为中度相关性（39%*），尚无法解释。
- 1989年测定值的标准差（1.6 mg/dL）低于1983年（2.5 mg/dL），表明前者比后者更可信。这意味着大部分1983年测定值的明显变化不能提供有用信息（部分1989年的测定值可能也是这样）。
- 与极少数其它指标存在相关性，而且这些指标没有特别让人感兴趣的地方。

P006中文注释:

- 根据白蛋白与溴甲酚紫结合形成显色物质来分析白蛋白。分析仪器：Beckman Synchron CX4/5CE。
- 总的来说，北部各省的白蛋白值较高，而南部各省的白蛋白值较低。
- 1983 年调查中的样品分析采用混合样品，但1989年的所有样品均单独测定，并对所有值进行平均计算白蛋白均值。
- 异常值(嘉善县(K)的一乡值高；温江县(S)的二乡值低)可能是由于测量问题。白蛋白水平在生物学上是被紧紧地控制的，象这样远离平均的值是不可信的。尽管加以仔细的质量控制，测定白蛋白的实验室方法仍会产生这样的异常值。
- 除异常值外，1989年的测量结果似乎是可靠的，在男性和女性(82%†)及两乡之间(77%†)存在良好的相关。
- 和1983年的测量结果的相关性不好，表明1983年的结果是不可靠的。
- 有一些地理相关关系出现，但没有一个是特别强的(虽然一些在统计上是显著的)。对决定血浆白蛋白水平的因素知之甚微。
- 英国男性的代表值为 38 g/L (Parish et al. BMJ 311:471-477, 1995)，而1989年调查的男性平均值为42 g/L。

P029 INORG-P – plasma 1989 INORGANIC PHOSPHORUS (mg/dL)



P029 INORG-P – 血浆：1989年 无机磷 (毫克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	2.35	2.71	QA	3.10	3.42	AA	2.65	3.14	KC	2.44	2.72	ZA	3.30	3.52
CC	2.51	3.90	QB	3.07	2.99	AB	2.46	3.45	LA	2.76	3.13	ZB	3.52	3.49
CD	2.85	2.91	QC	2.85	2.62	AC	2.74	1.29	LB	3.81	3.87	ZC	3.55	3.82
DA	3.10	3.65	RA	2.81	3.07	BA	2.49	2.55	LC	2.28	2.59	ZD	3.34	3.77
DB	2.15	2.76	SA	3.14	2.85	BB	2.65	2.79	LD	3.80	4.12	ZE	3.63	3.84
DC	2.85	3.16	SB	2.40	2.69	BC	2.31	2.54	PA	2.62	2.74	ZF	3.29	3.62
FA	2.46	2.54	SC	2.42	3.21	EA	2.35	2.69	PC	2.48	2.74	ZG	4.07	3.97
GA	1.95	2.57	TA	2.32	2.74	HA	3.10	3.01	PD	2.57	2.92	ZH	5.30	5.66
JA	2.60	2.51	TC	2.83	3.02	IA	3.66	3.10	PE	2.76	2.96	ZI	3.73	3.92
JB	2.68	2.99	TD	2.31	3.10	IB	2.51	2.99	UA	2.82	2.82	ZJ	3.42	3.52
MB	2.34	3.34	VA	2.46	3.01	IC	2.60	3.01	UB	2.32	2.60	ZK	3.72	3.68
MC	2.61	2.88	VB	2.92	2.74	ID	2.29	2.76	UC	2.93	3.05	ZL	3.60	3.70
MD	2.48	2.51	VC	2.48	2.87	IE	2.47	2.38	UD	2.54	2.76	ZM	3.82	3.90
NA	2.43	2.76	WA	2.37	2.60	IF	2.43	3.67	UE	2.71	2.71	ZN	4.20	4.14
NB	2.50	2.82	WB			IG	2.54	2.94	UF	1.83	2.68	ZO	3.45	3.43
NC	2.69	2.63	WC			KB	2.34	2.59				ZP	3.50	3.63
ND	2.77	2.63	XA											
OA	2.63	2.50	XB											
OB	2.00	2.49	YA	3.53	3.36									

Mean	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
平均值	2.62	2.90	2.65	2.88	3.72	3.85

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	65	2.63	0.39	2.89	0.42	47	4.3	†
Xiang (乡) I	vs	Xiang (乡) II	56	2.77	0.36	2.70	0.38	42	3.4	*
1983	vs	1989	65	2.45	0.26	2.76	0.34	20	1.7	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-26	M092 ILL-DEFc	28	P021 NEURSPOR	-33 *	P039 THYROXINE	-28	U007 URIC/cre	30	Q195 eMOTHERS
29	P013 RBP	30	P026 CERULO	44 †	P041 TESTOSTm	35 *	U033 INHIBNOC		
30	P014 A-TOCOPH	28	P028 K	-26	R002 RIBOFDEF	34 *	Q007 cHHSIZE		
-27	P017 LUTEIN	36 *	P036 GLUCOSE	38 *	R015 16:1n7	35 *	Q163 dSWEETPOT		

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methods: pages 10-11

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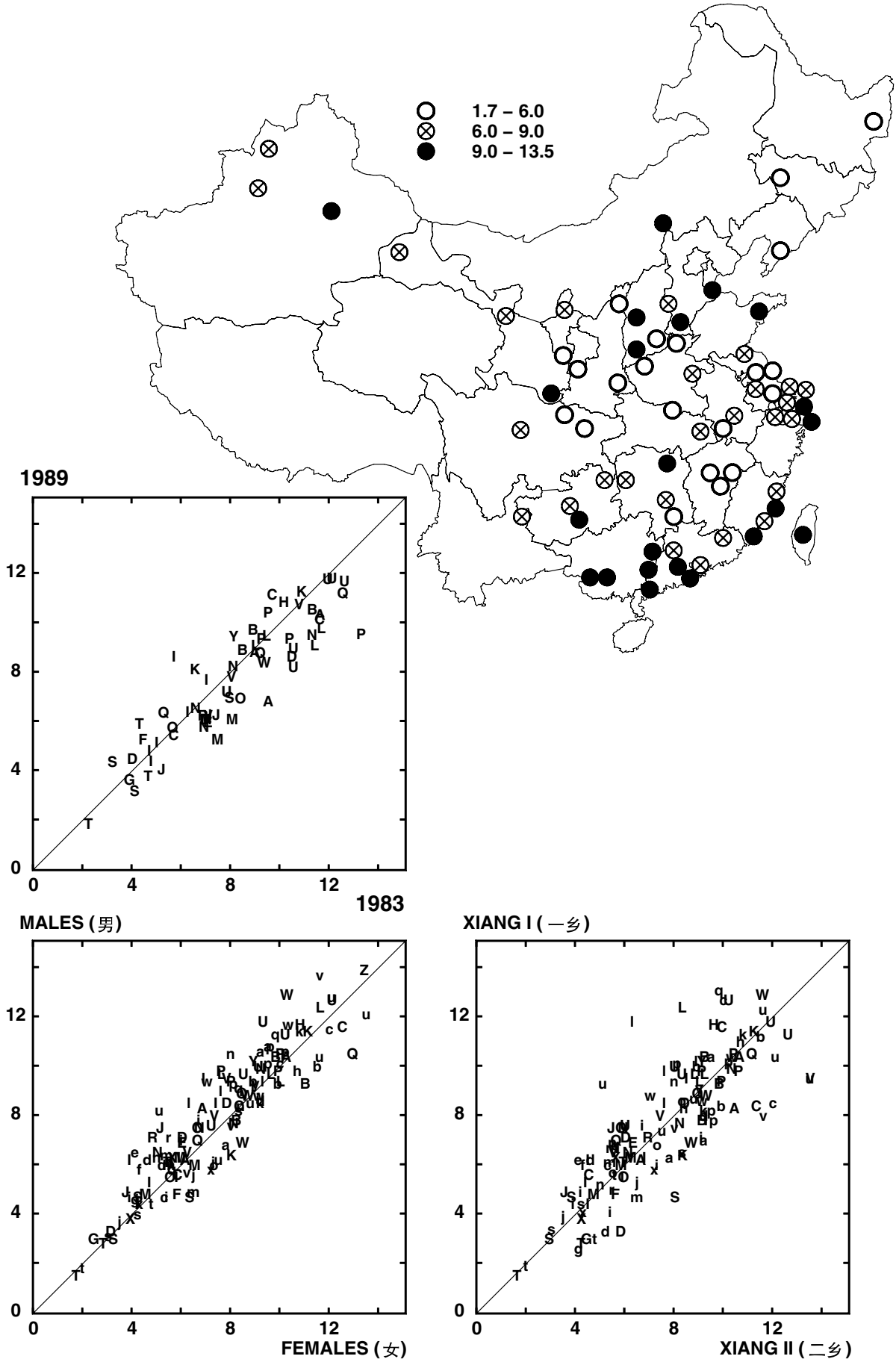
- Analysis by timed-endpoint method. Inorganic phosphate reacts with ammonium molybdate in acidic solution to form coloured phosphomolybdate complex. Analyser: Beckman Synchron CX4/5CE.
- No clear geographic pattern.
- Moderate correlations between xiangs (42%*) and between males and females (47%†).
- Poor correlation with 1983 values (20%, not significant), suggesting unreliability of one or both sets of measurements. No inferences about trends over time can be drawn from these measurements.
- Few correlations with other variables, and none of particular interest.

- 用定时终点方法测定。无机磷与钼酸铵在酸性溶液中反应，生成显色的磷钼酸盐复合物。仪器：Beckman Synchron CX4/5CE。
- 无明显的地理分布模式。
- 两乡之间以及男性与女性之间呈中度相关（42%*和47%†）。
- 与1983年的测定值呈弱相关性（20%，无显著性），表明其中之一或者两次测定缺乏可信性。从这些结果中无法推测无机磷的时间变化趋势。
- 与极少数其它指标存在相关性，而且这些指标没有特别让人感兴趣的地方。

P009中文注释:

- 分析方法：HPLC（Khachik et al., Methods in Enzymology 213（A）: 205-219, 1992）。
- 从1983年到1989年，β 胡萝卜素平均含量的明显升高（从 10.4增加到26.1μg/dL）是由于采用了不同的测定方法。因此从这次比较中，无法得出变化趋势。1989年的测定值在绝对意义上更可信。
- 尽管1983年的测定值远远低于1989年的测定值，但两组数据存在很好的相关性，因此1983年和1989年的相对值可能是可信的。
- 与绿叶蔬菜摄入量（47%†, D043）、血浆 γ 胡萝卜素水平（79%†, P010: G-CAROT）、红细胞多不饱和脂肪酸含量（51%†, R007: PUFA）以及单饱和脂肪酸含量（46%†, R014: 24:0）呈很强的正相关；但与血浆中 γ 维生素E（-31%, P015: G-TOCOPH）呈负相关。
- 在一项独立的研究1989年数据可靠性的实验中，1993年，对13个县的所有个体进行重新调查取样。同时对1989年和1993年的样品进行测定。各县1989年和1993年的平均值列于上表。

P030 Se – plasma SELENIUM (μg/dL)



P030 Se – 血浆：硒 (微克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	9.8	10.2	QA	8.8	8.4	AA	10.4	9.9	KC	7.3	8.6	ZA	14.6	13.6
CC	5.0	5.6	QB	6.2	6.1	AB	6.3	7.0	LA	9.1	9.4	ZB	13.6	12.5
CD	10.6	11.3	QC	10.7	11.4	AC	9.3	8.0	LB	9.4	8.4	ZC	12.9	12.1
DA	8.4	8.5	RA	6.9	5.2	BA	9.5	11.3	LC	9.2	8.6	ZD	11.5	12.3
DB	6.5	5.3	SA	6.3	7.3	BB	8.4	9.1	LD	10.3	9.0	ZE	13.9	12.7
DC	4.5	4.2	SB	4.2	4.2	BC	9.7	9.4	PA	9.4	9.0	ZF	13.6	14.3
FA	5.1	5.1	SC	2.9	3.1	EA	6.5	5.1	PC	10.1	8.6	ZG	14.3	14.2
GA	3.6	3.3	TA	3.4	3.8	HA	10.6	10.8	PD	10.4	10.1	ZH	12.0	15.8
JA	6.4	5.8	TC	5.9	5.5	IA	5.6	6.6	PE	9.6	8.8	ZI	14.1	13.6
JB	4.1	3.6	TD	1.5	1.9	IB	4.3	4.1	UA	8.9	7.1	ZJ	14.3	13.6
MB	4.7	5.5	VA	5.9	6.2	IC	8.0	7.1	UB	8.9	8.7	ZK	14.1	13.1
MC	6.2	5.7	VB	7.6	7.7	ID	5.3	4.7	UC	11.8	11.4	ZL	15.3	12.0
MD	5.8	6.0	VC	11.4	9.7	IE	8.9	8.0	UD	11.4	11.9	ZM	13.2	13.3
NA	6.2	5.0	WA	7.7	8.8	IF	6.5	6.0	UE	11.9	11.2	ZN	13.6	12.7
NB	6.6	6.1	WB	8.9	7.8	IG	4.8	4.4	UF	6.7	7.3	ZO	14.1	13.6
NC	7.8	8.3	WC	12.1	10.3	KB	11.2	11.0				ZP	14.4	15.2
ND	10.0	8.6	XA	5.8	6.4									
OA	5.6	5.5	XB	3.9	4.1									
OB	6.6	7.0	YA	9.6	8.9									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	6.6†	6.5*	8.7†	8.4*	13.7	13.4

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	7.6	2.5	7.3	2.4	95	24.3	†
Xiang (乡) I	vs	Xiang (乡) II	69	7.4	2.5	7.5	2.5	85	13.3	†
1983	vs	1989	65	8.1	2.7	7.5	2.4	90	16.3	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

25 M002 ALL5-14	50 † P005 APOB	-25 D008 %PLPRKCAL	44 † D050 REDMEAT	36 * Q051 c%FLUSHWC
-41 † M005 ALL35-69	-29 P011 Z-CAROT	-48 † D009 %CARBKCAL	47 † D052 FISH	25 Q057 dCOALKID
-34 * M006 ALL70-79	33 * P013 RBP	32 * D010 RETINOL	-33 * D057 ADDEDSALT	-27 Q096 dMALARIA
-41 † M008 MEDICALc	-31 * P017 LUTEIN	-25 D011 TOTCAROT	32 * D072 LYSINE	-38 * Q112 dFVCadj
-25 M017 OTHERTBb	38 * P041 TESTOSTm	-31 D014 VITC	31 * D082 MUFA	31 Q113 dMMEFadj
26 M035 LUNGCAmc	-27 P047 COTIN>20m	-27 D018 Ca	33 * D084 SATFA	-32 * Q132 dSMOKAGEm
28 M048 BLOODb	-30 R004 MUFA	-29 D020 Cu	45 † D085 CHOL	-27 Q133 dSMOKAGEf
25 M051 MENTALc	24 R013 22:0	-28 D021 K	39 † D086 LYS/ARG	24 Q138 dCIGCONSm
-40 † M056 EPILEPSYb	40 † R014 24:0	-30 D022 Mg	25 D087 %MUFA	24 Q151 dBEERday
-27 M057 EPILEPSYc	-26 R017 20:1n9	-26 D024 TOTNa	-31 D088 %PUFA	33 * Q166 dSALTFISH
-25 M058 ALLVASCb	-31 R019 24:1n9	-48 † D028 PLNTFOOD	28 D089 %SATFA	38 * Q167 dSALTFKID
-29 M059 ALLVASCc	34 * R021 20:5n3	46 † D029 ANIMFOOD	-34 * D090 P/S	-24 Q171 dSALTVEG
-24 M061 RHEUMHDc	-33 * U001 Cl/cre	-52 † D031 %PLNTFOOD	25 D091 M/P	41 † Q173 dFRUIT
-36 * M065 STROKEc	-29 U003 Na/cre	52 † D032 %ANIMFOOD	30 D094 TOTn9	51 † Q174 dFISH
-44 † M069 ALLRESPc	53 † U009 TAUR/cre	-40 † D033 PLNTPROT	-33 * D096 %TOTn6	51 † Q175 dMEAT
-46 † M072 COPDc	-34 * D001 KCAL	52 † D034 ANIMPROT	28 D104 14:0	26 Q184 dBLACKTEA
-26 M100 SUICIDEc	26 D002 TOTFAT	-56 † D035 %PLNTPROT	25 D136 %14:0	27 Q201 eDOCVIS
-25 M111 NTDa	-49 † D004 SOLCARB	56 † D036 %ANIMPROT	39 * D141 %16:1	-24 Q227 e%DIARRH
52 † P001 TOTCHOL	42 † D005 %FATKCAL	-27 D040 STCHTUBER	-33 * D147 %18:2	-26 Q247 fBMIadj
27 P002 HDLCHOL	24 D006 %PROTKCAL	-26 D044 SALTVEG	37 * Q031 aINCOME	-25 G001 LATITUDE
48 † P003 NONHDL	55 † D007 %ANPRKCAL	45 † D049 MEAT	29 Q050 c%H2OPIPE	30 G005 HEAT

- Very wide variation in values (1.7-13.5 μg/dL), with generally higher levels in coastal provinces. Intake and plasma levels are determined largely by soil content, which varies widely from one county to another. This variation in the soil Se content is the chief determinant of the wide and well-characterised variation in usual plasma Se levels. Variation in the choice of what is grown and eaten (D036: SeCARRY) is generally of less relevance.
- Strong correlations between xiangs (85%†), between males and females (95%†), and between 1983 and 1989 (90%†), suggesting highly reliable measurements in both surveys.
- Negatively correlated with death from respiratory disease (-44%† M069:ALLRESPc), but the link is not necessarily causal; no significant correlations with deaths from cancer.

- 测定值变化范围很大（1.7-13.5 μg/dL），总的来说，沿海各省的血浆硒水平较高。硒的摄入量和血浆含量主要取决于土壤硒含量，后者在各调查县之间存在很大的变化。土壤硒含量的变化是血浆硒水平出现很大变异的主要决定因素。与选择作物和食物（D036: SeCARRY）方面的差异没有太大关联。
- 两乡之间（85%†）、男性与女性之间（95%†）以及1989年测定值与1993年测量值之间（90%†）具有高度相关性，说明两次调查的分析方法十分可靠。
- 与呼吸系统疾病的死亡率呈负相关（-44%† M069:ALLRESPc），但是这种关联不一定具有因果关系，与癌症死亡没有显著相关性。

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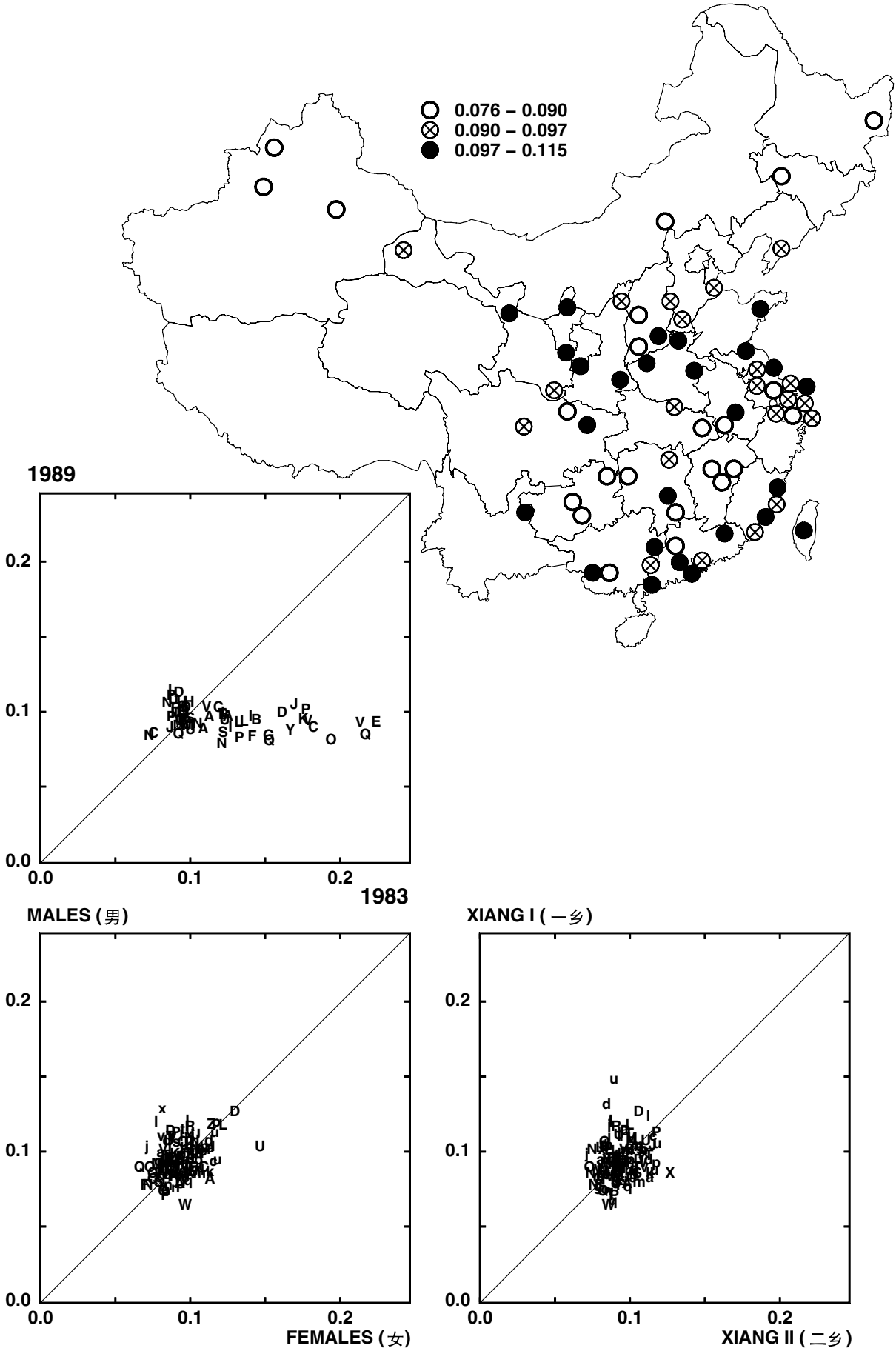
methods: pages 10-11

实验室测定 表述格式: 第 332-333 页

方法: 第 10-11 页

P031 Zn – plasma ZINC (mg/dL)



P031 Zn – 血浆：锌 (毫克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	0.091	0.083	QA	0.089	0.076	AA	0.085	0.104	KC	0.095	0.091	ZA	0.122	0.122
CC	0.089	0.112	QB	0.076	0.080	AB	0.091	0.097	LA	0.094	0.087	ZB	0.112	0.124
CD	0.081	0.085	QC	0.079	0.086	AC	0.087	0.086	LB	0.099	0.095	ZC	0.118	0.111
DA	0.115	0.106	RA	0.102	0.098	BA	0.092	0.092	LC	0.107	0.117	ZD	0.116	0.109
DB	0.098	0.102	SA	0.094	0.093	BB	0.088	0.103	LD	0.090	0.093	ZE	0.123	0.106
DC	0.104	0.090	SB	0.084	0.084	BC	0.090	0.094	PA	0.094	0.104	ZF	0.125	0.127
FA	0.084	0.078	SC	0.099	0.102	EA	0.090	0.092	PC	0.113	0.104	ZG	0.119	0.117
GA	0.087	0.076	TA	0.100	0.094	HA	0.104	0.104	PD	0.079	0.082	ZH	0.109	0.111
JA	0.108	0.097	TC	0.104	0.089	IA	0.101	0.092	PE	0.092	0.096	ZI	0.102	0.104
JB	0.091	0.084	TD	0.095	0.101	IB	0.102	0.087	UA	0.083	0.089	ZJ	0.115	0.107
MB	0.082	0.094	VA	0.103	0.098	IC	0.091	0.101	UB	0.092	0.093	ZK	0.122	0.110
MC	0.086	0.091	VB	0.097	0.084	ID	0.102	0.091	UC	0.108	0.101	ZL	0.124	0.113
MD	0.085	0.093	VC	0.099	0.084	IE	0.094	0.100	UD	0.092	0.117	ZM	0.102	0.105
NA	0.078	0.086	WA	0.073	0.093	IF	0.089	0.097	UE	0.088	0.106	ZN	0.119	0.111
NB	0.075	0.078	WB	0.088	0.084	IG	0.084	0.090	UF	0.101	0.111	ZO	0.110	0.112
NC	0.102	0.104	WC	0.089	0.083	KB	0.087	0.098				ZP	0.117	0.130
ND	0.087	0.093	XA	0.102	0.099									
OA	0.093	0.093	XB	0.105	0.090									
OB	0.079	0.078	YA	0.088	0.083									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	0.092	0.090*	0.094	0.097*	0.116	0.114

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	0.092	0.009	0.093	0.009	49	4.6	†
Xiang (乡) I	vs	Xiang (乡) II	67	0.092	0.011	0.094	0.009	29	2.4	
1983	vs	1989	63	0.120	0.037	0.093	0.008	32	2.7	*

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-32 *	M003 ALL15-34	-27	M047 MALNUTRIc	51 †	P027 Cu	-26	D001 KCAL
-26	M012 INFECTc	-25	M060 RHEUMHDb	-36 *	P036 GLUCOSE	-27	D055 ADDEDFAT
-27	M014 INTESTINc	-32 *	M071 PNEUMONc	-27	P045 COTININEm	47 †	Q018 aSCHOOLS
-31	M015 PULMTBb	-30	M089 ALLSKINc	-26	R009 14:0	26	Q051 c%FLUSHWC
-36 *	M017 OTHERTBb	-25	M109 ALLGIa	28	R014 24:0	35 *	Q111 dFEV1adj
24	M045 DIABETESc	24	P005 APOB	-28	U011 COT/cre	38 *	Q113 dMMEFadj

29	Q132 dSMOKAGEm				
-30	Q134 dSMOK<25m				
-24	Q164 dOILFAT				
-27	Q165 dSMOKFOOD				
27	Q174 dFISH				
-29	Q247 fBMIadj				

- Analysis by atomic absorption spectrometry.
- Small range of average values (0.077-0.115 mg/dL) because plasma zinc levels are very tightly controlled, with relatively little variation possible biologically.
- Moderate correlation between males and females (49%†) but not between xiangs (29%, not significant).
- 1989 values are probably mostly reliable, but outliers may be chiefly due to measurement errors.
- Values from 1983 are unreliable, probably a result of poor analytic techniques. This is illustrated by the substantial reduction in the standard deviation, from 0.037 in 1983 to 0.008 in 1989.
- Correlation with plasma copper (51%† P027:Cu) reinforces reliability of measurements, as these elements are known to vary together.

- 用原子吸收方法测定。
- 由于血浆铜含量被严格控制在一定水平，其生物学可能变异也很小，因此铜的平均含量在很小的范围内（0.077-0.115 mg/dL）。
- 男性与女性之间（49%†）呈中度相关性而两乡之间不存在这种相关（29%，无显著性差异）。
- 1989年的测定值可能大部分是可信的，但是其偏差值可能是由测定错误造成的。
- 1983年测定值不可信，可能是由分析技术落后造成。1989年的标准差（0.008）比1983年的标准差（0.037）明显下降就说明了这一点。
- 与血浆铜含量具有相关性（51%† P027:Cu），进一步说明了测定的可靠性，因为这些元素一般都同时发生变化。

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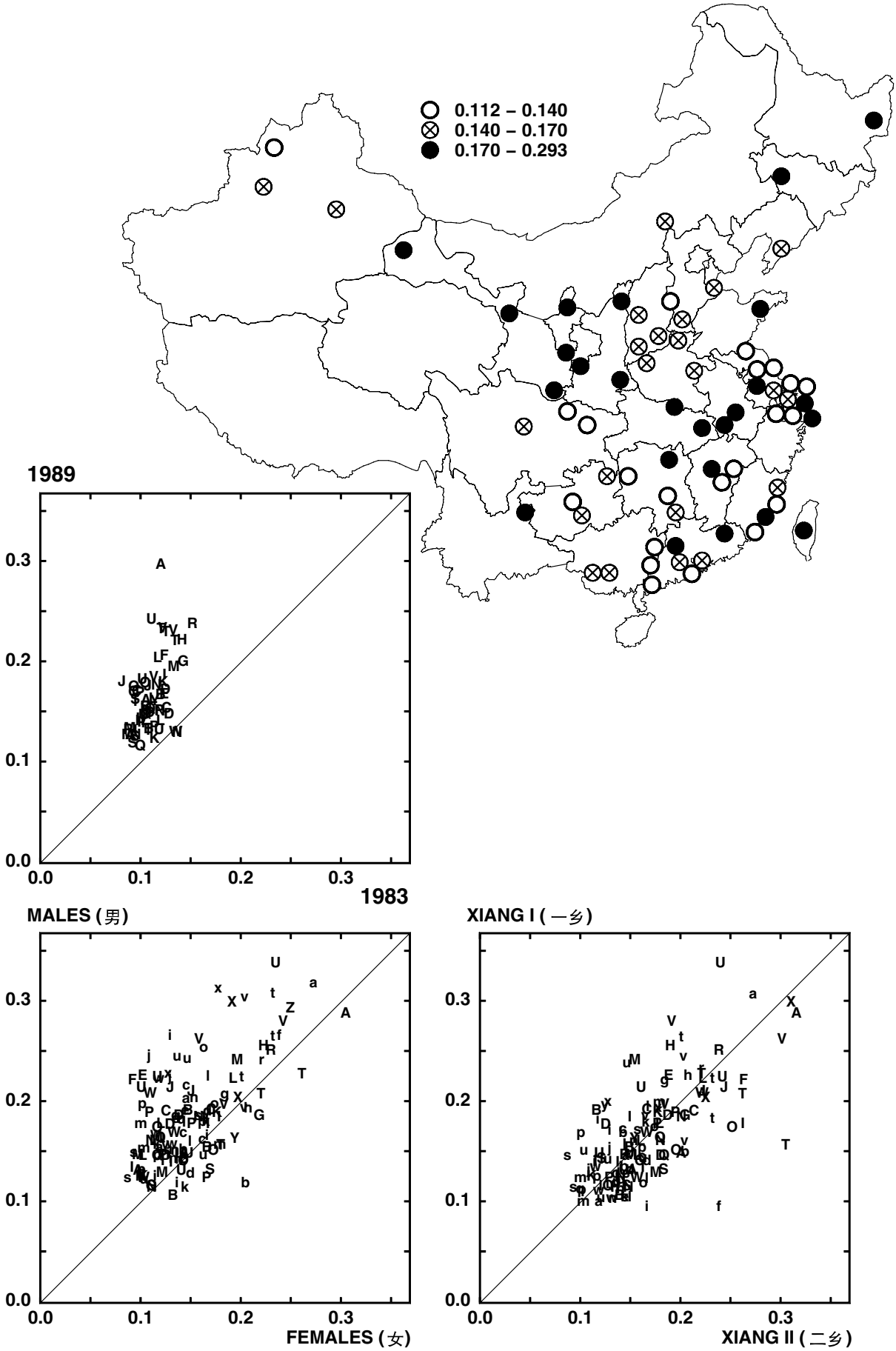
methods: pages 10-11

实验室测定表述格式: 第 332-333 页

方法: 第 10-11 页

P032 Fe – plasma IRON (mg/dL)



P032 Fe – 血浆：铁 (毫克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	0.199	0.134	QA	0.119	0.104	AA	0.299	0.288	KC	0.116	0.123	ZA	0.272	0.266
CC	0.148	0.151	QB	0.162	0.125	AB	0.171	0.144	LA	0.158	0.116	ZB	0.285	0.243
CD	0.177	0.156	QC	0.169	0.129	AC	0.139	0.107	LB	0.220	0.179	ZC	0.323	0.249
DA	0.184	0.152	RA	0.242	0.225	BA	0.151	0.175	LC	0.176	0.142	ZD	0.290	0.266
DB	0.161	0.130	SA	0.155	0.162	BB	0.120	0.137	LD	0.149	0.125	ZE	0.263	0.218
DC	0.148	0.139	SB	0.128	0.101	BC	0.149	0.154	PA	0.143	0.119	ZF	0.279	0.246
FA	0.240	0.164	SC	0.130	0.114	EA	0.205	0.123	PC	0.175	0.156	ZG	0.277	0.255
GA	0.192	0.200	TA	0.228	0.206	HA	0.220	0.215	PD	0.190	0.105	ZH	0.293	0.264
JA	0.226	0.118	TC	0.222	0.230	IA	0.126	0.129	PE	0.124	0.133	ZI	0.330	0.298
JB	0.213	0.139	TD	0.232	0.226	IB	0.130	0.125	UA	0.230	0.126	ZJ	0.242	0.214
MB	0.146	0.100	VA	0.279	0.180	IC	0.218	0.148	UB	0.135	0.151	ZK	0.289	0.234
MC	0.149	0.110	VB	0.188	0.173	ID	0.146	0.128	UC	0.146	0.133	ZL	0.347	0.271
MD	0.195	0.187	VC	0.233	0.222	IE	0.136	0.135	UD	0.131	0.125	ZM	0.289	0.253
NA	0.168	0.124	WA	0.137	0.115	IF	0.148	0.121	UE	0.185	0.110	ZN	0.280	0.261
NB	0.128	0.122	WB	0.212	0.112	IG	0.165	0.148	UF	0.287	0.190	ZO	0.289	0.238
NC	0.130	0.116	WC	0.165	0.123	KB	0.181	0.170				ZP	0.286	0.206
ND	0.190	0.155	XA	0.212	0.162									
OA	0.171	0.172	XB	0.302	0.184									
OB	0.210	0.139	YA	0.156	0.159									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	0.185	0.151	0.170	0.144	0.290	0.249

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	0.178	0.045	0.148	0.037	67	7.4	†
Xiang (乡) I	vs	Xiang (乡) II	69	0.161	0.042	0.166	0.039	70	8.0	†
1983	vs	1989	65	0.110	0.015	0.162	0.037	50	4.6	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

31 M006 ALL70-79	-35 * M118 MALNUTRIa	-36 * P041 TESTOSTm	-35 * Q015 aCANREADf	28 Q159 dMAIZE
28 M018 OTHERTBc	28 P010 G-CAROT	38 * U002 K/cre	-38 * Q016 aCANREADm	26 Q171 dSALTVEG
30 M038 CERVIXCAc	35 * P011 Z-CAROT	26 U005 P/cre	26 Q064 dCOALNOW	26 Q180 dGREENTEA
-34 * M043 ENDOCRINb	35 * P013 RBP	25 U007 URIC/cre	29 Q090 dHEIGHT	25 Q195 eMOTHERS
-35 * M046 MALNUTRIb	25 P016 LYCOPENE	-33 * U024 INHIBPRO	35 * Q098 dTHYROID	36 * G003 ELEVATION
25 M077 INTESTOBc	31 * P022 PHYTOFLU	-26 U026 SUMNITa	31 Q111 dFEV1adj	28 G004 ARIDITY
39 * M111 NTDa	30 P023 PHYTOENE	30 D008 %PLPRKCAL	35 * Q112 dFVCadj	
29 M113 PERINATa	26 P028 K	31 * D021 K	30 Q130 dSMOKNOWm	
26 M114 LOWBTHWTa	66 † P034 TIBC	-30 D037 RICE	-32 * Q157 dRICE	
26 M115 BTHTRAUMa	-34 * P040 B2-MGLOB	27 D044 SALTVEG	27 Q158 dWHEAT	

- Analysis by colourimetry. Analyser: Hitachi 704 blood autoanalyzer.
- The 1989 values appear to be much less reliable than the 1983 values, based on higher mean values and the much larger standard deviation. There is no way to verify this, but the most likely explanation is that different sample preparation and handling techniques in 1989 resulted in varying degrees of red blood cell hemolysis, which released hemoglobin into the plasma. The good correlations between xiangs (70%†) and between males and females (67%†) probably result from the contamination being of similar magnitude in each location, creating a spuriously higher correlation than would be seen for actual plasma values. The corresponding correlations from 1983 were somewhat lower.
- The correlation with total iron binding capacity (66%† P034:TIBC) would also be an expected artifact of the technical deficiencies in measurement.

- 用比色法测定。仪器：日立704血液自动分析仪。
- 从平均值很高而且标准差很大来看，1989年的测定值比1983年更缺乏可信性。虽然无法核实这一点，但最可能的解释是1989年所用的不同样品制备和处理技术引起不同程度的红细胞溶血（使血红蛋白释放到血浆中）。两乡之间（70%†）以及男性和女性之间（67%†）具有的良好相关性，可能是由各地红细胞溶血的发生程度相似引起的，造成了测定值的相关性比血浆实际水平的相关性更高的假象。与1983年对应的相关性比较而言要低一些。
- 可以想象，铁含量与总铁结合力的相关性（66%† P034:TIBC）也是由测定技术缺陷造成的假象。

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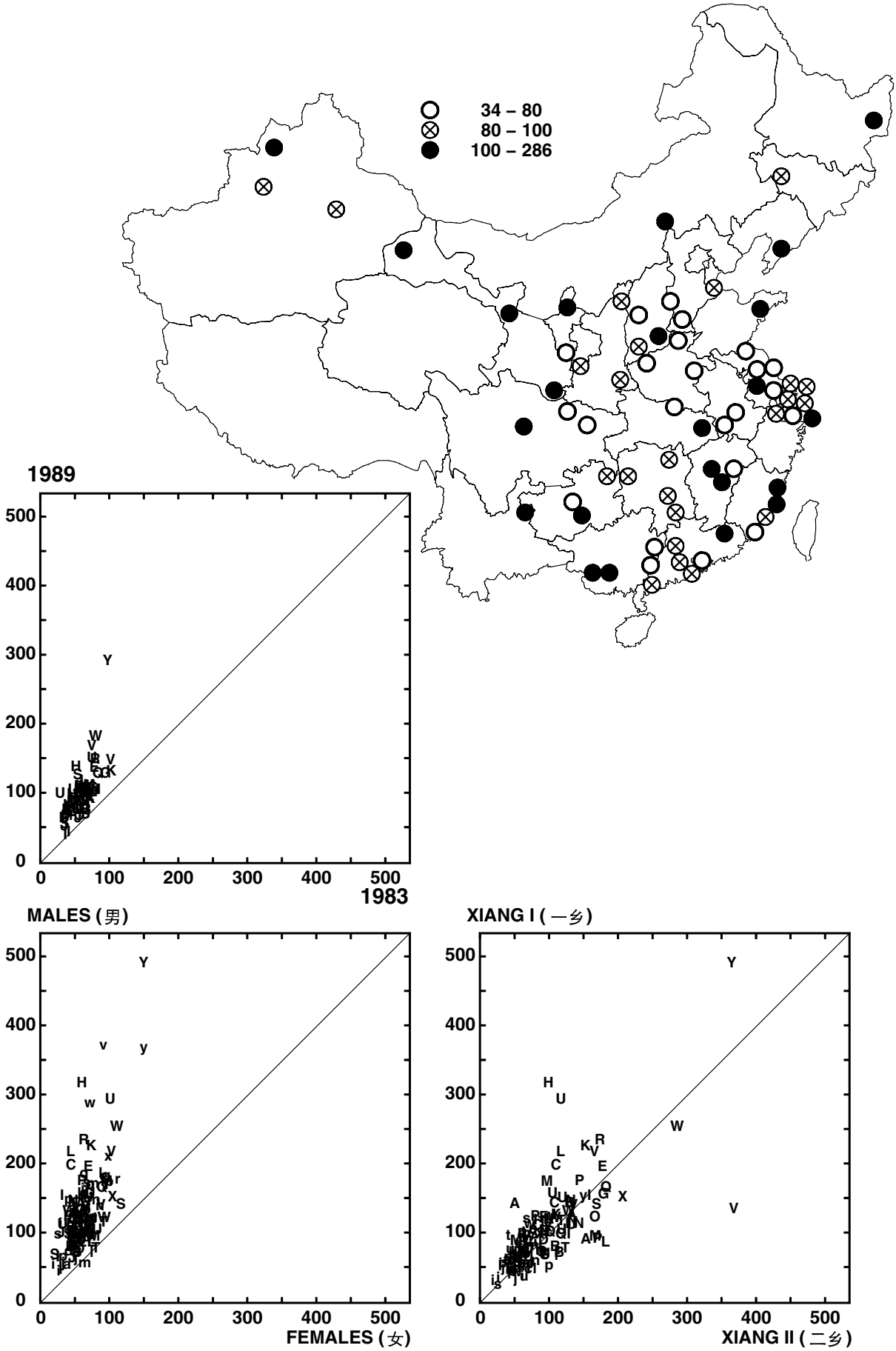
P033 FERRITIN – plasma FERRITIN (ng/mL)



P033 FERRITIN – 血浆：铁蛋白 (毫微克/毫升)

Inland Provinces (内地)

Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	121	55	ND	124	67	WA	265	88
CC	150	55	OA	77	46	WB	125	44
CD	93	58	OB	140	61	WC	110	79
DA	87	56	QA	97	49	XA	175	100
DB	94	48	QB	104	65	XB	88	52
DC	69	47	QC	170	74	YA	424	148
FA	104	62	RA	200	86			
GA	163	81	SA	151	90			
JA	54	38	SB	84	42			
JB	76	39	SC	77	21			
MB	127	76	TA	97	66			
MC	66	57	TC	99	65			
MD	132	79	TD	114	66			
NA	121	77	VA	247	77			
NB	135	56	VB	188	96			
NC	106	67	VC	133	75			

Mean 平均值	Male (男)	Female (女)
	131	66

Coastal Provinces (沿海)

Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
AA	125	46	KC	114	58
AB	118	63	LA	73	66
AC	92	47	LB	106	57
BA	90	42	LC	130	79
BB	89	51	LD	163	60
BC	132	65	PA	98	42
EA	183	79	PC	127	73
HA	204	60	PD	156	49
IA	40	27	PE	76	41
IB	96	52	UA	118	47
IC	153	46	UB	95	58
ID	113	39	UC	131	66
IE	116	65	UD	108	78
IF	110	54	UE	128	57
IG	53	21	UF	202	88
KB	185	65			

Mean 平均值	Male (男)	Female (女)
	120	56

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	127	57	62	20	78	10.2	†
Xiang (乡) I	vs	Xiang (乡) II	69	96	42	93	38	66	7.2	†
1983	vs	1989	65	58	17	94	37	67	7.2	†

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001
Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

31	M002 ALL5-14	32 *	P004 APOA1	27	D005 %FATKCAL	43 †	D049 MEAT	26	Q091 dWEIGHT
26	M018 OTHERTBc	24	P005 APOB	31 *	D006 %PROTKCAL	48 †	D050 REDMEAT	28	Q092 dBMI
-27	M019 VIRALHEPb	-27	P008 A-CAROT	36 *	D007 %ANPRKCAL	40 †	D072 LYSINE	-28	Q096 dMALARIA
25	M035 LUNGCAmc	32 *	P012 RETINOL	-34 *	D009 %CARBKCAL	33 *	D078 THREONINE	41 †	Q109 dDBP
50 †	M037 BREASTCAc	38 *	P013 RBP	36 *	D010 RETINOL	35 *	D084 SATFA	30	Q110 dMIDBP
35 *	M050 MENTALb	30	P014 A-TOCOPH	-34 *	D011 TOTCAROT	31 *	D085 CHOL	27	Q139 dCIGCONSf
35 *	M051 MENTALc	30	P016 LYCOPENE	-29	D012 VITA	48 †	D086 LYS/ARG	25	Q168 dANIMFAT
-28	M057 EPILEPSYc	-24	P024 FOLATE	40 †	D026 SeCARRY	-27	D088 %PUFA	-25	Q172 dGRNVEG
26	M068 ALLRESPb	43 †	P037 BUN	33 *	D029 ANIMFOOD	44 †	D089 %SATFA	50 †	Q175 dMEAT
26	M070 PNEUMONb	-24	P038 PEPSIN	-36 *	D031 %PLNTFOOD	-28	D090 P/S	58 †	Q177 dMILK
-25	M078 CIRRHOSb	-25	P039 THYROXINE	36 *	D032 %ANIMFOOD	-29	D096 %TOTn6	47 †	Q184 dBLACKTEA
43 †	M095 ROADACCb	33 *	R001 Hb	35 *	D034 ANIMPROT	54 †	D104 14:0	26	G001 LATITUDE
43 †	M096 ROADACCc	-31 *	R002 RIBOFDEF	-29	D035 %PLNTPROT	59 †	D136 %14:0	33 *	G003 ELEVATION
27	M108 RESPINFa	32 *	U005 P/cre	29	D036 %ANIMPROT	37 *	D141 %16:1	28	G004 ARIDITY
41 †	P001 TOTCHOL	27	U009 TAUR/cre	-29	D043 GREENVEG	47 †	D145 %18:0		
37 *	P003 NONHDL	-31 *	D004 SOLCARB	32 *	D047 MILK	-30	D147 %18:2		

- Anaysis by double-sited immunoassay. Analyser: LKB Wallac Compugamma (gamma counter).
- Wide variation in values (range of average values 34-286 ng/mL), but no clear geographic pattern. High value in Xianghuangqi (county YA) may be due to high animal food consumption.
- Higher values in males than females, which is the usual worldwide pattern.
- Good correlations between xiangs (66%†) and between males and females (78%†).
- Good correlation between 1983 and 1989 values, but absolute values differ greatly, due mainly to different analytic techniques. 1989 values are in the more usual range for ferritin and are more likely to be correct than the 1983 values.
- Correlations with various indicators of red meat intake (e.g., 43%† D049:MEAT)

- 用双位免疫方法测定。仪器：LKB Wallac Compugamma γ 计数仪。
- 测定值变化范围很大（均值范围34-286ng/ml），但无清晰的地理分布模式。镶黄旗（YA）偏高的数值也许要归因于大量的肉类食物的消费。
- 男性比女性的数值高，这符合通常的全球分布模式。
- 乡之间（66%†）以及男性与女性（78%†）之间具有很好的相关性。
- 1983年以及1989年的值有很好的相关性，但绝对值差异显著，主要归因于不同的分析技术。1989年的铁蛋白值在更常规的范围内，因而比1983年的值更有可能准确些。
- 与各类红肉摄取量指标相关（例如，43%† D049:MEAT）。

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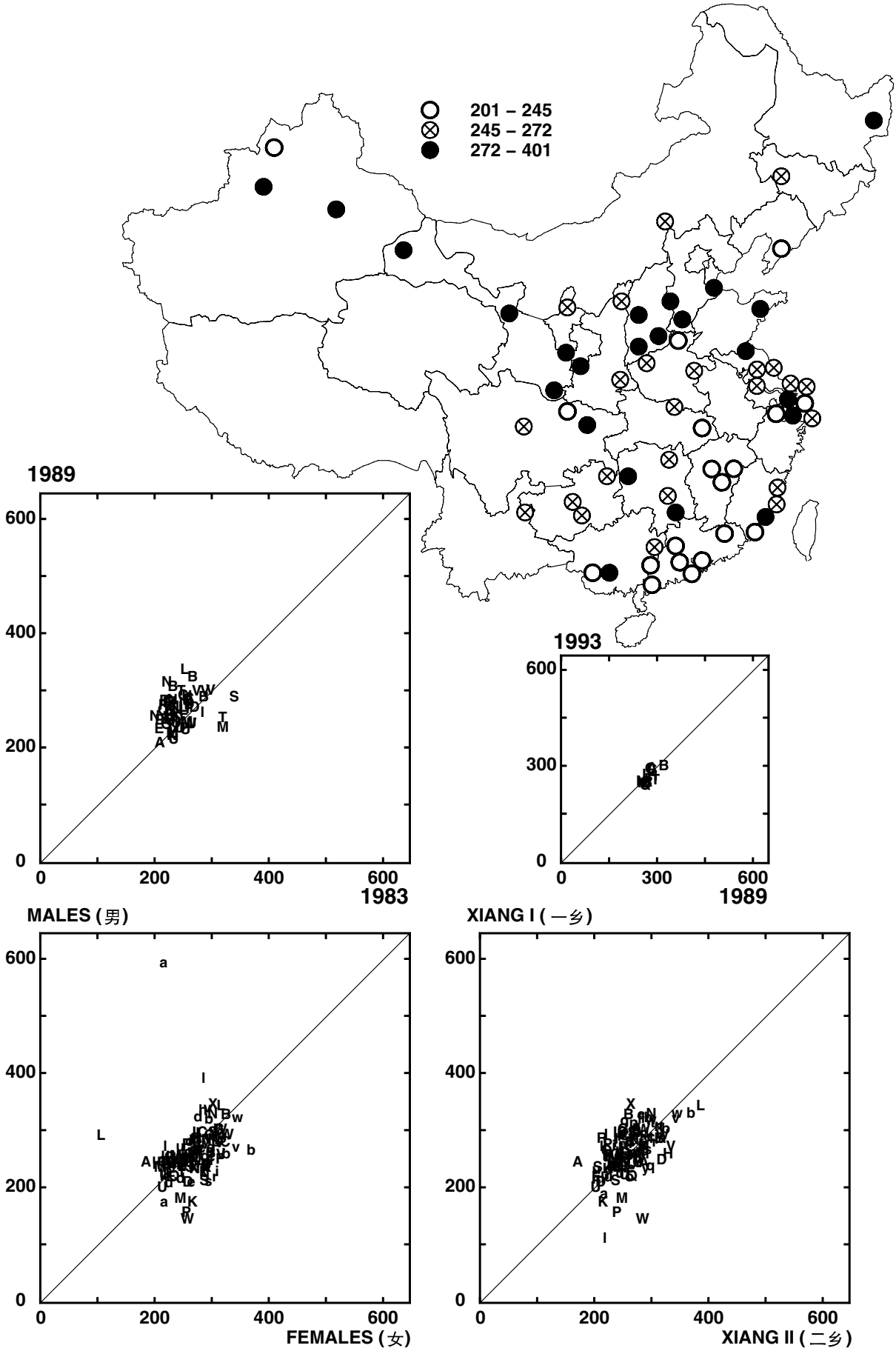
P035 TRANSFE – plasma 1989 TRANSFERRIN (mg/dL)



P035 TRANSFE – 血浆：1989年 转铁蛋白

Inland Provinces (内地)

Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	267	280	ND	237	259	WA	208	261
CC	268	289	OA	255	236	WB	300	333
CD	267	301	OB	243	224	WC	288	304
DA	279	259	QA	238	278	XA	229	268
DB	205	250	QB	238	264	XB	300	286
DC	239	287	QC	242	272	YA	255	258
FA	246	296	RA	245	289			
GA	271	280	SA	216	276			
JA			SB	220	265			
JB			SC	277	286			
MB	230	207	TA	234	256			
MC	210	248	TC	249	272			
MD	240	234	TD	278	304			
NA	272	281	VA	256	327			
NB	310	306	VB	298	285			
NC	266	263	VC	279	307			

Coastal Provinces (沿海)

Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
AA	203	199	KC	190	240
AB	586	215	LA	274	161
AC	260	298	LB	360	299
BA	289	345	LC	260	266
BB	252	310	LD	264	253
BC	295	304	PA	236	267
EA	206	245	PC	245	238
HA	290	276	PD	263	287
IA	253	293	PE	194	260
IB	249	286	UA	241	232
IC	244	244	UB	197	218
ID	247	289	UC	249	231
IE	258	250	UD	242	214
IF	271	271	UE	233	217
IG			UF	236	234
KB	223	276			

Mean 平均值	Male (男)	Female (女)
Inland Provinces (内地)	255	275
Coastal Provinces (沿海)	261	257

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	66	257	51	267	34	14	1.2	
Xiang (乡) I	vs	Xiang (乡) II	65	258	33	261	29	61	6.1	†
1983	vs	1989	61	244	28	258	27	26	2.1	
1989	vs	1993	13	272	19	254	21	69	3.2	*

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001
Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-25	M025 NASOPCAc	-24	U023 NO3mn	39 *	D038 WHTFLOUR	-32 *	D094 TOTn9
29	M067 VASC-STRc	-27	D005 %FATKCAL	-27	D049 MEAT	32 *	D096 %TOTn6
-28	P009 B-CAROT	-26	D007 %ANPRKCAL	-27	D050 REDMEAT	-37 *	D097 %TOTn9
-39 *	P024 FOLATE	31	D008 %PLPRKCAL	36 *	D067 GLUTAMINE	-26	D145 %18:0
43 †	P026 CERULO	25	D009 %CARBKCAL	-32 *	D082 MUFA	-37 *	D146 %18:1
26	P034 TIBC	28	D020 Cu	-26	D084 SATFA	32 *	D147 %18:2
28	R009 14:0	30	D033 PLNTPROT	-36 *	D087 %MUFA	25	Q090 dHEIGHT
-25	R014 24:0	28	D035 %PLNTPROT	31	D088 %PUFA	31	Q091 dWEIGHT
27	U006 UREA/cre	-28	D036 %ANIMPROT	28	D090 P/S	31	Q092 dBMI
25	U014 VOLURmn	-32 *	D037 RICE	-31	D091 M/P	-30	Q093 dPEPULCER

-33 *	Q157 dRICE		
40 †	Q158 dWHEAT		
-32 *	Q172 dGRNVEG		
-28	Q174 dFISH		
-26	Q234 eWORMS		
26	Q247 fBMIadj		
32 *	G001 LATITUDE		
27	G004 ARIDITY		
-39 *	G005 HEAT		

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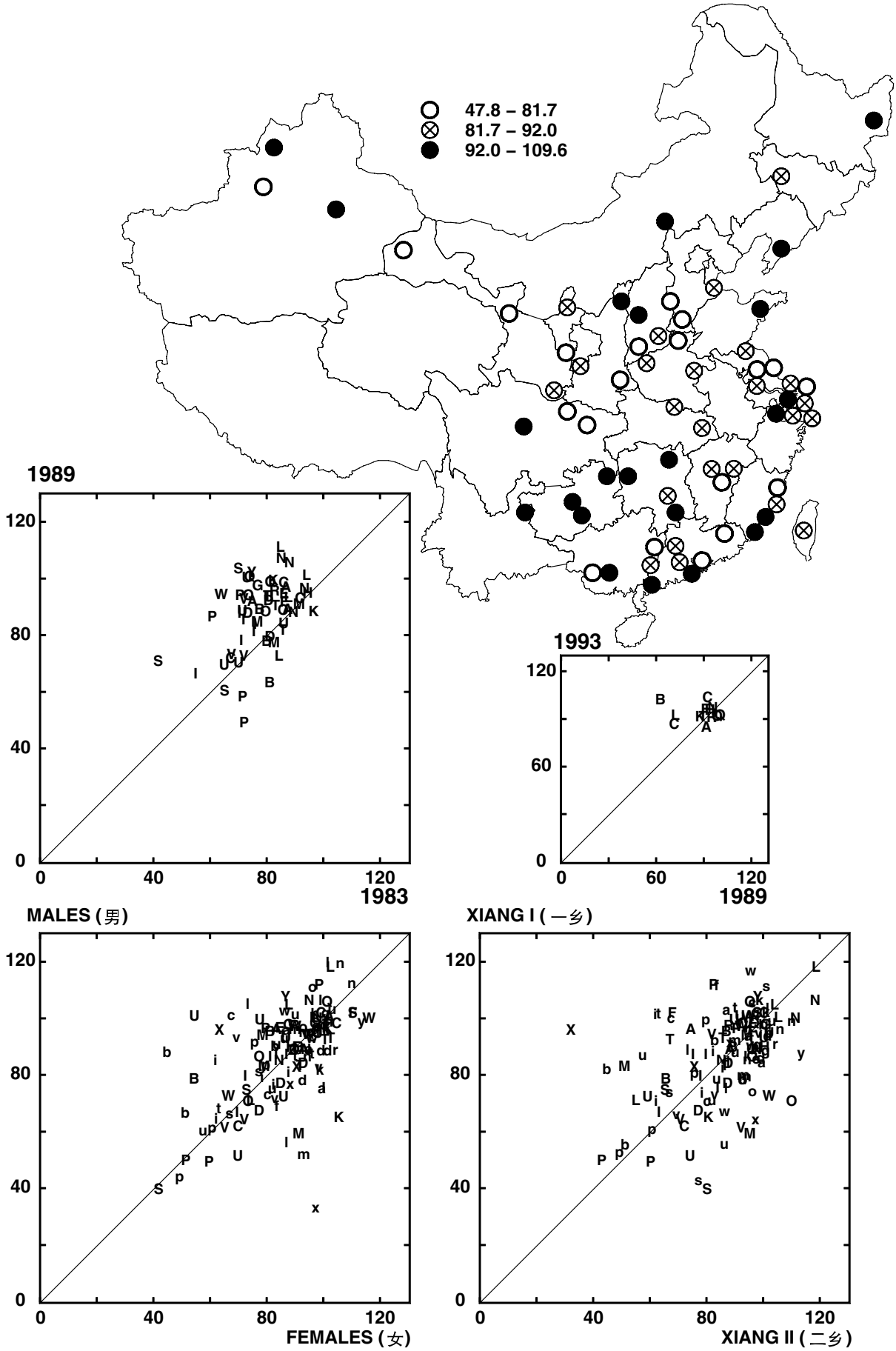
- Analysis by turbidimetric assay of binding to a specific antibody. Analyser: Beckman Synchron CX4/5CE.
- Some geographic variation, with generally higher values in the north. Overall variation is relatively small (range of average values 201-401) for this compound that is tightly controlled physiologically.
- Good correlation between xiangs (61%†), but poor correlation between males and females (14%, not significant) due to a few outliers, which are probably unreliable values.
- Generally correlated with other variables distributed north to south, but no correlations of special interest.
- Transferrin should be highly correlated with total iron binding capacity; the relatively poor correlation seen (26% P034:TIBC) supports the idea that analyses of plasma iron and TIBC are unreliable.

- 与特异受体结合，通过比浊法进行测定。仪器：Beckman Synchron CX4/5CE。
- 存在地理差异，北方各省水平一般较高。对于这种在生理学上被严格控制在一定水平内的化合物来说，其平均值的总体变异水平相对较小（变化范围201-401）。
- 两乡之间具有良好的相关性（61%†），但是由于几个测定值出现偏离（可能是不可信值），男性和女性之间的相关性很差（14%，无显著性差异）。
- 与其它南北分布的指标具有相关性，但是这些相关性没有什么特殊的意义。
- 转铁蛋白应该与总铁结合力高度相关，但它们之间很弱的相关性（26% P034:TIBC）说明，血浆铁含量和总铁结合力的测定缺乏可靠性。

P036 GLUCOSE – plasma 1989 GLUCOSE (mg/dL)



P036 GLUCOSE – 血浆：1989年 葡萄糖 (毫克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	66.1	74.7	QA	99.6	98.8	AA	84.3	91.1	KC	95.0	100.8	ZA	83.3	85.2
CC	100.2	82.9	QB	91.6	93.4	AB	97.0	94.1	LA	101.9	97.6	ZB	92.7	90.5
CD	94.5	100.0	QC	96.6	98.3	AC	87.7	93.5	LB	117.5	101.7	ZC	88.8	95.8
DA	84.9	96.9	RA	91.7	96.9	BA	71.3	52.5	LC	62.1	80.4	ZD	96.3	103.7
DB	71.3	84.7	SA	99.0	105.3	BB	90.2	62.6	LD	103.5	80.3	ZE	98.2	97.0
DC	81.3	91.7	SB	59.0	59.1	BC	88.6	86.8	PA	54.0	59.9	ZF	90.7	96.5
FA	84.1	96.8	SC	69.2	69.5	EA	95.7	90.8	PC	45.5	50.1	ZG	78.3	80.7
GA	98.3	93.8	TA	78.8	81.7	HA	94.3	92.6	PD	96.3	88.8	ZH	59.3	59.0
JA			TC	88.5	96.2	IA	82.8	85.4	PE	92.7	77.4	ZI	102.2	93.7
JB			TD	84.1	93.8	IB	79.0	80.9	UA	93.8	80.4	ZJ	76.7	75.3
MB	66.1	85.8	VA	66.5	77.1	IC	80.5	84.5	UB	61.9	75.7	ZK	100.8	97.5
MC	76.3	90.4	VB	75.8	66.8	ID	64.3	65.7	UC	96.0	88.2	ZL	86.2	91.5
MD	93.2	85.8	VC	87.1	95.7	IE	77.9	75.3	UD	97.7	100.3	ZM	84.7	96.5
NA	104.8	103.7	WA	93.6	92.3	IF	89.3	83.3	UE	95.5	70.2	ZN	82.7	85.5
NB	111.5	100.2	WB	86.3	75.8	IG			UF	64.9	71.4	ZO	81.7	78.0
NC	84.4	89.1	WC	96.3	105.2	KB	71.9	101.8				ZP	95.0	94.2
ND	92.5	97.7	XA	78.3	89.1									
OA	89.3	84.4	XB	63.1	80.0									
OB	90.3	84.7	YA	102.0	99.8									

Mean 平均值	Male (男)	Female (女)
Inland Provinces (内地)	86.0	89.4
Coastal Provinces (沿海)	84.4	82.1
Taiwan (台湾)	87.3	88.8

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	66	85.3	14.4	86.1	12.9	69	7.5	†
Xiang (乡) I	vs	Xiang (乡) II	66	85.1	14.3	86.3	13.9	58	5.8	†
1983	vs	1989	62	77.7	10.0	85.8	12.7	45	3.9	†
1989	vs	1993	13	87.0	11.6	91.1	5.3	10	0.3	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

27	M009 NONMEDb	38 *	M095 ROADACCb	36 *	P029 INORG-P	32 *	D002 TOTFAT	27	D072 LYSINE
-26	M027 OESOPHCAc	35 *	M096 ROADACCc	-36 *	P031 Zn	29	D005 %FATKCAL	30	D082 MUFA
-27	M028 STOMCAc	-27	P008 A-CAROT	-27	R005 TOTn6	-27	D009 %CARBKCAL	31	D084 SATFA
-34 *	M048 BLOODb	-25	P009 B-CAROT	-27	R008 P/S	31	D025 Na	30	D094 TOTn9
28	M051 MENTALc	39 *	P013 RBP	25	R012 20:0	30	D041 LEGUME	-26	Q067 dCOOKm
-26	M079 CIRRHOSc	-25	P017 LUTEIN	-25	R025 20:3n6	26	D049 MEAT	-36 *	Q205 eHRSWORK
33 *	M089 ALLSKINc	25	P026 CERULO	-27	R026 20:4n6	25	D050 REDMEAT	31	Q209 eBIRTHWT

- Analysis by timed endpoint method. The glucose is phosphorylated (by hexokinase) and then oxidised (by G6PD), with concomitant reduction of NAD to NADH. Analyser: Beckman Synchron CX4/5CE.
- No clear geographic pattern.
- Good correlations between xiangs (58%†) and between males and females (69%†).
- Values below about 80 are implausible and probably due to problems with sample handling, which might well affect males and females from the same county similarly. (Glucose degrades in stored blood if it is not kept cold.)
- Few correlations with other variables, and none of particular interest. While this is a standard blood measurement for individuals, mean population values are not very informative for epidemiologic purposes.

- 采用定时终点方法测定。葡萄糖被己糖激酶磷酸化，然后被G6PD氧化，同时NAD被还原成NADH。仪器：Beckman Synchron CX4/5CE。
- 无明显的地理分布模式。
- 两乡之间（58%†）以及男性与女性之间（69%†）具有良好的相关性。
- 低于80左右的测定值是不可信的，可能是由样品处理方面的问题引起的，来自于同一个县的男性和女性样品可能会受到相似的影响（如果血液未冷冻保存，葡萄糖会发生降解）。
- 与极少数其它指标存在相关性，而且这些指标没有特别让人感兴趣的地方。尽管这是一种标准的对个体样品的测定方法，但是人群平均水平并不能为流行病学研究提供有用信息。

Conversion of glucose *to* SI Units (葡萄糖换算-*到*国际单位):	mg/dL * 0.056 = mmol/L
Conversion of glucose *from* SI Units (葡萄糖换算-*从*国际单位):	mmol/L * 18 = mg/dL

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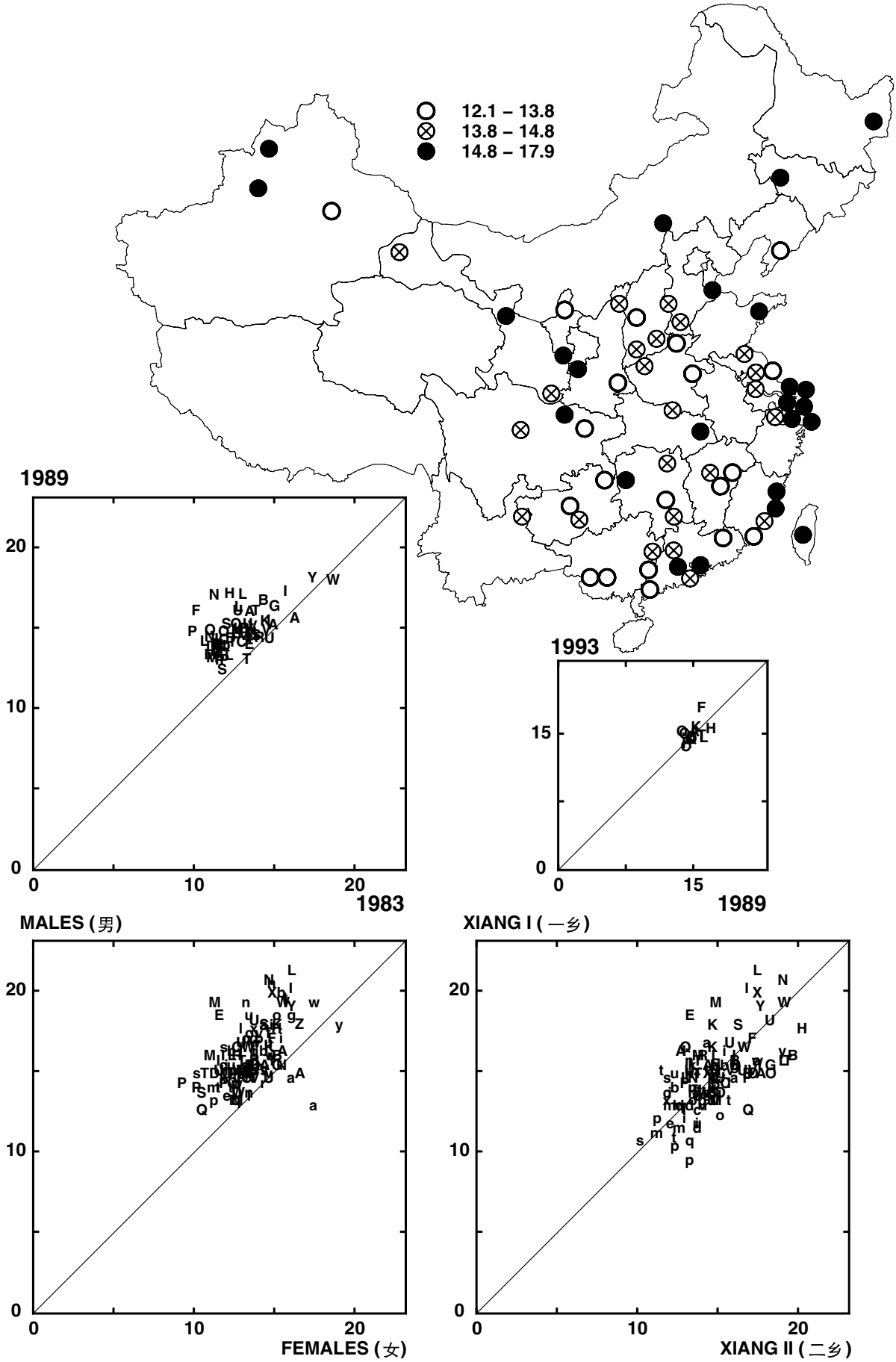
P037 BUN – plasma 1989 UREA NITROGEN (mg/dL)



P037 BUN – 血浆：1989年 尿素氮 (毫克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	14.6	13.4	QA	14.6	12.6	AA	14.3	16.4	KC	15.4	13.9	ZA	16.7	16.4
CC	14.7	13.0	QB	14.6	11.8	AB	16.1	15.4	LA	13.6	12.5	ZB	19.0	17.0
CD	14.9	12.6	QC	15.6	13.7	AC	14.7	15.2	LB	15.3	12.6	ZC	17.8	14.9
DA	14.3	12.9	RA	14.9	13.5	BA	15.6	13.9	LC	17.2	14.9	ZD	15.7	15.9
DB	14.0	12.6	SA	14.8	13.8	BB	15.7	13.0	LD	19.2	14.4	ZE	16.5	15.0
DC	15.7	12.4	SB	16.9	13.1	BC	17.6	15.3	PA	15.6	13.4	ZF	18.6	18.5
FA	17.0	14.7	SC	14.0	10.3	EA	15.7	11.8	PC	14.3	11.2	ZG	19.1	18.1
GA	16.7	15.6	TA	14.2	11.5	HA	18.8	15.0	PD	13.4	11.5	ZH	19.0	16.5
JA			TC	14.6	13.2	IA	15.9	12.4	PE	14.3	11.2	ZI	17.1	17.2
JB			TD	17.4	14.3	IB	14.6	13.6	UA	15.7	13.8	ZJ	17.1	16.5
MB	14.7	11.1	VA	15.3	14.5	IC	15.7	12.6	UB	16.1	13.9	ZK	17.3	15.7
MC	13.9	12.3	VB	16.0	13.3	ID	14.2	12.7	UC	14.7	13.5	ZL	18.2	16.5
MD	16.9	11.9	VC	14.5	14.2	IE	18.4	15.7	UD	14.8	12.6	ZM	16.5	17.4
NA	14.8	13.6	WA	19.0	16.4	IF	16.4	14.1	UE	18.1	13.6	ZN	17.8	16.0
NB	19.7	13.9	WB	16.4	13.4	IG			UF	14.0	12.9	ZO	17.9	16.0
NC	13.9	13.4	WC	13.7	12.6	KB	16.1	14.3				ZP	17.9	16.8
ND	15.0	14.3	XA	14.5	12.4									
OA	15.9	13.1	XB	18.5	14.3									
OB	16.4	13.6	YA	18.2	17.5									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	15.5	13.3	15.7	13.6	17.6	16.5

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	66	15.6	1.5	13.4	1.4	58	5.7	†
Xiang (乡) I	vs	Xiang (乡) II	64	14.4	1.5	14.7	1.5	49	4.5	†
1983	vs	1989	61	12.8	1.7	14.6	1.3	57	5.3	†
1989	vs	1993	13	14.9	1.0	14.6	1.1	44	1.6	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-28	M016 PULMTBc	45 †	P002 HDLCHOL	41 †	D006 %PROTKCAL	29	D078 THREONINE	37 *	Q110 dMIDBP
29	M032 PANCRSCAc	31	P003 NONHDL	35 *	D007 %ANPRKCAL	32 *	D085 CHOL	31	Q111 dFEV1adj
42 †	M035 LUNGCAmc	29	P004 APOA1	-31	D009 %CARBKCAL	41 †	D086 LYS/ARG	35 *	Q112 dFVCadj
38 *	M036 LUNGCAfc	28	P005 APOB	36 *	D010 RETINOL	26	D092 TOTn3	27	Q151 dBEERday
26	M037 BREASTCAc	30	P013 RBP	-35 *	D014 VITC	30	D104 14:0	27	Q166 dSALTFISH
36 *	M050 MENTALb	-27	P024 FOLATE	41 †	D026 SeCARRY	30	D136 %14:0	28	Q167 dSALTFKID
-32 *	M055 MENINGITc	43 †	P033 FERRITIN	31	D029 ANIMFOOD	24	D141 %16:1	31	Q176 dEGGS
-25	M073 DIGESTIVb	-43 †	P040 B2-MGLOB	-31	D031 %PLNTFOOD	-26	Q018 aSCHOOLS	38 *	Q177 dMILK
-28	M075 PEPULCERc	-27	R002 RIBOFDEF	31	D032 %ANIMFOOD	36 *	Q031 aINCOME	28	Q184 dBLACKTEA
-26	M076 ENTCOLc	-34 *	R025 20:3n6	33 *	D034 ANIMPROT	-27	Q069 dUNVENT	29	Q201 eDOCVIS
-31	M078 CIRRHOSb	34 *	U005 P/cre	-28	D035 %PLNTPROT	26	Q090 dHEIGHT	33 *	Q243 fWTadj
-25	M080 TOTLIVRb	26	U006 UREA/cre	28	D036 %ANIMPROT	34 *	Q091 dWEIGHT	30	Q245 fHTadj
32	M111 NTDa	28	U008 CREAT	28	D046 NUTS	34 *	Q092 dBMI	32 *	G001 LATITUDE
-28	M117 NEOTETANa	40 †	U009 TAUR/cre	25	D047 MILK	37 *	Q108 dSBP	-31	G005 HEAT
45 †	P001 TOTCHOL	29	D003 TOTPROT	30	D072 LYSINE	31	Q109 dDBP		

- Analysis by enzymatic rate method. Urea is hydrolysed by urease to ammonia, which condenses with α-ketoglutarate (in a condensing reaction catalysed by the reverse action of glutamate dehydrogenase), with concomitant oxidation of NADH to NAD. Analyser: Beckman Synchron CX4/5CE.
- No clear geographic pattern.
- Good correlations between xiangs (49%†), between males and females (58%†), and 1983 to 1989 (59%†) .
- Increase between 1983 and 1989 is plausible and probably represents a real change due to increased animal protein intake.

- 采用酶反应速度方法测定。尿素被尿素酶水解成氨，用α-酮戊二酸盐进行浓缩（通过谷氨酸脱氢酶逆向催化进行浓缩反应），同时NADH被氧化成NAD。仪器：Beckman Synchron CX4/5CE。
- 无明显的地理分布模式。
- 两乡之间（49%†）、男性与女性之间（58%†）以及1983年和1989年测定值之间（59%†）具有良好的相关性。
- 从1983年到1989年，血浆尿素氮水平看上去有所增加，可能反映了由动物蛋白摄入量增加而引起的真正增加。

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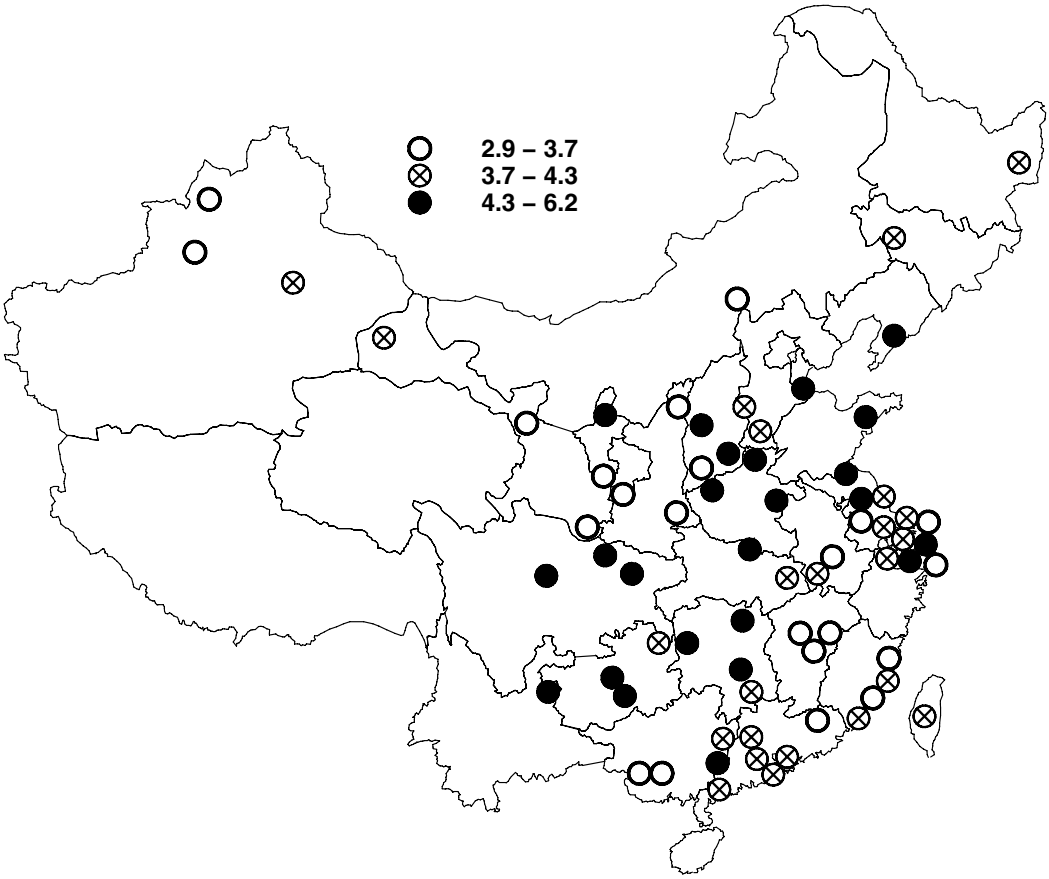
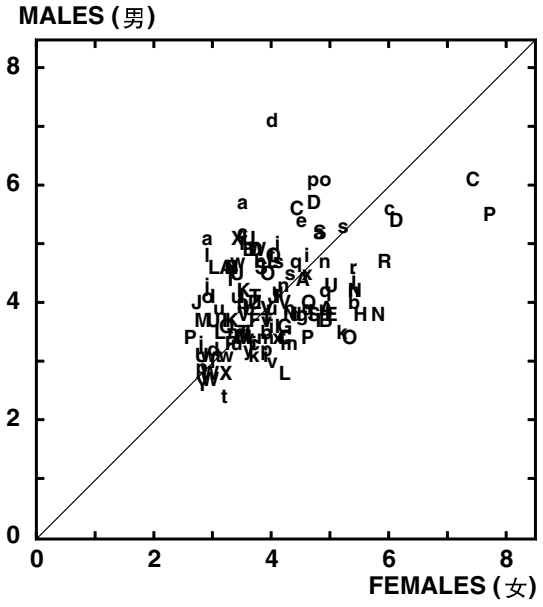
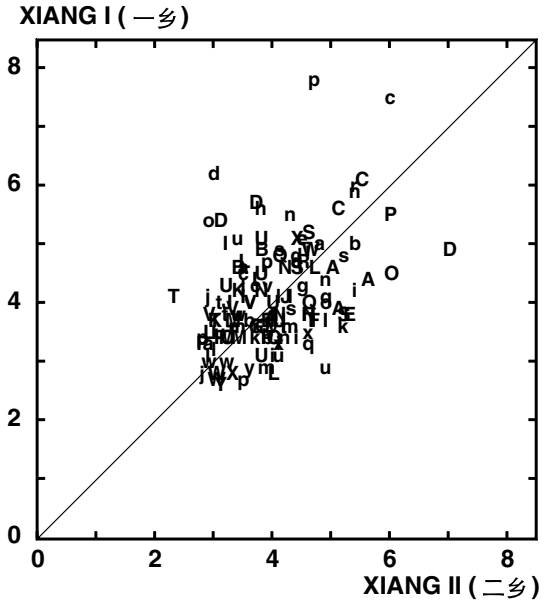
P038 PEPSIN – plasma PEPSINOGEN I/II







P038 PEPSIN – 血浆：胃蛋白酶原 I/II

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	3.3	4.0	QA	4.4	4.5	AA	4.4	4.9	KC	3.8	4.3	ZA	4.0	3.6
CC	5.3	4.0	QB	3.7	3.9	AB	4.8	3.1	LA	4.1	4.1	ZB	3.8	3.7
CD	5.8	6.7	QC	4.3	4.5	AC	5.0	4.0	LB	3.2	3.0	ZC	3.9	3.7
DA	4.2	4.6	RA	4.6	5.7	BA	4.0	3.6	LC	3.4	3.8	ZD	4.3	4.4
DB	5.9	3.9	SA	4.8	4.5	BB	4.3	3.6	LD	4.6	3.0	ZE	4.3	4.4
DC	4.7	4.6	SB	4.5	4.1	BC	3.8	5.2	PA	3.2	4.3	ZF	3.3	3.6
FA	4.2	3.9	SC	4.4	4.9	EA	4.5	4.8	PC	3.0	3.0	ZG	4.0	3.5
GA	3.6	4.3	TA	3.4	3.8	HA	4.2	4.7	PD	3.6	3.0	ZH	3.7	3.5
JA	3.6	2.8	TC	3.2	3.5	IA	4.2	4.7	PE	5.7	6.2	ZI	3.9	3.6
JB	4.1	3.5	TD	3.3	3.5	IB	4.2	4.8	UA	3.8	3.5	ZJ	3.1	3.5
MB	3.3	3.9	VA	3.5	3.8	IC	3.2	3.8	UB	4.4	3.8	ZK	4.1	3.4
MC	3.5	3.4	VB	3.8	4.1	ID	4.1	3.6	UC	4.0	3.6	ZL	4.7	3.9
MD	3.4	3.5	VC	3.3	3.8	IE	3.8	3.5	UD	4.1	3.3	ZM	4.0	3.4
NA	4.3	3.8	WA	2.9	3.1	IF	4.0	3.9	UE	3.7	4.2	ZN	3.7	3.2
NB	4.2	4.6	WB	2.8	2.9	IG	4.3	3.7	UF	3.4	3.9	ZO	4.2	4.1
NC	4.0	4.9	WC	4.7	3.6	KB	3.3	3.5				ZP	3.8	4.2
ND	3.9	5.6	XA	4.7	4.0									
OA	5.2	4.4	XB	3.0	3.7									
OB	3.7	4.1	YA	2.8	3.2									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	4.0	4.1	4.0	3.9	3.9	3.7

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	4.0	0.7	4.0	0.8	51	4.9	†
Xiang (乡) I	vs	Xiang (乡) II	69	4.0	0.8	4.0	0.7	53	5.1	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-28	M005 ALL35-69	25	M044 ENDOCRINc	-25	M113 PERINATa	-32 *	D047 MILK	-31 *	Q184 dBLACKTEA
-28	M007 MEDICALb	-36 *	M050 MENTALb	-27	M115 BTHTRAUMa	-31	D104 14:0	-24	Q195 eMOTHERS
-28	M008 MEDICALc	-29	M054 MENINGITb	32 *	P015 G-TOCOPH	-34 *	D136 %14:0	25	Q209 eBIRTHWT
-26	M013 INTESTINb	-33 *	M055 MENINGITc	-24	P028 K	-29	Q017 aPRIMARY	-25	Q213 eDPT3rd
-27	M016 PULMTBc	-25	M080 TOTLIVRb	-24	P033 FERRITIN	26	Q021 eCANREAD	-26	Q216 ePOLIO3
-32 *	M022 ALLCAb	-40 †	M081 TOTLIVRc	-44 †	P042 HBsAg	30	Q057 dCOALKID	-25	Q220 eFULLIMM
-28	M023 ALLCAc	-24	M084 GENITURmc	-76 †	P044 HPYLORI	25	Q102 dPHLEGMw		
-30	M028 STOMCAc	-30	M087 PREGBRTHb	-25	D029 ANIMFOOD	29	Q139 dCIGCONSf		
-30	M030 LIVERCAb	-31	M104 MATERNAL	26	D031 %PLNTFOOD	-35 *	Q177 dMILK		
-38 *	M031 LIVERCAc	-24	M106 MEDICALa	-26	D032 %ANIMFOOD	32 *	Q180 dGREENTEA		

- Analysis of group I and II pepsinogen by Dr. Kazumasa Miki, using radioimmunoassay (Ichinose et al., Clinica Chimica Acta126:183-191, 1982).
- Geographic pattern with higher levels generally in the north.
- Good correlations between xiangs (53%†) and between males and females (51%†).
- Striking negative correlation with percentage of individuals positive for *H. pylori* antibody (-76%† P044:HPYLORI) and moderate negative correlation with stomach cancer mortality (-30%, p<0.05 M028:STOMCAc).

- 胃蛋白酶原I/II由Kazumasa Miki博士用放射免疫方法测定（Ichinose et al., Clinica Chimica Acta126:183-191, 1982）。
- 具有地理分布模式，北方各省的水平较高。
- 两乡之间（53%†）以及男性与女性之间（51%†）具有良好的相关性。
- 与幽门螺杆菌抗体阳性个体的百分比呈显著负相关（-76%† P044:HPYLORI），与胃癌死亡率呈中度负相关（-30%, p<0.05 M028:STOMCAc）。

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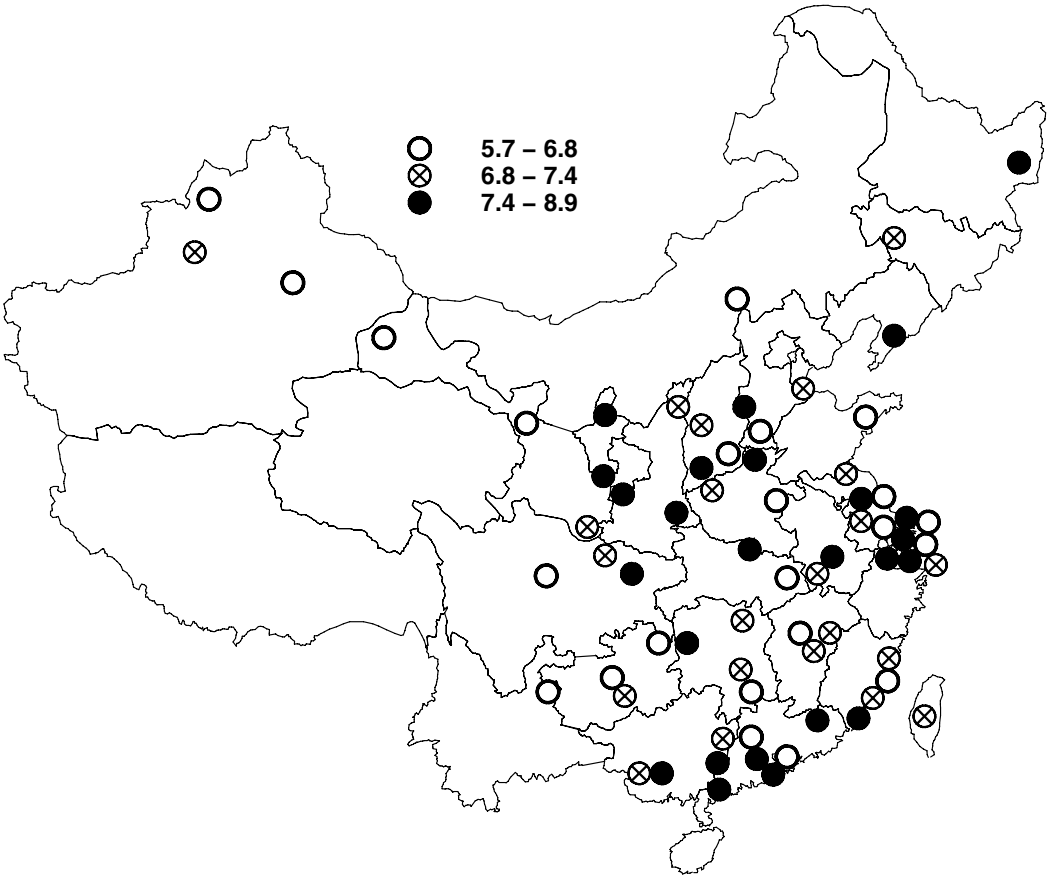
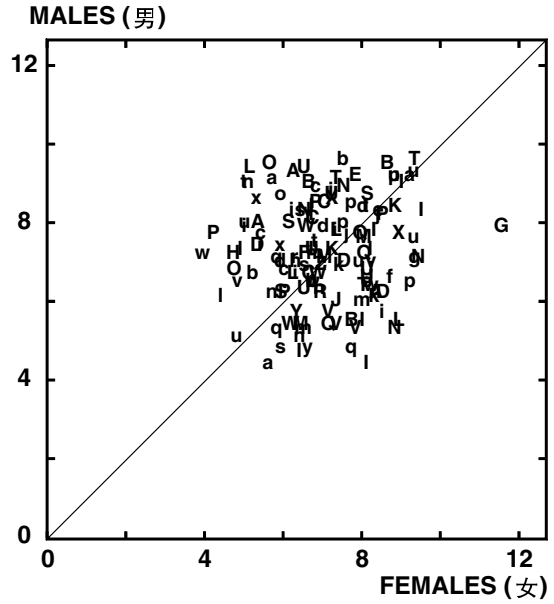
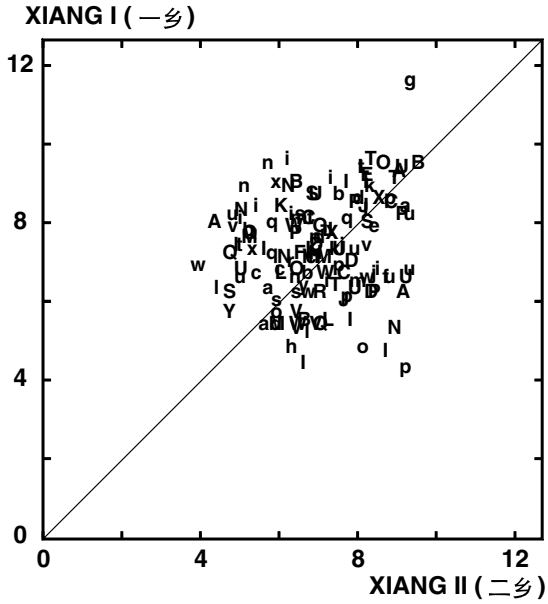
P039 THYROXINE – plasma TOTAL THYROXINE (μg/dL)







P039 THYROXINE – 血浆：总甲状腺素 (微克/100毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	8.6	6.9	QA	6.2	6.5	AA	6.1	5.5	KC	7.2	8.6	ZA	7.3	7.5
CC	7.1	6.0	QB	6.4	6.9	AB	7.6	8.8	LA	6.3	8.6	ZB	7.5	7.2
CD	7.3	6.3	QC	5.9	7.8	AC	9.1	5.9	LB	7.4	6.1	ZC	7.3	7.4
DA	7.1	5.6	RA	6.6	6.6	BA	6.0	6.4	LC	8.7	5.9	ZD	6.5	6.6
DB	7.2	8.3	SA	5.4	5.9	BB	9.4	8.1	LD	6.3	5.3	ZE	6.6	6.6
DC	7.4	7.3	SB	8.1	6.3	BC	7.7	6.7	PA	7.3	6.8	ZF	6.4	6.6
FA	6.8	7.6	SC	7.7	7.3	EA	8.7	8.1	PC	7.0	6.7	ZG	6.8	6.6
GA	7.4	10.4	TA	8.9	6.2	HA	7.0	5.5	PD	8.6	8.7	ZH	5.2	6.4
JA	8.2	7.5	TC	6.9	7.4	IA	7.5	6.9	PE	8.1	7.2	ZI	6.2	7.3
JB	6.8	7.5	TD	8.9	8.7	IB	8.3	8.2	UA	7.1	5.8	ZJ	6.3	6.6
MB	7.1	6.9	VA	5.8	6.3	IC	6.4	7.6	UB	5.8	6.5	ZK	7.2	6.9
MC	6.3	7.3	VB	6.0	6.9	ID	5.5	7.2	UC	7.3	8.0	ZL	7.5	8.0
MD	5.6	7.2	VC	6.1	7.8	IE	6.6	6.5	UD	9.2	7.7	ZM	6.1	6.1
NA	6.6	6.5	WA	6.8	5.4	IF	8.2	7.8	UE	7.8	7.6	ZN	6.0	7.1
NB	7.5	7.2	WB	7.1	7.3	IG	6.7	6.8	UF	7.8	8.7	ZO	7.0	6.3
NC	7.0	7.0	WC	5.9	6.4	KB	7.0	7.3				ZP	9.7	7.9
ND	6.6	7.5	XA	7.5	7.4									
OA	9.0	5.8	XB	8.5	6.3									
OB	6.6	6.4	YA	5.2	6.5									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	7.0	7.0	7.4	7.1	6.8	6.9

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	7.2	1.0	7.0	1.0	21	1.7	
Xiang (乡) I	vs	Xiang (乡) II	69	7.2	0.9	7.0	1.0	28	2.4	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-31	M051 MENTALc	-25	P012 RETINOL	31 *	R005 TOTn6	-34 *	R016 18:1n9	32 *	Q219 eHBV2nd
27	M110 CONGENITa	-31 *	P014 A-TOCOPH	27	R007 PUFA	34 *	R026 20:4n6	37 *	Q229 e%RESP
29	M111 NTDa	-33 *	P029 INORG-P	30	R008 P/S	-33 *	Q184 dBLACKTEA	33 *	Q231 e%FEVER
27	M112 CONGENHDa	-25	P033 FERRITIN	-25	R009 14:0	-26	Q192 dLIVEBRTH	26	G002 LONGITUDE
27	P008 A-CAROT	-24	P043 HBsAb	-32 *	R012 20:0	35 *	Q218 eHBV1st		

- Analysis of tetra-iodinated thyroxine (T4) by ELISA. Sample is first mixed with anti-T4 antibody, which promotes dissociation of T4 from endogenous binding proteins. Analyser: IL Monarch Chemistry System.
- No clear geographic pattern.
- Poor correlations between xiangs (28%) and between males and females (21%).
- The heterogeneity among the measured values of this variable provides no useful information.

- 通过ELISA方法测定四碘甲状腺素（T4）。血浆样品先于抗T4抗体混合，这样可以促进T4从内源性结合蛋白中解离出来。仪器：IL Monarch Chemistry System。
- 无明显的地理分布模式。
- 两乡之间（28%）以及男性与女性之间（21%）的相关性很差。
- 该指标测定值的变异无法提供有用的信息。

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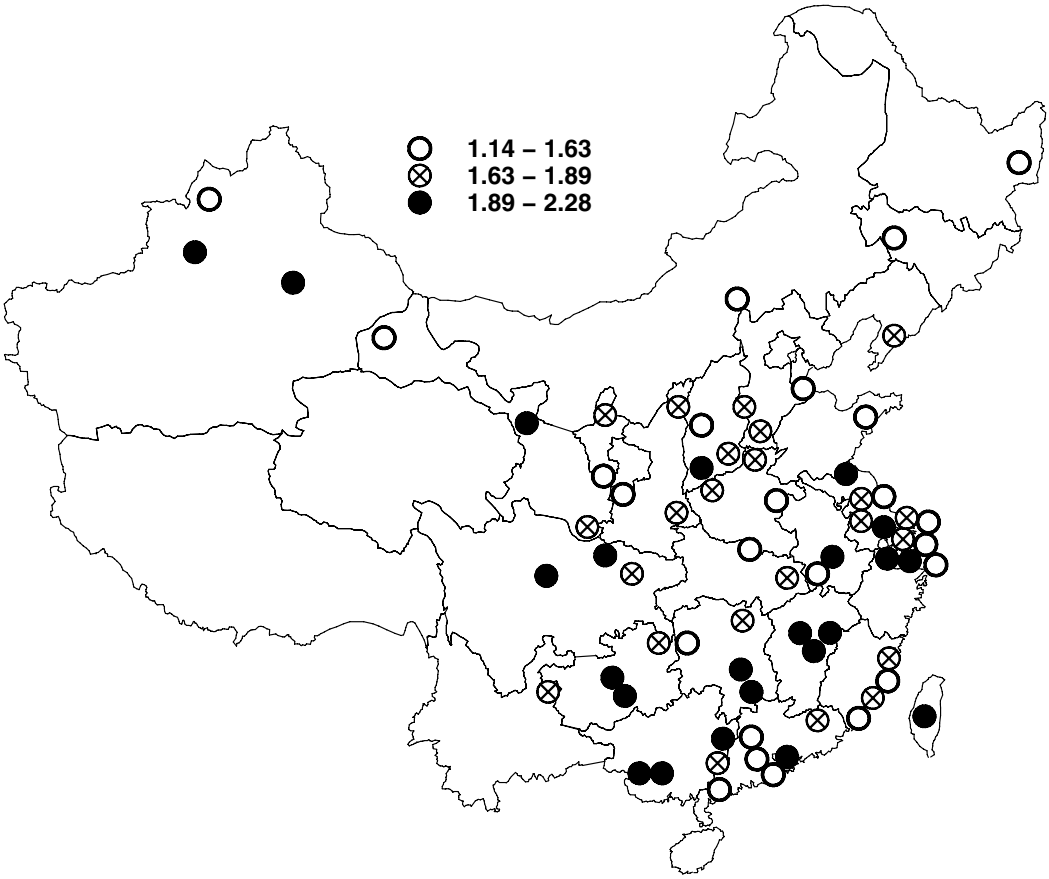
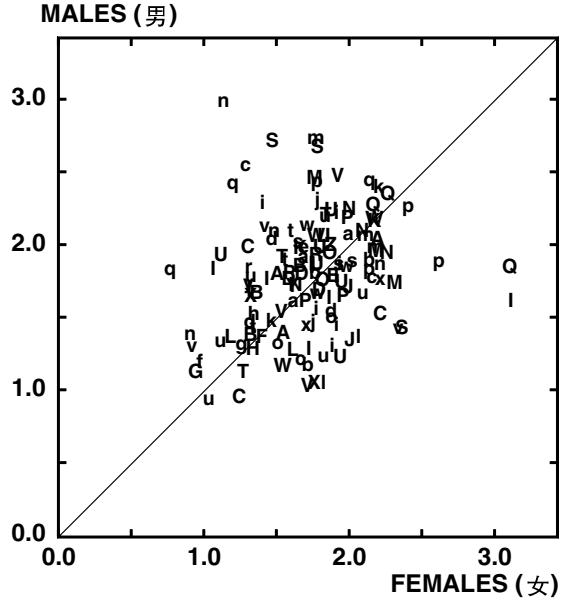
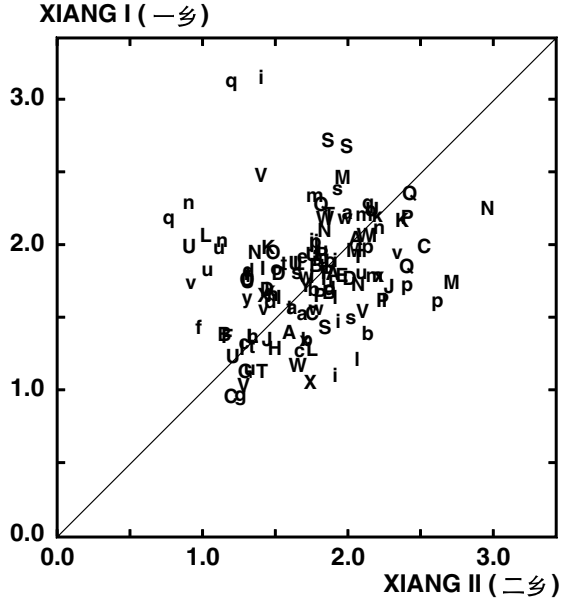
P040 B2-MGLOB – plasma BETA-2-MICROGLOBULIN (μg/mL)







P040 B2-MGLOB – 血浆：β-2-微球蛋白 (微克/毫升)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	1.62	2.18	QA	2.10	2.14	AA	1.47	1.57	KC	2.25	2.18	ZA	2.07	1.59
CC	2.23	1.28	QB	2.02	1.46	AB	1.82	1.59	LA	1.33	1.62	ZB	1.83	1.92
CD	1.05	1.45	QC	2.36	2.19	AC	2.02	2.09	LB	1.51	1.82	ZC	1.79	2.03
DA	1.54	1.54	RA	1.85	1.53	BA	1.75	1.74	LC	1.74	1.53	ZD	2.01	1.86
DB	1.87	1.52	SA	2.31	1.71	BB	1.80	1.71	LD	1.49	1.75	ZE	2.08	1.89
DC	1.63	1.76	SB	2.27	1.74	BC	1.24	1.51	PA	1.81	2.10	ZF	1.89	1.93
FA	1.25	1.18	SC	1.61	2.13	EA	1.85	1.78	PC	2.28	1.88	ZG	1.75	1.58
GA	1.19	1.09	TA	2.02	1.70	HA	1.37	1.34	PD	1.91	2.05	ZH	2.14	2.16
JA	1.97	1.88	TC	1.97	1.57	IA	1.92	2.25	PE	1.71	2.04	ZI	2.17	2.19
JB	1.37	1.87	TD	1.25	1.30	IB	1.78	1.68	UA	1.50	1.53	ZJ	2.16	1.98
MB	1.98	2.14	VA	1.92	2.12	IC	1.83	1.75	UB	2.18	1.85	ZK	2.17	1.61
MC	2.19	1.97	VB	1.13	1.31	ID	1.61	1.49	UC	1.43	1.41	ZL	1.95	2.07
MD	2.20	2.04	VC	1.79	1.47	IE	1.26	1.80	UD	1.82	1.22	ZM	1.98	1.47
NA	1.95	2.14	WA	1.38	1.64	IF	1.56	1.82	UE	1.20	1.88	ZN	1.75	1.65
NB	1.63	1.58	WB	1.98	2.06	IG	2.10	1.88	UF	1.73	1.93	ZO	1.73	1.88
NC	2.58	1.56	WC	2.06	1.73	KB	1.69	1.56				ZP	1.91	2.02
ND	1.88	1.55	XA	1.37	1.98									
OA	1.50	1.65	XB	1.51	1.50									
OB	1.69	1.86	YA	1.69	1.45									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	1.79	1.71	1.71	1.75	1.96	1.86

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	1.75	0.34	1.73	0.28	41	3.7	†
Xiang (乡) I	vs	Xiang (乡) II	69	1.75	0.31	1.73	0.31	41	3.7	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

35 *	M012 INFECTc	-37 *	M095 ROADACCb	-34 *	P032 Fe	-24	D026 SeCARRY	-31	Q109 dDBP
27	M014 INTESTINc	-31	M096 ROADACCc	-43 †	P037 BUN	38 *	D037 RICE	-39 †	Q110 dMIDBP
26	M016 PULMTBc	30	M098 DROWNc	-33 *	P046 COTININEf	-32 *	D038 WHTFLOUR	-41 †	Q111 dFEV1adj
-27	M034 LARYNXCAc	28	M109 ALLGla	-31 *	P048 COTIN>20f	34 *	D041 LEGUME	-37 *	Q112 dFVCadj
-26	M035 LUNGCAmc	-30	M110 CONGENITa	26	R004 MUFA	24	D053 ANIMFAT	-29	Q113 dMMEFadj
-36 *	M036 LUNGCAfc	-44 †	M111 NTDa	-34 *	R006 TOTn3	-32 *	D067 GLUTAMINE	-27	Q131 dSMOKNOWf
-32 *	M045 DIABETESc	-27	M112 CONGENHDa	-24	R011 18:0	25	D087 %MUFA	-24	Q135 dSMOK<25f
25	M046 MALNUTRIb	-32 *	P001 TOTCHOL	-31 *	R013 22:0	26	D097 %TOTn9	28	Q153 dWINEday
29	M047 MALNUTRIc	-36 *	P003 NONHDL	44 †	R016 18:1n9	27	D146 %18:1	38 *	Q157 dRICE
-30	M059 ALLVASCc	-37 *	P005 APOB	-35 *	R022 22:6n3	-24	Q031 aINCOME	-35 *	Q158 dWHEAT
-40 †	M063 IHDc	-27	P010 G-CAROT	24	R025 20:3n6	-25	Q050 c%H2OPIPE	28	Q172 dGRNVEG
-33 *	M065 STROKEc	-38 *	P011 Z-CAROT	-34 *	U005 P/cre	26	Q067 dCOOKm	-35 *	Q176 dEGGS
38 *	M073 DIGESTIVb	-42 †	P013 RBP	-31 *	U006 UREA/cre	30	Q069 dUNVENT	29	Q227 e%DIARRH
25	M074 DIGESTIVc	-33 *	P016 LYCOPENE	-31 *	U009 TAUR/cre	-46 †	Q090 dHEIGHT	-43 †	Q243 fWTadj
36 *	M076 ENTCOLc	-31 *	P022 PHYTOFLU	-27	U014 VOLURmn	-46 †	Q091 dWEIGHT	-42 †	Q245 fHTadj
39 *	M078 CIRRHOSb	-34 *	P023 PHYTOENE	-26	D003 TOTPROT	-38 *	Q092 dBMI	-34 *	G001 LATITUDE
25	M080 TOTLIVRb	26	P024 FOLATE	-30	D006 %PROTKCAL	-40 †	Q108 dSBP	28	G005 HEAT

- Analysis by Dr. Judith Fitzpatrick, using Serex, Inc. Beta-2 Microglobulin Enzyme Immunoassay Kit.
- No clear geographic pattern.
- Moderate correlations between xiangs (41%†) and between males and females (41%†).
- Negative correlation with ischemic heart disease mortality (40%† M063:IHDc) may be of interest.

- 由Judith Fitzpatrick博士利用Serex公司生产的β-2-微球蛋白酶免疫测定试剂盒进行测定。
- 无明显的地理分布模式。
- 两乡之间（41%†）以及男性与女性之间（41%†）具有中度相关性。
- 与缺血性心脏病死亡率呈负相关（40%† M063:IHDc），这可能会引起研究者的兴趣。

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methods: pages 10-11

实验室测定表述格式: 第 332-333 页

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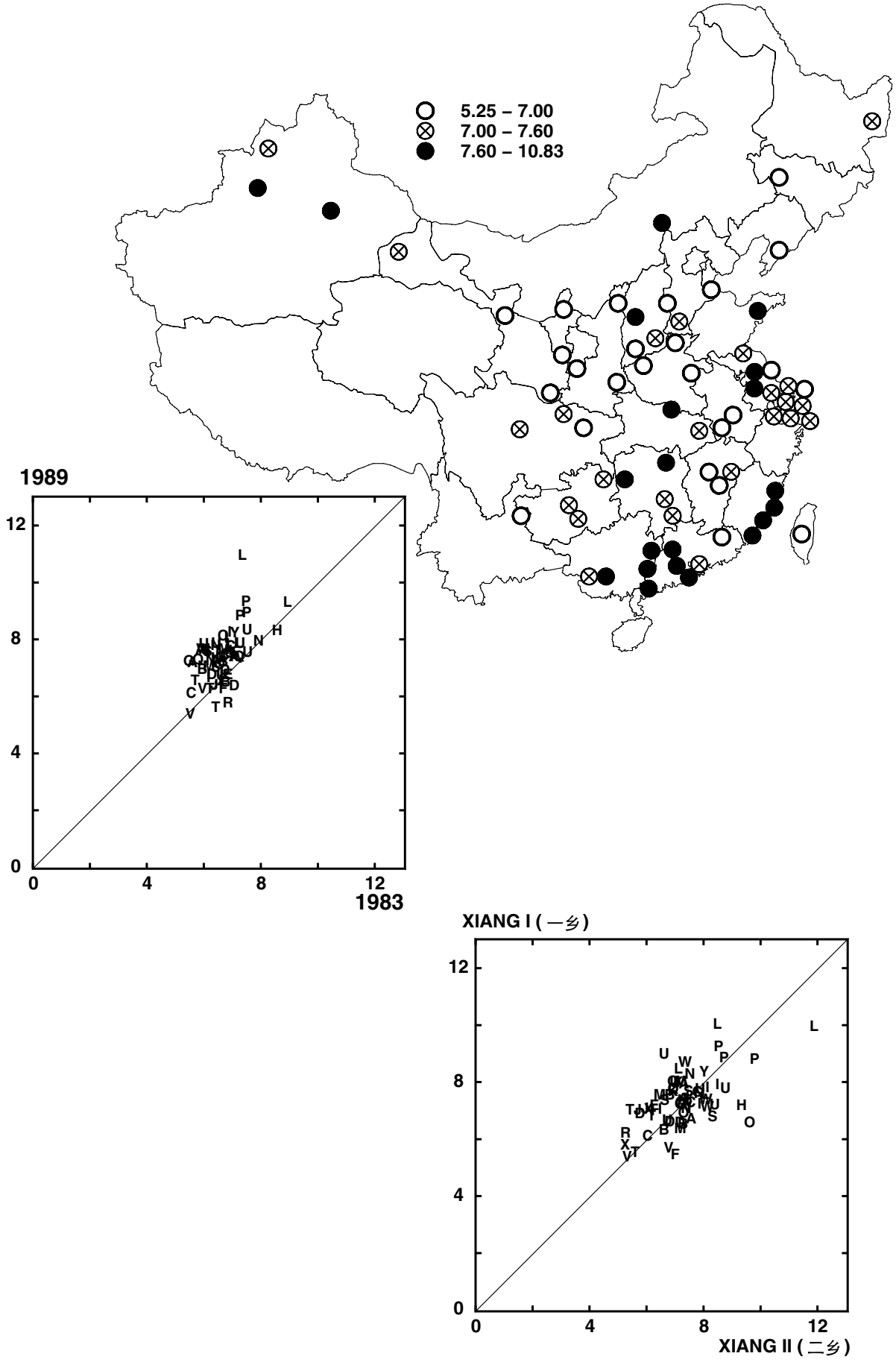
P041 TESTOSTm – plasma TESTOSTERONE (males) (ng/mL)



P041 TESTOSTm – 血浆：睾丸酮 (男性) (毫微克/毫升)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	5.98	QA	7.15	AA	7.27	KC	7.47	ZA	6.64
CC	7.33	QB	7.38	AB	7.53	LA	7.71	ZB	6.61
CD	7.62	QC	7.25	AC	7.04	LB	10.83	ZC	6.63
DA	6.62	RA	5.65	BA	7.08	LC	7.73	ZD	6.41
DB	6.24	SA	7.46	BB	6.37	LD	9.18	ZE	6.63
DC	6.79	SB	7.49	BC	6.81	PA	9.21	ZF	7.28
FA	6.15	SC	6.91	EA	6.64	PC	7.27	ZG	6.92
GA	7.11	TA	6.14	HA	8.18	PD	8.71	ZH	6.56
JA	6.41	TC	5.48	IA	7.47	PE	8.80	ZI	7.54
JB	6.26	TD	6.41	IB	8.13	UA	7.72	ZJ	6.37
MB	6.68	VA	6.14	IC	7.91	UB	7.41	ZK	7.07
MC	7.53	VB	7.20	ID	6.69	UC	7.71	ZL	6.68
MD	6.91	VC	5.25	IE	6.54	UD	7.74	ZM	6.33
NA	7.14	WA	7.51	IF	7.47	UE	8.19	ZN	6.35
NB	7.64	WB	7.62	IG	7.38	UF	6.61	ZO	7.28
NC	7.24	WC	7.92	KB	7.21			ZP	7.69
ND	7.82	XA	6.47						
OA	8.00	XB	5.43						
OB	7.01	YA	8.10						

Mean 平均值	Male (男)	Male (男)	Male (男)
	6.88†	7.68†	6.81

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs	Xiang (乡) II	69	7.23	0.94	7.24	1.14	58	5.8	†
M1983	vs	M1989	64	6.62	0.68	7.27	0.92	55	5.3	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-35 * M006 ALL70-79	-38 * P019 A-CRYPT	-39 † D003 TOTPROT	30 D052 FISH	30 Q093 dPEPULCER
26 M016 PULMTBc	25 P021 NEURSPOR	-38 * D004 SOLCARB	-51 † D059 TOTNDF	36 * Q094 dHEPATIT
-34 * M018 OTHERTBc	-37 * P022 PHYTOFLU	41 † D005 %FATKCAL	-32 * D067 GLUTAMINE	-39 * Q112 dFVCadj
44 † M025 NASOPCAc	-32 * P023 PHYTOENE	45 † D007 %ANPRKCAL	-27 D074 METH+CYS	27 Q117 dDIARRH
40 † M031 LIVERCAc	44 † P029 INORG-P	-52 † D008 %PLPRKCAL	33 * D082 MUFA	27 Q138 dCIGCONSm
26 M035 LUNGCAmc	38 * P030 Se	-37 * D009 %CARBKCAL	31 D084 SATFA	28 Q155 dLIQRday
-42 † M038 CERVIXCAc	-36 * P032 Fe	34 * D010 RETINOL	42 † D085 CHOL	31 * Q157 dRICE
26 M040 LYMPHOMAc	32 * P042 HBsAg	-46 † D015 THIAMINE	31 * D087 %MUFA	-27 Q158 dWHEAT
-27 M053 NERVOUSc	-24 R001 Hb	-35 * D020 Cu	-28 D088 %PUFA	-47 † Q159 dMAIZE
-31 M056 EPILEPSYb	-30 R002 RIBOFDEF	-50 † D021 K	25 D091 M/P	-25 Q161 dMILLET
-31 M064 STROKEb	-24 R004 MUFA	-38 * D022 Mg	33 * D094 TOTn9	-24 Q162 dLEGUME
-30 M074 DIGESTIVc	39 † R014 24:0	-41 † D028 PLNTFOOD	-28 D096 %TOTn6	45 † Q166 dSALTFISH
-26 M075 PEPULCERc	-26 R017 20:1n9	39 † D029 ANIMFOOD	29 D097 %TOTn9	43 † Q167 dSALTFKID
-42 † M077 INTESTOBc	-25 R019 24:1n9	-43 † D031 %PLNTFOOD	26 D104 14:0	37 * Q172 dGRNVEG
27 M081 TOTLIVRc	26 R026 20:4n6	43 † D032 %ANIMFOOD	39 * D141 %16:1	33 * Q174 dFISH
30 M117 NEOTETANa	-51 † U001 Cl/cre	-58 † D033 PLNTPROT	28 D146 %18:1	41 † Q175 dMEAT
36 * P001 TOTCHOL	-55 † U002 K/cre	42 † D034 ANIMPROT	-28 D147 %18:2	-25 Q243 fWTadj
32 * P003 NONHDL	-56 † U003 Na/cre	-48 † D035 %PLNTPROT	-28 D148 %18:3	-34 * Q247 fBMladj
31 * P004 APOA1	-36 * U006 UREA/cre	48 † D036 %ANIMPROT	28 Q007 cHHSIZE	-35 * G001 LATITUDE
52 † P005 APOB	-38 * U007 URIC/cre	32 * D037 RICE	25 Q015 aCANREADf	-47 † G003 ELEVATION
-31 * P006 ALBUMIN	40 † U009 TAUR/cre	-25 D038 WHTFLOUR	31 * Q016 aCANREADm	-38 * G004 ARIDITY
-25 P008 A-CAROT	33 * U023 NO3mn	-47 † D039 OTHCEREAL	-42 † Q017 aPRIMARY	38 * G005 HEAT
-41 † P011 Z-CAROT	24 U024 INHIBPRO	-26 D044 SALTVEG	38 * Q019 dCANREAD	
27 P013 RBP	28 U033 INHIBNOC	46 † D049 MEAT	27 Q031 aINCOME	
-29 P015 G-TOCOPH	-26 D001 KCAL	42 † D050 REDMEAT	-25 Q057 dCOALKID	
-41 † P017 LUTEIN	30 D002 TOTFAT	40 † D051 POULTRY	-27 Q064 dCOALNOW	

- Analysis by radioimmunoassay, using Coat-A-Count Total Testosterone. Test is based on testosterone-specific antibody.
- Geographic pattern with higher values in the south, and particularly high values in Fujian (L) and Guangxi (P) provinces.
- Good correlations between xiangs (58%†) and between 1983 and 1989 (55%†).
- Generally correlated with other variables that have a north to south distribution, e.g., positive correlations with animal food intake and negative with plant food intake.

- 采用Coat-A计数总睾丸酮的放射免疫方法测定。该测定是基于睾丸酮特异性抗体。
- 呈一定的地理分布模式，南部各省较高，尤其在福建省（L）和广西自治区（P）。
- 两乡之间（58%†）以及1983年和1989年之间（55%†）具有良好的相关性。
- 与其它表现出南北分布模式的指标具有相关性，如，与动物食品摄入量呈正相关，与植物食品的摄入量呈负相关。

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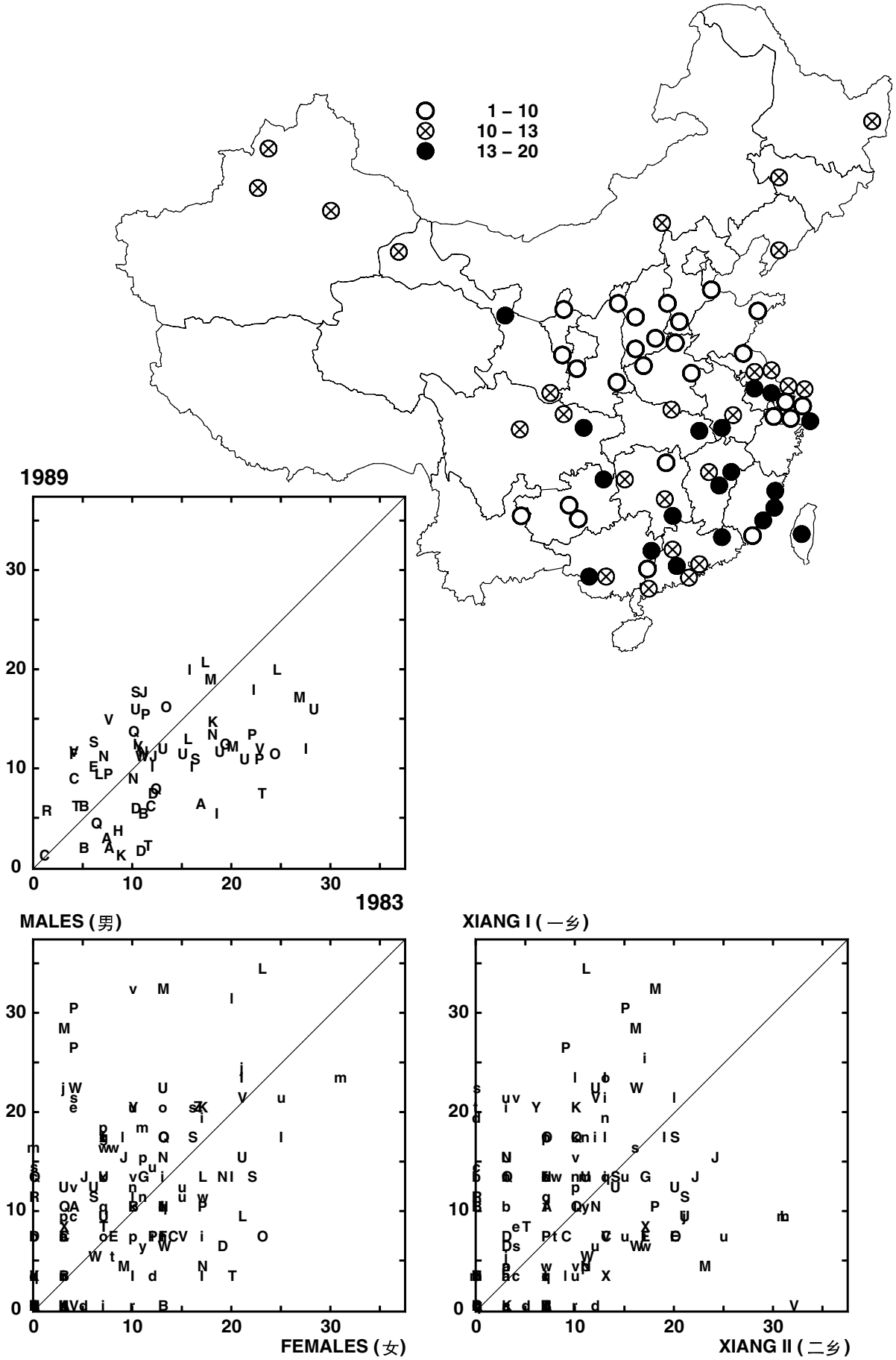
methods: pages 10-11

实验室测定表述格式: 第 332-333 页

方法: 第 10-11 页

P042 HBsAg – plasma HEPATITIS B SURFACE ANTIGEN (% of individual samples that were positive; non-pooled analysis)



P042 HBsAg – 血浆：乙型肝炎病毒表面抗原 (个别样品中阳性的百分比；非混合样品测定)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	10	7	QA	8	0	AA	8	3	KC	1	0	ZA	7	17
CC	8	3	QB	13	13	AB	3	1	LA	12	6	ZB	20	19
CD	0	1	QC	10	5	AC	0	3	LB	20	20	ZC	22	9
DA	5	6	RA	5	5	BA	3	6	LC	10	15	ZD	19	14
DB	0	2	SA	13	11	BB	5	6	LD	22	16	ZE	26	27
DC	4	9	SB	16	5	BC	1	1	PA	22	7	ZF	27	24
FA	12	10	SC	18	16	EA	13	6	PC	14	12	ZG	20	10
GA	15	9	TA	6	7	HA	3	3	PD	17	3	ZH	17	3
JA	17	4	TC	1	10	IA	1	8	PE	7	11	ZI	41	42
JB	19	15	TD	3	0	IB	8	11	UA	16	6	ZJ	18	16
MB	13	20	VA	16	12	IC	18	21	UB	12	11	ZK	15	14
MC	25	12	VB	16	7	ID	12	12	UC	9	12	ZL	13	14
MD	22	1	VC	10	12	IE	5	14	UD	13	9	ZM	12	17
NA	10	16	WA	11	10	IF	10	13	UE	17	14	ZN	27	22
NB	11	11	WB	19	5	IG	18	17	UF	15	16	ZO	15	12
NC	7	14	WC	8	11	KB	15	13				ZP	25	9
ND	9	8	XA	8	3									
OA	12	10	XB	12	5									
OB	13	18	YA	13	10									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	11	9	11	10	20	17

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	11	6	9	5	45	4.2	†
Xiang (乡) I	vs	Xiang (乡) II	69	10	6	10	6	26	2.2	
1983	vs	1989	65	13	7	10	5	47	4.2	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

27	M005 ALL35-69	27	M119 DROWNa	31 *	D014 VITC	32 *	D145 %18:0	27	Q149 dALCEVER
25	M008 MEDICALc	-27	P006 ALBUMIN	-46 †	D015 THIAMINE	39 *	D146 %18:1	25	Q155 dLIQRday
25	M010 NONMEDc	-25	P015 G-TOCOPH	-34 *	D023 Mn	-35 *	D147 %18:2	30	Q156 dALCOday
43 †	M016 PULMTBc	-29	P019 A-CRYPT	-39 †	D033 PLNTPROT	-28	D148 %18:3	40 †	Q157 dRICE
-25	M021 SCHISTOc	-37 *	P022 PHYTOFLU	37 *	D037 RICE	28	Q007 cHHSIZE	-36 *	Q158 dWHEAT
28	M022 ALLCAb	29	P024 FOLATE	-35 *	D038 WHTFLOUR	-40 †	Q057 dCOALKID	-28	Q159 dMAIZE
32 *	M024 MOUTHCAc	-44 †	P038 PEPSIN	-26	D039 OTHCEREAL	-33 *	Q064 dCOALNOW	-24	Q161 dMILLET
33 *	M025 NASOPCAc	32 *	P041 TESTOSTm	-37 *	D059 TOTNDF	-26	Q091 dWEIGHT	-24	Q162 dLEGUME
38 *	M031 LIVERCAc	51 †	P044 HPYLORI	-38 *	D067 GLUTAMINE	-27	Q092 dBMI	24	Q163 dSWEETPOT
35 *	M040 LYMPHOMAc	-29	R002 RIBOFDEF	40 †	D087 %MUFA	37 *	Q093 dPEPULCER	-39 †	Q243 fWTadj
-28	M045 DIABETESc	-26	R010 16:0	-34 *	D088 %PUFA	31	Q094 dHEPATIT	-27	Q245 fHTadj
44 †	M081 TOTLIVRc	24	R014 24:0	-28	D090 P/S	-29	Q095 dSCHISTO	-31 *	Q247 fBMIadj
31	M097 DROWNb	-46 †	U006 UREA/cre	32 *	D091 M/P	-30	Q108 dSBP	-28	G001 LATITUDE
34 *	M099 SUICIDEb	-36 *	D003 TOTPROT	-25	D095 %TOTn3	-26	Q109 dDBP	-34 *	G004 ARIDITY
40 *	M100 SUICIDEc	-30	D006 %PROTKCAL	-35 *	D096 %TOTn6	-31	Q110 dMIDBP	34 *	G005 HEAT
-34 *	M111 NTDa	-44 †	D008 %PLPRKCAL	40 †	D097 %TOTn9	40 †	Q117 dDIARRH		

- Analysis by radioimmunoassay. Analyser: Beijing Instrument Factory, Model FT-630G, gamma counter.
- Geographic pattern with north to south gradient.
- Tremendous scatter in male vs. female and xiang I vs. xiang II pictograms occurs because the data recorded are the percentage of samples positive, which would number only about 10 per xiang. In the 1983 vs. 1989 pictogram, the values represent whole counties, so the denominators for each point are twice as large as for the 1989 pictograms, but they are still not large enough for statistical stability.
- The change from 1983 to 1989 (13% to 10% positive) is larger than would be expected. There is no obvious explanation for this, but it is possible that at least part of it is artefactual.
- Although HBV is a cause of most liver cancer, the geographic correlation with liver cancer mortality is only moderate. This is because HBV is prevalent everywhere in China, so even though it is a necessary factor in the development of liver cancer, the geographic variation in liver cancer is driven largely by the geographic variation of other factors that also contribute to the risk of contracting liver cancer.

- 采用放射免疫法测定。仪器：FT-630G型γ计数仪（北京仪器厂）。
- 地理分布模式呈由北向南的梯度。
- 男性-女性和乡I-乡II对照图中的数据点十分分散，是因为数据代表阳性样品的百分率，每乡仅有10例左右。在1983年-1989年对照图中，数据点代表整个县，因此每点的分母是1989年男女和乡对照图中分母的2倍，但这些值仍不够大到具有统计学稳定性。
- 从1983年到1989年的变化（阳性率从13％降至10％）比预期的要大。尚无合理的解释，可能至少部分是假象造成的。
- 尽管HBV是大部分肝癌的病因，但是HBV与肝癌死亡率仅表现为中度的地理相关性。这是因为HBV在中国各地均很普遍，因此，即使HBV是肝癌的必要因素，但是肝癌的地区差异主要是由肝癌的其它危险因素的地区差异造成的。

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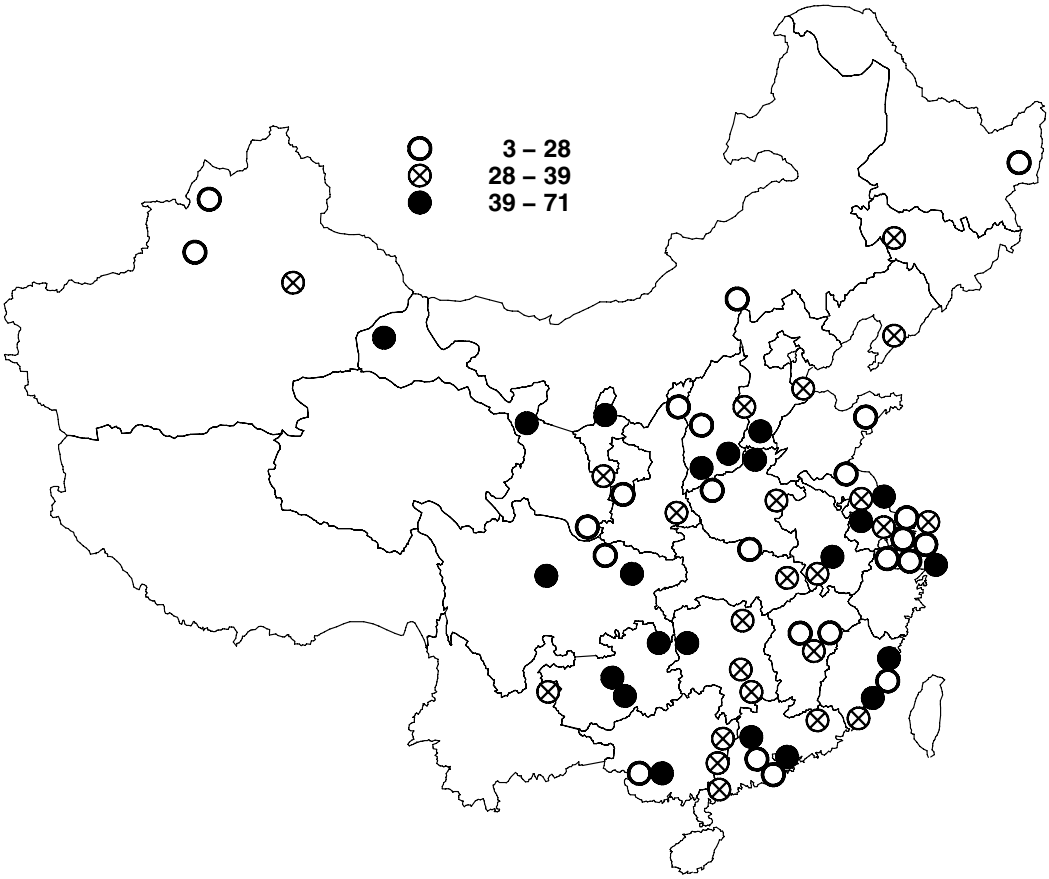
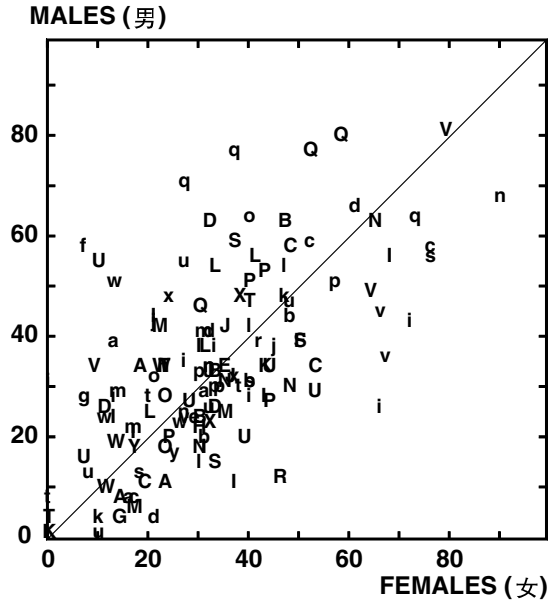
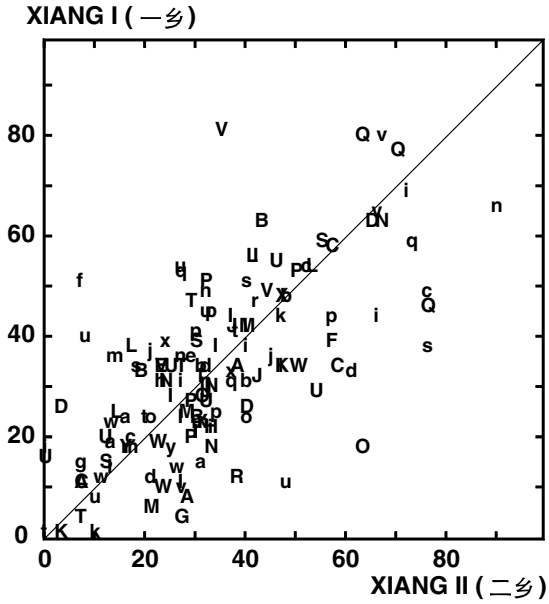
P043 HBsAb – plasma HEPATITIS B ANTI-SURFACE ANTIGEN ANTIBODY (% of individual samples that were positive; non-pooled analysis)







P043 HBsAb – 血浆：乙型肝炎病毒抗表面抗原抗体 (个别样品中阳性的百分比；非混合样品测定)

Inland Provinces (内地)									Coastal Provinces (沿海)					
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	57	62	ND	27	31	WA	20	19	AA	35	15	KC	1	5
CC	45	52	OA	29	22	WB	16	11	AB	17	22	LA	27	31
CD	8	18	OB	40	31	WC	41	17	AC	8	19	LB	48	40
DA	32	32	QA	73	39	XA	47	31	BA	52	47	LC	53	40
DB	63	46	QB	71	65	XB	26	34	BB	25	32	LD	19	25
DC	14	16	QC	60	33	YA	16	21	BC	26	35	PA	27	38
FA	47	28	RA	24	44				EA	28	32	PC	24	29
GA	15	10	SA	56	56				HA	27	26	PD	51	50
JA	39	40	SB	13	25				IA	25	13	PE	41	35
JB	36	28	SC	34	45				IB	18	38	UA	50	29
MB	40	26	TA	37	39				IC	48	70	UB	41	40
MC	13	17	TC	30	21				ID	26	54	UC	7	8
MD	26	24	TD	5	0				IE	35	28	UD	29	30
NA	25	31	VA	46	65				IF	25	8	UE	15	23
NB	64	77	VB	57	73				IG	40	27	UF	29	38
NC	31	40	VC	28	18				KB	40	45			

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)
	36	34	30	32

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	33	16	33	16	73	8.7	†
Xiang (乡) I	vs	Xiang (乡) II	69	33	16	34	16	80	10.8	†

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001
Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

29	M015 PULMTBb	-25	M110 CONGENITa	-28	D006 %PROTKCAL	39 †	D042 LIGHTVEG	-24	Q166 dSALTFISH		
-29	M020 VIRALHEPc	-36 *	M111 NTDa	-27	D010 RETINOL	-28	D072 LYSINE	-30	Q201 eDOCVIS		
-25	M021 SCHISTOc	-33 *	P002 HDLCHOL	-24	D016 RIBOFLAV	-27	D085 CHOL	-25	Q229 e%RESP		
36 *	M047 MALNUTRIc	31	P012 RETINOL	-31 *	D029 ANIMFOOD	-29	D086 LYS/ARG	-26	Q231 e%FEVER		
31	M071 PNEUMONc	-24	P039 THYROXINE	29	D031 %PLNTFOOD	26	Q069 dUNVENT				
30	M073 DIGESTIVb	-24	R021 20:5n3	-29	D032 %ANIMFOOD	-27	Q094 dHEPATIT				
28	M093 ACCIDENTb	-24	D003 TOTPROT	-26	D034 ANIMPROT	-25	Q095 dSCHISTO				

- Analysis by radioimmunoassay. Analyser: Beijing Instrument Factory, Model FT-630G, gamma counter.
- No clear geographic pattern, but large differences among counties.
- Strong correlations between xiangs (80%†) and between males and females (73%†).
- Few correlations with other variables, and none of obvious interest.

- 采用放射免疫法测定。仪器：FT-630G型γ计数仪（北京仪器厂）。
- 无明显的地区分布模式，但是各县之间具有很大的差异。
- 两乡之间（80%†）以及男性与女性之间（73%†）具有很强的相关性。
- 与极少数其它指标存在相关性，但这些相关性没有明显让人感兴趣的地方。

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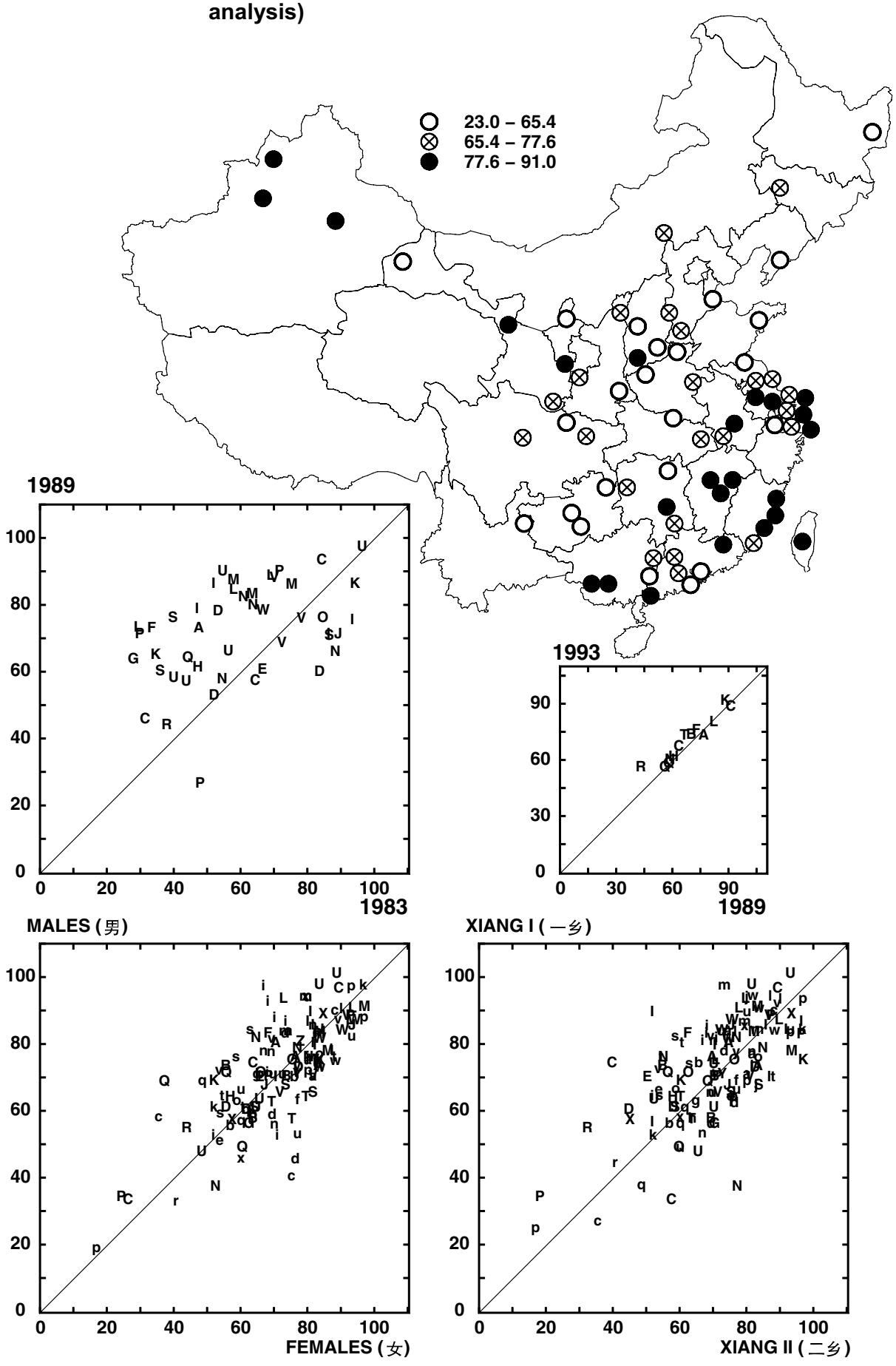
P044 HPYLORI – plasma HELICOBACTER PYLORI IgG ANTIBODY (using cut-off 300) (% of individual samples that were positive; non-pooled analysis)



P044 HPYLORI – 血浆：幽门螺旋杆菌抗体 (采用阈值300) (个别样品中阳性的百分比；非混合样品测定)

Inland Provinces (内地)

Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	92.3	88.5	QA	53.7	60.7
CC	56.3	69.2	QB	63.2	57.6
CD	44.7	30.6	QC	67.8	42.5
DA	77.1	75.0	RA	42.9	42.1
DB	51.9	68.8	SA	75.0	67.8
DC	58.9	62.2	SB	59.2	58.6
FA	72.1	72.4	SC	69.7	69.8
GA	62.6	63.3	TA	59.9	64.8
JA	79.8	86.5	TC	68.3	78.5
JB	70.3	74.8	TD	61.5	69.9
MB	85.0	82.6	VA	87.0	90.1
MC	82.2	83.3	VB	67.7	62.4
MD	86.4	85.0	VC	74.9	75.2
NA	78.8	66.7	WA	77.4	86.5
NB	64.9	75.0	WB	80.6	87.4
NC	81.2	79.1	WC	77.3	85.5
ND	56.7	59.5	XA	50.5	58.5
OA	66.3	62.0	XB	90.5	81.9
OB	75.0	79.2	YA	71.2	76.7

Mean 平均值	Male (男)	Female (女)
	69.5	70.5

Coastal Provinces (沿海)

Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
AA	77.6	78.5	KC	64.0	51.8
AB	72.1	78.7	LA	72.3	79.6
AC	76.7	75.0	LB	87.8	91.2
BA	69.6	69.4	LC	86.0	77.0
BB	62.9	69.6	LD	83.5	90.1
BC	63.5	56.0	PA	70.1	74.0
EA	59.5	59.5	PC	89.0	87.8
HA	60.4	60.2	PD	87.3	94.7
IA	53.7	57.5	PE	25.6	20.4
IB	77.8	70.2	UA	71.6	77.6
IC	91.0	73.3	UB	56.0	54.0
ID	70.1	75.8	UC	57.3	71.2
IE	87.5	76.2	UD	89.0	88.2
IF	74.5	75.0	UE	65.0	67.0
IG	85.2	77.4	UF	96.5	84.3
KB	85.3	90.0			

Mean	Male (男)	Female (女)
	73.2	72.6

Taiwan (台湾)

Area 地区	Male 男	Fem. 女
ZA	78.1	79.0
ZB	79.7	71.9
ZC	76.7	78.3
ZD	56.1	69.4
ZE	65.0	61.7
ZF	91.7	84.8
ZG	81.7	68.8
ZH	83.0	81.9
ZI	88.2	88.5
ZJ	90.0	90.0
ZK	88.1	85.0
ZL	81.7	81.4
ZM	83.6	81.1
ZN	86.7	86.7
ZO	66.7	65.9
ZP	78.3	68.3

Mean	Male (男)	Fem. (女)
	79.7	77.7

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	71.1	13.6	71.5	14.2	85	13.1	†
Xiang (乡) I	vs	Xiang (乡) II	69	71.8	14.2	70.8	14.0	79	10.6	†
1983	vs	1989	46	59.8	20.0	70.9	14.4	46	3.4	*
1989	vs	1993	13	67.6	13.8	68.5	11.9	95	10.6	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

33 * M022 ALLCAb	-25 M047 MALNUTRIc	-26 M117 NEOTETANa	-25 R024 20:2n6	-33 * Q180 dGREENTEA
29 M023 ALLCAc	27 M080 TOTLIVRb	-25 P017 LUTEIN	-29 U011 COT/cre	
31 * M028 STOMCAc	42 † M081 TOTLIVRc	-28 P022 PHYTOFLU	-27 Q057 dCOALKID	
34 * M030 LIVERCAb	32 * M082 GALLBILc	-76 † P038 PEPSIN	30 Q093 dPEPULCER	
44 † M031 LIVERCAc	29 M092 ILL-DEFc	51 † P042 HBsAg	25 Q117 dDIARRH	

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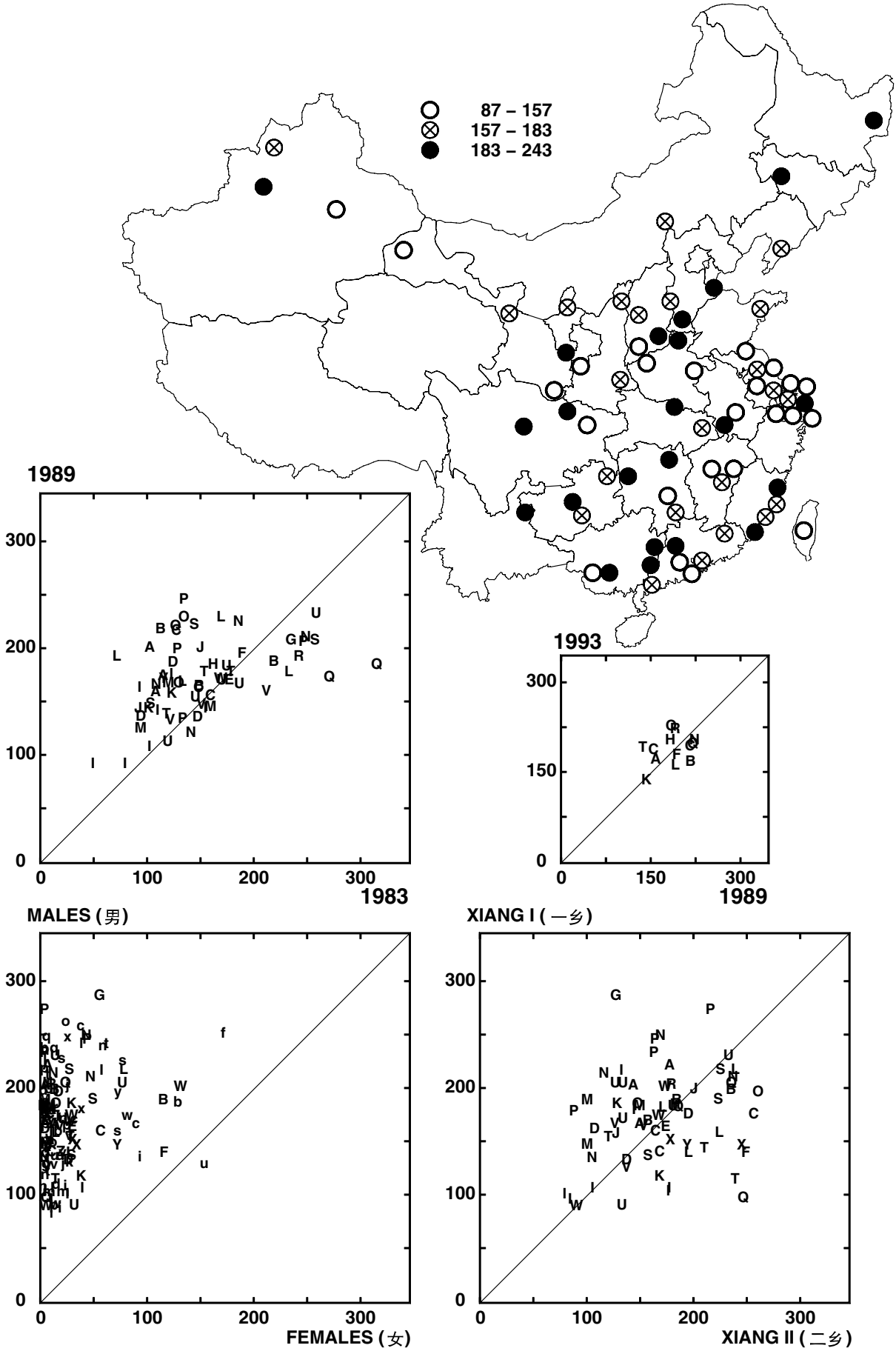
- Analysis of H. pylori IgG antibodies in serum by ELISA. Analyser: Dade Behring ELISA Processor III.
- Geographic pattern with lower prevalence inland (70%), higher in coastal provinces (73%) and highest in Taiwan (79%), but with substantial variation, including some counties with prevalence below 40%. Rates are high compared with many developed countries (IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: Schistosomes, liver flukes, and Helicobacter pylori. Vol 61 (IARC: Lyons), 1994).
- Very good correlations between xiangs (79%†) and between males and females (85%†), and a moderate correlation between 1983 and 1989 values (46%*).
- A better analytic method was used in 1989, and the apparent increase between 1983 and 1989 is almost certainly due to better detection.
- Correlations with diagnosis of peptic ulcer (30%, p<0.05 Q093:dPEPULCER) and stomach cancer mortality (31%* M028:STOMCAc) are weak, but present, and represent known causal associations (IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: Schistosomes, liver flukes, and Helicobacter pylori. Vol 61 (IARC: Lyons), 1994).
- Strong positive correlations with HBsAg (51%† P042:HbsAg) and liver cancer mortality at ages <35 (34%* M030:LIVERCAb) and 35-69 (44%† M031:LIVERCAc).
- Particularly strong negative correlation with pepsinogen (-76%† P038:PEPSIN).

- 通过ELISA测定血清幽门螺杆菌IgG抗体。仪器：Dade Behring ELISA Processor III。
- 具有地理分布模式，内地阳性率较低（70%），沿海各省较高（73%），台湾省最高（79%），但是各省的变异也很大，包括一些阳性率低于40%的县。阳性率高于许多发达国家（IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: Schistosomes, liver flukes, and Helicobacter pylori. Vol 61 (IARC: Lyons), 1994）。
- 两乡之间（79%†）以及男性与女性之间（85%†）具有很好的相关性，1983年和1989年测定值之间呈中度相关（46%*）。
- 1989年采用了更好的分析方法，其阳性率比1983年明显增加几乎肯定是由这种较好的测定方法造成的。
- 与胃溃疡诊断率（30%, p<0.05 Q093:dPEPULCER）和胃癌死亡率（31%* M028:STOMCAc）呈弱相关性，但是这种相关是存在的，反映了幽门螺杆菌与上述两种疾病的因果关系（IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: Schistosomes, liver flukes, and Helicobacter pylori. Vol 61 (IARC: Lyons), 1994）。
- 与HBsAg阳性（51%† P042:HbsAg）、35岁前肝癌死亡率（34%* M030:LIVERCAb）以及35-69岁肝癌死亡率（44%† M031:LIVERCAc）具有很强的正相关关系。
- 与胃蛋白酶原具有特别强的负相关关系（-76%† P038:PEPSIN）。

P045 COTININEm – plasma MALE COTININE (ng/mL) (non-pooled analysis)



P045 COTININEm – 血浆：男性可的宁 (毫微克/毫升) (非混合样品测定)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	152	QA	218	AA	197	KC	155	ZA	134
CC	214	QB	170	AB	171	LA	226	ZB	119
CD	160	QC	182	AC	156	LB	174	ZC	113
DA	133	RA	189	BA	215	LC	189	ZD	153
DB	183	SA	204	BB	161	LD	165	ZE	153
DC	132	SB	219	BC	184	PA	203	ZF	146
FA	192	SC	145	EA	167	PC	131	ZG	119
GA	205	TA	175	HA	182	PD	243	ZH	140
JA	140	TC	175	IA	140	PE	196	ZI	93
JB	198	TD	135	IB	173	UA	230	ZJ	114
MB	164	VA	157	IC	138	UB	167	ZK	192
MC	142	VB	129	ID	88	UC	151	ZL	165
MD	122	VC	144	IE	104	UD	164	ZM	99
NA	163	WA	168	IF	88	UE	110	ZN	123
NB	207	WB	185	IG	160	UF	180	ZO	155
NC	118	WC	87	KB	141			ZP	175
ND	222	XA	163						
OA	226	XB	194						
OB	164	YA	168						

Mean 平均值	Male (男)	Male (男)	Male (男)
	169	166	137

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs	Xiang (乡) II	69	168	43	167	47	21	1.7	
M1983	vs	M1989	65	150	54	168	35	45	4.0	†
1989	vs	1993	13	183	30	182	25	32	1.1	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-24	M028 STOMCAc	29	M101 HOMICIDEb	45 †	U011 COT/cre	-25	Q091 dWEIGHT	27	Q180 dGREENTEA
-34 *	M032 PANCRSCAc	-33	M119 DROWNa	-42 †	D017 NIACIN	65 †	Q130 dSMOKNOWm	33 *	Q187 dBLEED
-32 *	M040 LYMPHOMAc	-27	P031 Zn	25	D053 ANIMFAT	58 †	Q134 dSMOK<25m		
28	M071 PNEUMONc	66 †	P047 COTIN>20m	-26	Q090 dHEIGHT	35 *	Q142 dTOBCONSm		

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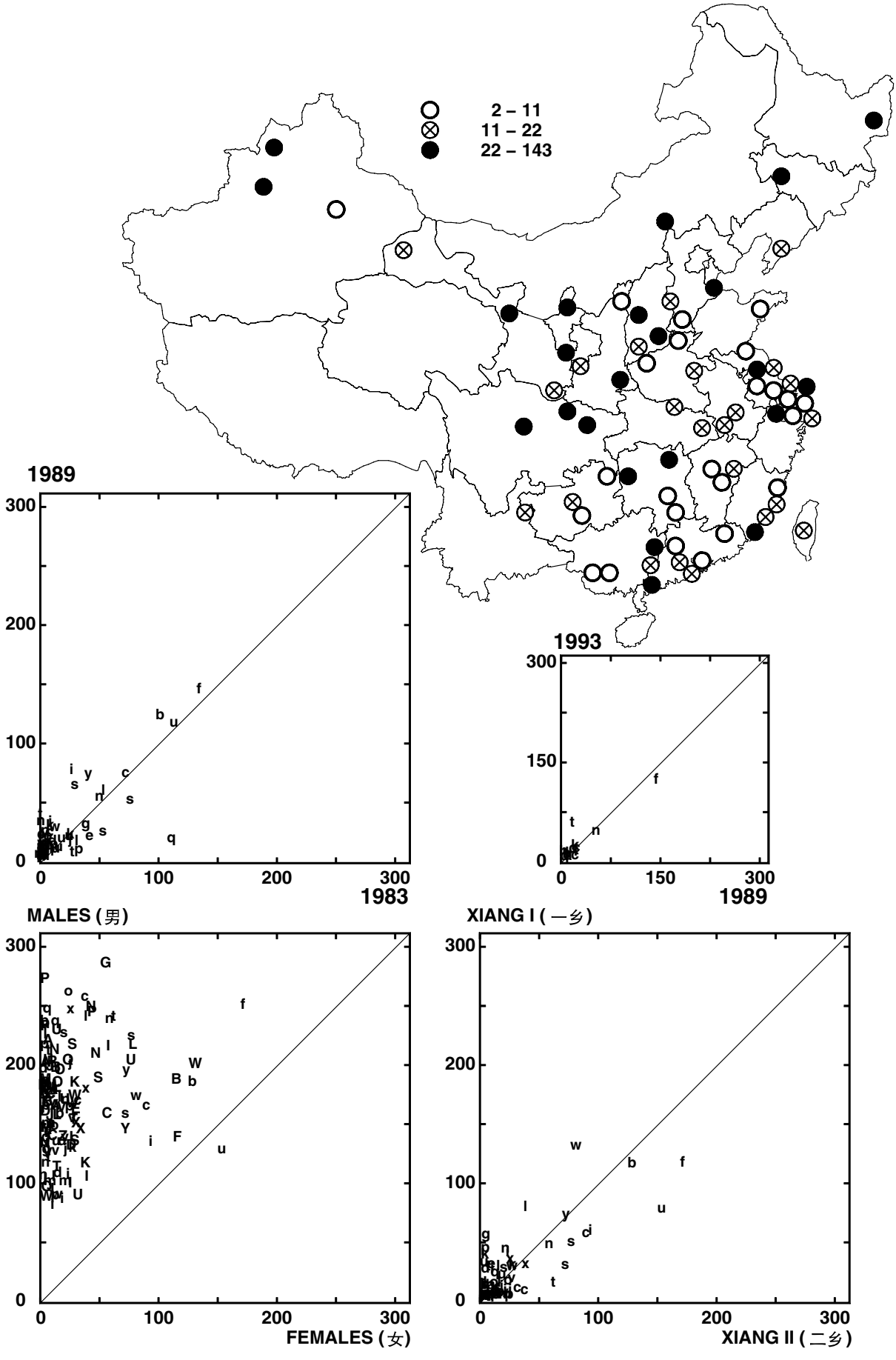
- Analysis of free cotinine by ELISA. Analyser: Dade Behring ELISA Processor III.
- No clear geographic pattern.
- Poor correlations between xiangs (21%) and between 1983 and 1989 (32%).
- This value is the average plasma cotinine level among all men, including smokers and non-smokers, so it represents information both on the percentage of men who smoke and how much they smoke. It does not, however, assess the prevalence of persistent cigarette smoking (i.e., that has continued for several decades).
- Strongly correlated with self-reported smoking (65%† Q130:dSMOKNOWm) and moderately with urinary cotinine (45%† U011:COT/cre).
- Correlations with other variables are mostly uninformative, because of the lack of variation in smoking rates among counties, and because current smoking may be poorly correlated with persistent cigarette smoking.

- 用ELISA方法测定。仪器：Dade Behring ELISA Processor III。
- 无明显的地理分布模式。
- 两乡之间（21%）以及1983年和1989年测定值之间（32%）相关性很差。
- 该值是所有男性（包括吸烟者和不吸烟者）血浆可的宁的平均水平，因此反映了吸烟男性比例和吸烟量的信息。但是，该值并不能评估持续吸烟情况（即持续吸烟几十年的情况）。
- 与自己声称吸烟的比例呈强相关（65%† Q130:dSMOKNOWm），并与尿可的宁含量呈中度相关（45%† U011:COT/cre）。
- 由于各县男性吸烟比例无差异，而且现阶段吸烟可能与持续吸烟缺乏相关性，因此与其它指标的相关性不能提供有用信息。

P046 COTININEf – plasma FEMALE COTININE (ng/mL) (non-pooled analysis)



P046 COTININEf – 血浆：女性可的宁 (毫微克/毫升) (非混合样品测定)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Female 女	Area 地区	Female 女	Area 地区	Female 女	Area 地区	Female 女	Area 地区	Female 女
CB	20	QA	17	AA	8	KC	28	ZA	10
CC	22	QB	5	AB	5	LA	58	ZB	14
CD	72	QC	4	AC	10	LB	15	ZC	13
DA	15	RA	12	BA	8	LC	9	ZD	19
DB	2	SA	62	BB	11	LD	21	ZE	5
DC	9	SB	23	BC	121	PA	24	ZF	12
FA	143	SC	50	EA	19	PC	8	ZG	32
GA	29	TA	38	HA	3	PD	3	ZH	31
JA	14	TC	6	IA	7	PE	14	ZI	53
JB	16	TD	17	IB	75	UA	9	ZJ	36
MB	4	VA	22	IC	4	UB	10	ZK	22
MC	12	VB	13	ID	18	UC	19	ZL	9
MD	6	VC	11	IE	31	UD	115	ZM	14
NA	8	WA	27	IF	14	UE	17	ZN	16
NB	32	WB	105	IG	2	UF	9	ZO	4
NC	3	WC	8	KB	21			ZP	7
ND	52	XA	34						
OA	19	XB	29						
OB	12	YA	72						

Mean 平均值	Female (女)	Female (女)	Female (女)
	27	23	19

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs	Xiang (乡) II	69	24	28	26	35	78	10.1	†
F1983	vs	F1989	65	20	30	24	29	79	10.4	†
1989	vs	1993	13	26	37	24	32	93	8.1	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

25	M017 OTHERTBb	38 *	M096 ROADACCc	37 *	D047 MILK	-28	Q132 dSMOKAGEm
37 *	M034 LARYNXCAc	24	P019 A-CRYPT	24	D086 LYS/ARG	83 †	Q135 dSMOK<25f
36 *	M036 LUNGCAfc	-33 *	P040 B2-MGLOB	24	D089 %SATFA	44 †	Q139 dCIGCONSf
34 *	M041 LEUKEMIAb	94 †	P048 COTIN>20f	35 *	D104 14:0	31 *	Q142 dTOBCONSm
-25	M053 NERVOUSc	24	D010 RETINOL	35 *	D136 %14:0	72 †	Q143 dTOBCONSf
-24	M057 EPILEPSYc	29	D026 SeCARRY	24	Q092 dBMI	-27	Q172 dGRNVEG
-25	M076 ENTCOLc	-27	D041 LEGUME	28	Q099 dBRTHFAST	33 *	Q177 dMILK
46 †	M095 ROADACCb	-25	D043 GREENVEG	86 †	Q131 dSMOKNOWf	-27	Q186 dMENCYCLE

-27	Q213 eDPT3rd
-28	Q216 ePOLIO3
28	Q243 fWTadj
30	Q247 fBMIadj
29	G001 LATITUDE

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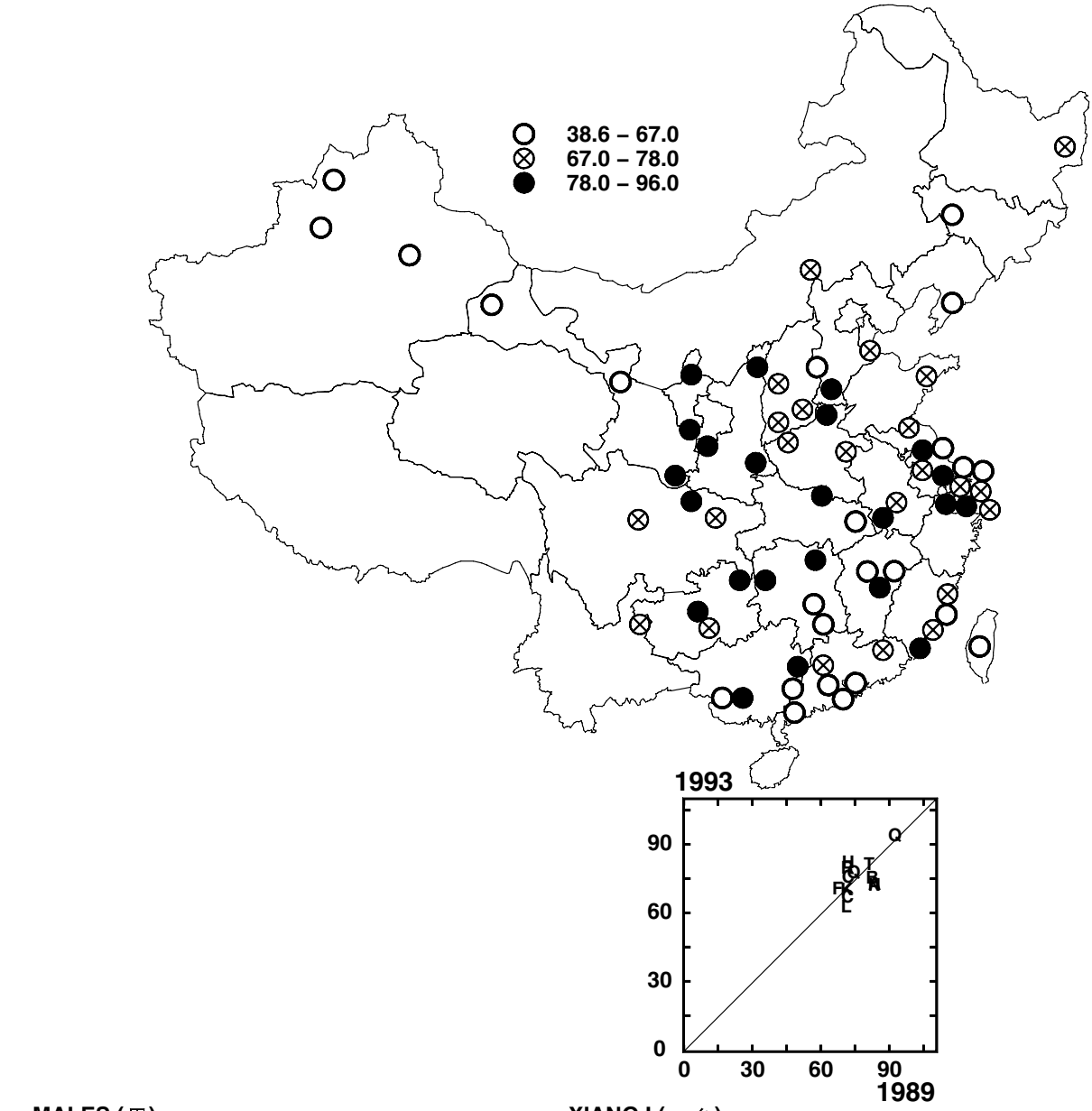
- Analysis of free cotinine by ELISA. Analyser: Dade Behring ELISA Processor III.
- No clear geographic pattern. Most counties are clustered at very low values, with a small number of higher ones.
- This value is the average plasma cotinine level among all women, including smokers and non-smokers, so it represents information both the percentage of women who smoke and how much they smoke.
- Very strong correlations between xiangs (78%†), between 1983 and 1989 (79%†), between 1989 and 1993 (93%†).
- Strongly correlated with self-reported smoking (86%† Q131:dSMOKNOWf) and other tobacco related questionnaire variables.
- Correlations with other variables are mostly uninformative, because of the small number of women who smoke.

- 用ELISA方法测定。仪器：Dade Behring ELISA Processor III。
- 无明显的地理分布模式。大多数县都处于很低水平，少数县的女性可的宁水平较高。
- 该值是所有女性（包括吸烟者和不吸烟者）血浆可的宁的平均水平，因此反映了吸烟女性比例和吸烟量的信息。
- 两乡之间（78%†）、1983年和1989年测定值之间（79%†）以及1989年和1993年测定值之间（93%†）具有很强的相关性。
- 与自己声称吸烟的比例呈强相关（86%† Q131:dSMOKNOWf），并和其它与烟草有关的调查指标呈强相关。
- 由于女性吸烟者较少，因此与其它指标的相关性不能提供有用信息。

P047 COTIN>20m – plasma PERCENT OF MALES WITH COTININE >20 ng/mL



P047 COTIN>20m – 血浆：可的宁大于 20 毫微克/毫升 的男性百分比

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	71.3	QA	91.7	AA	77.6	KC	78.3	ZA	49.8
CC	70.9	QB	80.9	AB	76.5	LA	85.9	ZB	45.8
CD	73.7	QC	73.5	AC	82.7	LB	71.0	ZC	45.1
DA	68.0	RA	70.9	BA	81.8	LC	70.4	ZD	61.4
DB	82.5	SA	72.9	BB	64.6	LD	66.0	ZE	57.0
DC	68.4	SB	84.4	BC	76.3	PA	86.5	ZF	57.6
FA	66.8	SC	68.4	EA	64.9	PC	45.9	ZG	51.3
GA	69.1	TA	78.5	HA	71.6	PD	84.0	ZH	54.8
JA	71.9	TC	79.5	IA	68.8	PE	65.5	ZI	38.6
JB	81.2	TD	80.7	IB	80.8	UA	77.8	ZJ	42.9
MB	83.0	VA	64.5	IC	75.3	UB	60.2	ZK	59.5
MC	60.3	VB	61.4	ID	60.1	UC	46.7	ZL	62.5
MD	54.7	VC	78.0	IE	47.9	UD	57.4	ZM	48.1
NA	65.5	WA	66.2	IF	60.6	UE	56.1	ZN	53.6
NB	86.9	WB	60.8	IG	83.0	UF	67.0	ZO	58.0
NC	66.0	WC	38.6	KB	70.8			ZP	57.9
ND	82.9	XA	87.4						
OA	96.0	XB	86.3						
OB	65.2	YA	70.2						

Mean 平均值	Male (男)	Male (男)	Male (男)
	73.1	69.7	52.7

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs	Xiang (乡) II	69	72.0	12.6	71.1	13.5	50	4.7	†
1989	vs	1993	13	75.8	7.3	73.3	7.9	58	2.4	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

26	M061 RHEUMHDc	66 †	P045 COTININEm	33 *	D009 %CARBKCAL	-36 *	D086 LYS/ARG	26	Q170 dLEGUMyr		
-25	M063 IHDc	26	R004 MUFA	-24	D029 ANIMFOOD	-27	Q019 dCANREAD	-30	Q173 dFRUIT		
31	M071 PNEUMONc	26	R019 24:1n9	27	D031 %PLNTFOOD	-25	Q090 dHEIGHT	-26	Q174 dFISH		
25	M075 PEPULCERc	-32 *	R023 18:2n6	-27	D032 %ANIMFOOD	-32 *	Q094 dHEPATIT	-32 *	Q175 dMEAT		
-25	M092 ILL-DEFc	24	U001 Cl/cre	-24	D034 ANIMPROT	24	Q096 dMALARIA	31	Q180 dGREENTEA		
-28	P001 TOTCHOL	26	U011 COT/cre	26	D035 %PLNTPROT	-24	Q117 dDIARRH	-32 *	Q184 dBLACKTEA		
-27	P003 NONHDL	32 *	D004 SOLCARB	-26	D036 %ANIMPROT	80 †	Q130 dSMOKNOWm	24	Q186 dMENCYCLE		
-27	P005 APOB	-30	D005 %FATKCAL	25	D044 SALTVEG	39 *	Q134 dSMOK<25m				
-27	P030 Se	-28	D007 %ANPRKCAL	-24	D050 REDMEAT	40 †	Q138 dCIGCONSm				

- Analysis of free cotinine by ELISA. Analyser: Dade Behring ELISA Processor III.
- No clear geographic pattern, with substantial rates in most places, but much lower in Taiwan.
- A plasma level of 20 ng/mL of cotinine is accepted as a reasonable cutoff that separates regular smokers from nonsmokers. This level was chosen independent of the measurements from this study.
- Good correlations between xiangs (50%†) and between 1989 and 1993 (58%).
- Very strongly correlated with self-reported daily smoking (80%† Q130:dSMOKNOWm). The absolute mean percentages of smokers identified are also very close (see Q130), within 2 percentage points, validating the laboratory method and cutoff value used.
- By this criterion, the prevalence of smoking among middle-aged men is about 73%, compared with 53% in Taiwan.

- 用ELISA方法测定。仪器：Dade Behring ELISA Processor III。
- 无明显的地理分布模式。大多数地方的百分比很高，但台湾很低。
- 血浆可的宁20 ng/mL的水平是公认的作为区分常规吸烟者与非吸烟者的合理的分界点。该值的选择与本次研究的测定无关。
- 两乡之间（50%†）以及1989年和1993年测定值之间（58%）具有很好的相关性。
- 与自己声称吸烟的比例呈强相关（80%† Q130:dSMOKNOWm）。被确定的吸烟者的绝对平均比例也很接近（见Q130），相差2个百分点，证明了所采用的分析方法和上述分界点的合理性。
- 以此标准计算，中年男性吸烟比例约为73%，台湾为53%。

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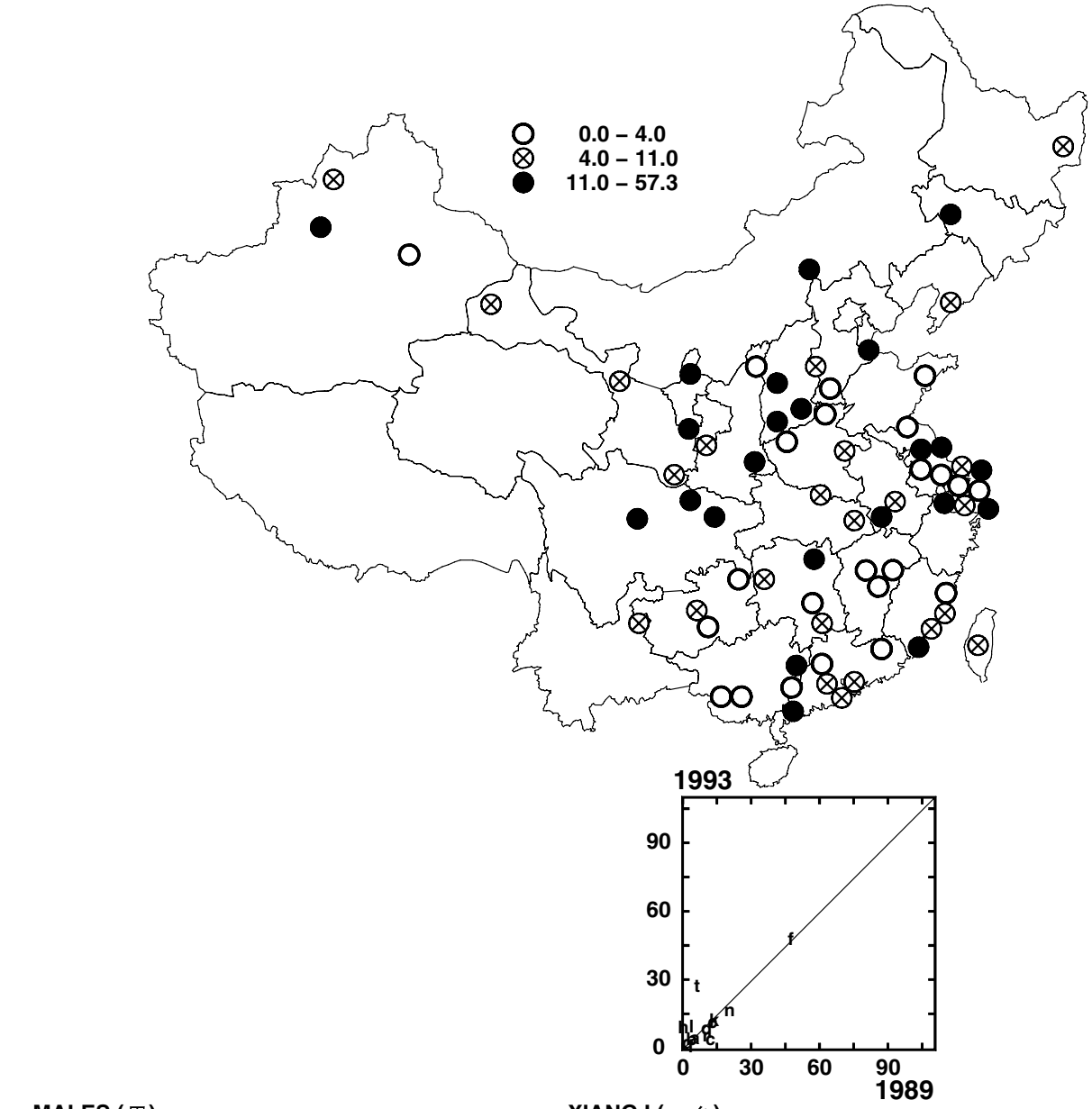
P048 COTIN>20f – plasma PERCENT OF FEMALES WITH COTININE >20 ng/mL



P048 COTIN>20f – 血浆：可的宁大于 20 毫微克/毫升 的女性百分比

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Female 女	Area 地区	Female 女	Area 地区	Female 女	Area 地区	Female 女	Area 地区	Female 女
CB	11.8	QA	10.0	AA	3.3	KC	11.1	ZA	3.7
CC	12.8	QB	0.0	AB	1.9	LA	20.4	ZB	5.2
CD	44.3	QC	1.6	AC	5.2	LB	10.4	ZC	5.1
DA	5.8	RA	10.3	BA	3.5	LC	3.7	ZD	3.7
DB	0.0	SA	24.1	BB	8.6	LD	5.7	ZE	1.7
DC	3.9	SB	13.8	BC	57.3	PA	15.7	ZF	5.0
FA	47.3	SC	21.1	EA	7.7	PC	3.5	ZG	6.5
GA	10.0	TA	14.8	HA	0.0	PD	0.0	ZH	10.8
JA	4.4	TC	0.0	IA	3.4	PE	3.5	ZI	14.9
JB	13.2	TD	6.3	IB	39.0	UA	1.8	ZJ	11.8
MB	1.4	VA	10.0	IC	3.9	UB	5.5	ZK	8.6
MC	2.9	VB	7.8	ID	11.9	UC	8.4	ZL	5.8
MD	3.4	VC	6.9	IE	20.6	UD	39.9	ZM	7.1
NA	5.3	WA	8.0	IF	9.0	UE	7.2	ZN	8.5
NB	10.7	WB	53.4	IG	0.0	UF	3.9	ZO	1.8
NC	0.0	WC	2.1	KB	13.6			ZP	1.7
ND	20.3	XA	22.5						
OA	8.7	XB	25.9						
OB	5.3	YA	40.0						

Mean 平均值	Female (女) 12.9	Female (女) 10.6	Female (女) 6.4

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs	Xiang (乡) II	69	11.8	13.9	11.9	14.0	81	11.3	†
1989	vs	1993	13	11.2	12.2	10.3	12.5	83	4.9	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

29	M034 LARYNXCAc	-31 *	P040 B2-MGLOB	43 †	D047 MILK	25	Q111 dFEV1adj	39 †	Q177 dMILK
33 *	M036 LUNGCAfc	94 †	P046 COTININEf	27	D067 GLUTAMINE	87 †	Q131 dSMOKNOWf	-26	Q186 dMENCYCLE
27	M039 BRAINCAc	29	R011 18:0	25	D074 METH+CYS	-26	Q132 dSMOKAGEm	28	Q243 fWTadj
28	M041 LEUKEMIAb	26	D003 TOTPROT	36 *	D104 14:0	78 †	Q135 dSMOK<25f	34 *	Q247 fBMIadj
-26	M053 NERVOUSc	26	D010 RETINOL	37 *	D136 %14:0	56 †	Q139 dCIGCONSf	33 *	G001 LATITUDE
-27	M057 EPILEPSYc	33 *	D026 SeCARRY	29	Q091 dWEIGHT	27	Q142 dTOBCONSm	-29	G005 HEAT
25	M062 HYPTENSc	-25	D037 RICE	30	Q092 dBMI	61 †	Q143 dTOBCONSf		
40 *	M095 ROADACCb	26	D038 WHTFLOUR	28	Q099 dBRTHFAST	-27	Q157 dRICE		
34 *	M096 ROADACCc	-25	D041 LEGUME	24	Q102 dPHLEGMw	-32 *	Q172 dGRNVEG		

- Analysis of free cotinine by ELISA. Analyser: Dade Behring ELISA Processor III.
- No clear geographic pattern. Most counties are clustered at very low values, with a small number of higher ones. In seven counties, about half (39-57%) of the middle-aged women have cotinine values that indicate some tobacco consumption, but in most counties fewer than 10% do.
- A plasma level of 20 ng/mL of cotinine is accepted as a reasonable cutoff that separates regular smokers from nonsmokers. This level was chosen independent of the measurements from this study.
- Very strong correlations between xiangs (81%†), and between 1989 and 1993 (83%†).
- Strongly correlated with self-reported smoking (87%† Q131:dSMOKNOWf). The absolute mean percentages of smokers identified are also very close, but not as close as for men (see P047:COTIN>20m).
- Correlations with other variables are mostly uninformative, because of the small number of points above very low levels.

- 用ELISA方法测定。仪器：Dade Behring ELISA Processor III。
- 无明显的地理分布模式。大多数地方的百分比很低，但少数地方很高。在7个县，大约一半（39-57%）的中年女性被检测出可的宁，说明她们是吸烟者，但是在大部分县，被检查可的宁的中年女性不足10%。
- 血浆可的宁20 ng/mL的水平是公认的作为区分常规吸烟者与非吸烟者的合理的分界点。该值的选择与本次研究的测定无关。
- 两乡之间（81%†）以及1989年和1993年测定值之间（83%†）具有很强的相关性。
- 与自己声称吸烟的比例呈强相关（87%† Q131:dSMOKNOWf）。被确定的吸烟者的绝对平均比例也很接近，但低于男性（见P047:COTIN>20m）。
- 由于女性吸烟者较少，因此与其它指标的相关性不能提供有用信息。

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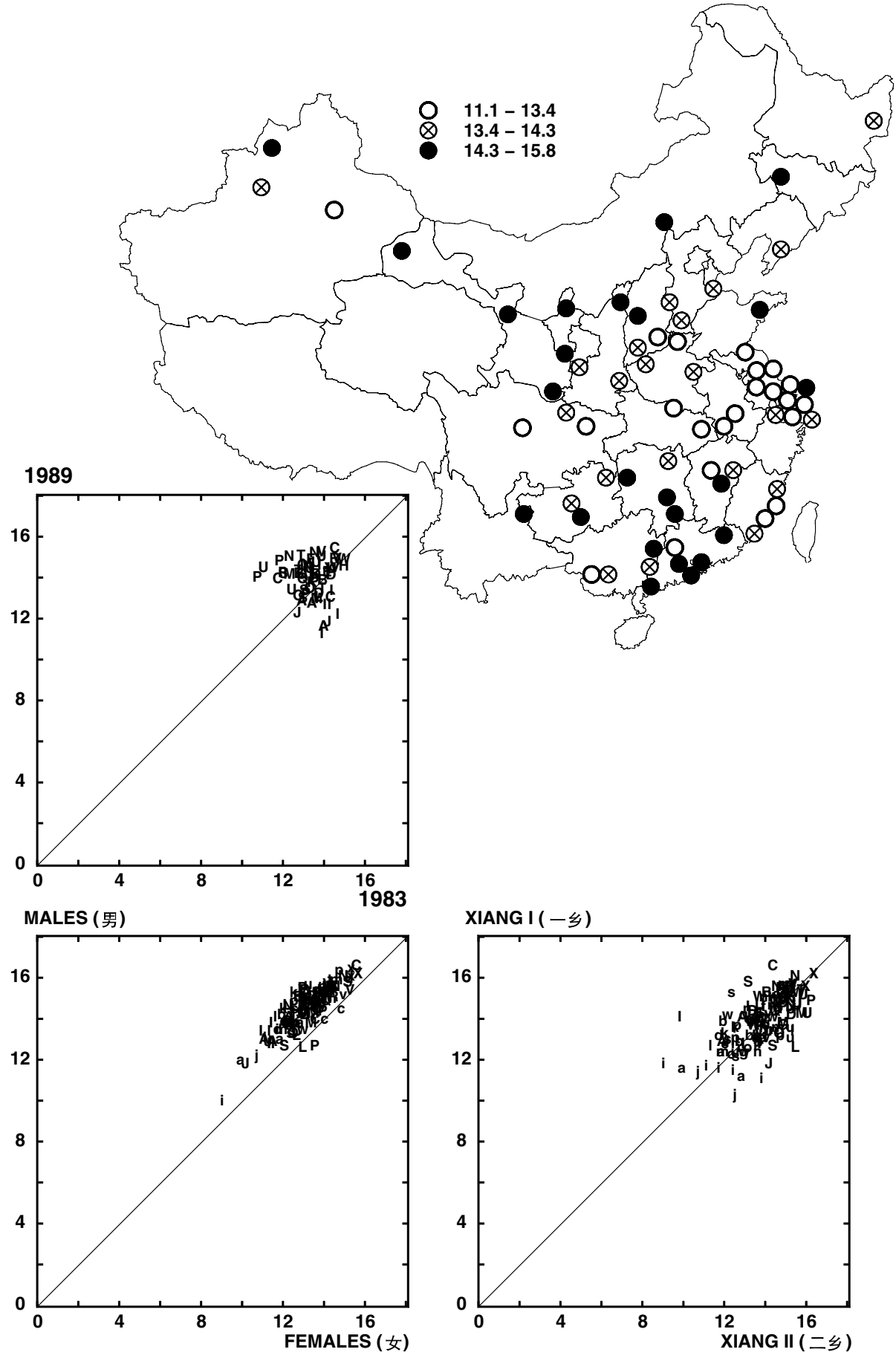
R001 Hb – red blood cell HAEMOGLOBIN (g/dL of whole blood) (non-pooled analysis)



R001 Hb – 红细胞：血红蛋白 (克/100毫升，全血) (非混合样品测定)

Inland Provinces (内地)

Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	13.8	13.8	ND	14.8	12.9	WA	15.3	14.1
CC	13.4	12.3	OA	13.7	12.2	WB	14.3	13.1
CD	15.4	15.2	OB	13.9	12.8	WC	13.4	12.6
DA	14.6	13.3	QA	14.6	13.4	XA	15.6	14.9
DB	13.8	12.4	QB	14.3	13.2	XB	16.1	15.5
DC	14.7	13.3	QC	14.9	13.9	YA	14.7	13.9
FA	15.3	14.1	RA	15.1	14.4			
GA	14.2	12.6	SA	13.9	12.5			
JA	12.4	10.9	SB	14.4	13.7			
JB	12.9	11.3	SC	13.4	12.3			
MB	14.9	14.0	TA	14.5	13.6			
MC	14.2	13.8	TC	15.4	14.3			
MD	13.5	12.1	TD	14.9	13.5			
NA	15.6	14.4	VA	15.2	13.4			
NB	14.9	13.7	VB	15.4	14.1			
NC	15.3	14.4	VC	15.1	15.1			

Coastal Provinces (沿海)

Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
AA	13.2	11.9	KC	14.6	12.6
AB	12.3	10.6	LA	14.6	13.7
AC	13.4	12.0	LB	13.3	12.5
BA	14.9	12.7	LC	13.9	13.4
BB	14.9	13.1	LD	13.8	11.9
BC	14.6	12.8	PA	15.5	13.9
EA	14.8	13.4	PC	13.1	13.1
HA	15.1	13.6	PD	15.0	12.7
IA	11.9	10.3	PE	14.4	13.7
IB	13.5	11.6	UA	14.1	12.4
IC	13.2	11.9	UB	15.1	13.5
ID	13.8	12.6	UC	15.0	13.7
IE	15.0	13.9	UD	15.4	14.3
IF	12.8	11.3	UE	14.8	13.8
IG	14.3	12.4	UF	15.1	14.1
KB	15.0	12.9			

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)
	14.5	13.4	14.2	12.8

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	14.4	0.9	13.1	1.1	88	15.5	†
Xiang (乡) I	vs	Xiang (乡) II	69	13.7	1.0	13.8	1.2	55	5.3	†
1983	vs	1989	63	13.4	0.9	13.7	0.9	-8	0.6	

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001
Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

37 * M001 ALL0-4	25 M067 VASC-STRc	39 * M108 RESPINFa	35 * R022 22:6n3	-36 * D093 TOTn6
24 M002 ALL5-14	40 † M068 ALLRESPb	36 * M109 ALLGIa	28 U002 K/cre	37 * D140 %16:0
37 * M003 ALL15-34	39 * M070 PNEUMONb	33 * M113 PERINATa	-27 U004 Ca/cre	26 D145 %18:0
42 † M004 ALL0-34	40 † M071 PNEUMONc	31 M115 BTHTRAUMa	-26 U023 NO3mn	-25 Q052 c%TOILET
26 M006 ALL70-79	32 * M073 DIGESTIVb	26 M116 RDSa	-27 U024 INHIBPRO	33 * Q064 dCOALNOW
42 † M007 MEDICALb	45 † M074 DIGESTIVc	-35 * M119 DROWNa	-30 U026 SUMNITa	-26 Q095 dSCHISTO
36 * M011 INFECTb	41 † M075 PEPULCERc	-29 P004 APOA1	-26 U033 INHIBNOC	-42 † Q096 dMALARIA
32 * M013 INTESTINb	25 M077 INTESTOBc	-25 P006 ALBUMIN	-25 D011 TOTCAROT	-25 Q097 dARTHRIT
38 * M018 OTHERTBc	36 * M079 CIRRHOSc	25 P007 TOTPROT	-27 D012 VITA	30 Q142 dTOBCONSm
-29 M019 VIRALHEPb	42 † M084 GENITURmc	28 P010 G-CAROT	-39 † D013 VITE	-27 Q157 dRICE
-35 * M021 SCHISTOc	26 M085 GENITURfc	31 P011 Z-CAROT	-28 D018 Ca	24 Q168 dANIMFAT
-28 M027 OESOPHCAc	40 † M086 RENALc	25 P012 RETINOL	25 D021 K	-25 Q172 dGRNVEG
-28 M029 COLRECCAc	36 * M087 PREGBRTHb	28 P013 RBP	-30 D037 RICE	27 Q173 dFRUIT
-30 M032 PANCRSCAc	32 M094 ACCIDENTc	24 P020 B-CRYPT	-26 D048 EGGS	-26 Q185 dAGEMENS
-24 M035 LUNGCAmc	38 * M095 ROADACCb	41 † P022 PHYTOFLU	-28 D051 POULTRY	27 Q187 dBLEED
34 * M038 CERVIXCAc	-33 M097 DROWNb	30 P023 PHYTOENE	-38 * D054 VEGOIL	-32 * Q205 eHRSWORK
-33 * M040 LYMPHOMAc	-34 * M098 DROWNc	33 * P033 FERRITIN	-27 D055 ADDEDFAT	-32 * G002 LONGITUDE
25 M052 NERVOUSb	26 M102 HOMICIDEc	-24 P041 TESTOSTm	-36 * D083 PUFA	47 † G003 ELEVATION
29 M058 ALLVASCb	34 * M103 INFANT	-24 R004 MUFA	33 * D089 %SATFA	34 * G004 ARIDITY
39 * M061 RHEUMHDc	28 M104 MATERNAL	34 * R006 TOTn3	-26 D090 P/S	
25 M064 STROKEb	37 * M105 ALLCUMa	-38 * R018 22:1n9	24 D091 M/P	
25 M066 VASC-STRb	44 † M106 MEDICALa	-28 R019 24:1n9	-36 * D092 TOTn3	

- Analysis by spectrophotometric cyanomethemoglobin method.
- No clear geographic pattern, but wide spread of values for this measurement, with some very low values (Western reference values are about 14-17 gm/dL for males and 12-16 gm/dL for females).
- The complete lack of correlation between 1983 and 1989 values, and the fact that individually, 1989 and 1983 values were well correlated between xiangs and between males and females casts doubt on the reliability of all the values. The high self-correlations in each year may be the result of systematic differences in sample handling (in particular, delay in processing) in different counties, which would tend to inflate the correlations.
- Because of the uncertainties about these values, little weight should be given to correlations with other variables.

- 用分光光度氰化高铁血红蛋白法测定。
- 无明显的地理分布模式，但是测定值很分散，有些值很低（西方国家男性和女性的参考值分别约为14-17 gm/dL和12-16 gm/dL）。
- 1983年和1989年测定值之间完全缺乏相关性，而1983年和1989年各自测定值在乡与乡之间以及男性与女性之间存在很好相关性的事实使人怀疑所有测定值的可靠性。每年内的高度自相关可能是不同县样品处理（尤其是样品处理被耽搁）的系统差异造成的，这样会增加相关性。
- 由于这些值不确定，因此不应过分考虑该值与其它指标的相关性。

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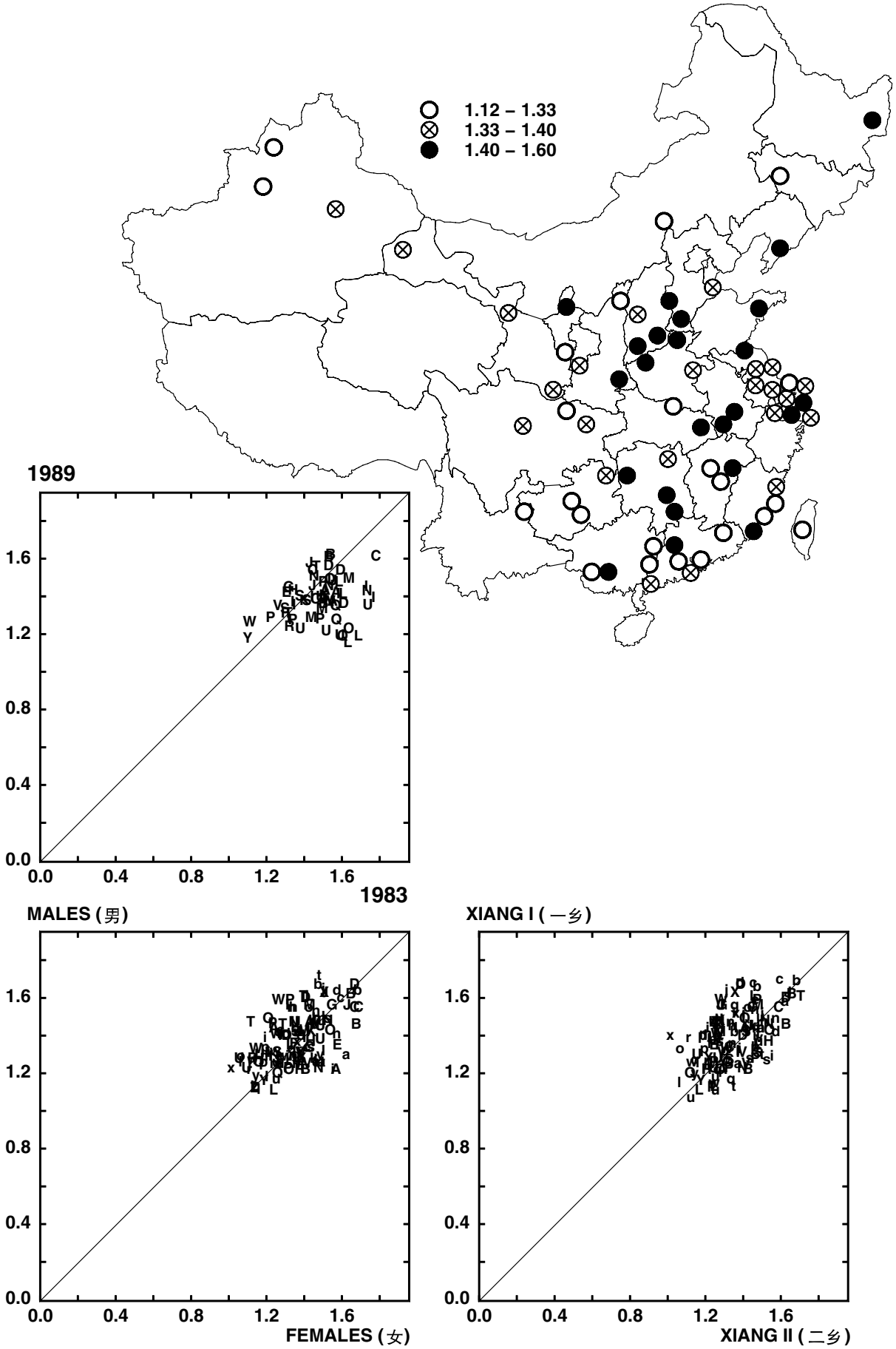
R002 RIBOFDEF – red blood cell RIBOFLAVIN DEFICIENCY (glutathione reductase activity coefficient)



R002 RIBOFDEF – 红细胞：核黄素缺乏（谷胱甘肽还原酶活性系数）

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	1.49	1.56	QA	1.27	1.24	AA	1.35	1.46	KC	1.33	1.44	ZA	1.15	1.14
CC	1.56	1.63	QB	1.44	1.23	AB	1.41	1.30	LA	1.52	1.39	ZB	1.11	1.18
CD	1.32	1.41	QC	1.14	1.20	AC	1.24	1.59	LB	1.18	1.10	ZC	1.13	1.13
DA	1.38	1.30	RA	1.20	1.24	BA	1.53	1.67	LC	1.40	1.39	ZD	1.08	1.06
DB	1.51	1.52	SA	1.40	1.31	BB	1.63	1.56	LD	1.13	1.22	ZE	1.12	1.04
DC	1.60	1.49	SB	1.29	1.35	BC	1.31	1.38	PA	1.36	1.18	ZF	1.05	1.23
FA	1.31	1.28	SC	1.38	1.38	EA	1.29	1.52	PC	1.24	1.28	ZG	0.97	1.19
GA	1.41	1.45	TA	1.65	1.44	HA	1.44	1.38	PD	1.52	1.39	ZH	1.04	1.13
JA	1.62	1.50	TC	1.35	1.23	IA	1.44	1.43	PE	1.27	1.25	ZI	1.02	1.13
JB	1.40	1.47	TD	1.34	1.39	IB	1.34	1.45	UA	1.45	1.49	ZJ	1.19	1.02
MB	1.34	1.30	VA	1.34	1.33	IC	1.41	1.35	UB	1.23	1.17	ZK	1.23	1.15
MC	1.50	1.45	VB	1.28	1.43	ID	1.33	1.42	UC	1.35	1.42	ZL	1.10	1.15
MD	1.23	1.31	VC	1.32	1.41	IE	1.29	1.41	UD	1.30	1.38	ZM	1.14	1.06
NA	1.49	1.49	WA	1.30	1.19	IF	1.33	1.20	UE	1.26	1.09	ZN	1.15	1.16
NB	1.30	1.52	WB	1.32	1.18	IG	1.36	1.32	UF	1.22	1.21	ZO	1.16	1.21
NC	1.49	1.39	WC	1.42	1.27	KB	1.37	1.36				ZP	0.99	1.16
ND	1.36	1.34	XA	1.48	1.43									
OA	1.24	1.18	XB	1.24	1.20									
OB	1.47	1.48	YA	1.15	1.16									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	1.38	1.36	1.35	1.36	1.10	1.13

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	1.36	0.12	1.36	0.13	63	6.7	†
Xiang (乡) I	vs	Xiang (乡) II	69	1.37	0.13	1.35	0.12	63	6.7	†
1983	vs	1989	65	1.48	0.15	1.36	0.11	24	2.0	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-35 * M001 ALL0-4	-29 M116 RDSa	24 U003 Na/cre	-30 D036 %ANIMPROT	-32 * D145 %18:0
-26 M004 ALL0-34	44 † P006 ALBUMIN	35 * U004 Ca/cre	26 D042 LIGHTVEG	-24 D146 %18:1
-32 * M007 MEDICALb	31 * P008 A-CAROT	26 U006 UREA/cre	-29 D049 MEAT	29 D147 %18:2
-30 M011 INFECTb	-28 P009 B-CAROT	29 D004 SOLCARB	-30 D050 REDMEAT	26 D148 %18:3
-27 M013 INTESTINb	24 P011 Z-CAROT	-27 D005 %FATKCAL	28 D059 TOTNDF	-39 * Q007 cHHSIZE
37 * M045 DIABETESc	-38 * P013 RBP	-33 * D007 %ANPRKCAL	28 D074 METH+CYS	-37 * Q094 dHEPATIT
-36 * M068 ALLRESPb	32 * P015 G-TOCOPH	31 * D009 %CARBKCAL	-25 D084 SATFA	-25 Q117 dDIARRH
-37 * M070 PNEUMONb	27 P019 A-CRYPT	27 D015 THIAMINE	-33 * D086 LYS/ARG	-33 * Q142 dTOBCONSm
-25 M084 GENITURmc	-26 P029 INORG-P	30 D022 Mg	-27 D087 %MUFA	-30 Q149 dALCEVER
-29 M086 RENALc	-31 * P033 FERRITIN	25 D023 Mn	29 D088 %PUFA	-25 Q165 dSMOKFOOD
-35 * M103 INFANT	-27 P037 BUN	28 D027 Zn	-25 D089 %SATFA	-31 * Q175 dMEAT
-35 * M105 ALLCUMa	-30 P041 TESTOSTm	-31 D029 ANIMFOOD	26 D090 P/S	-27 Q177 dMILK
-36 * M106 MEDICALa	-29 P042 HBsAg	33 * D031 %PLNTFOOD	29 D096 %TOTn6	-32 * Q184 dBLACKTEA
-37 * M108 RESPINFa	33 * R010 16:0	-33 * D032 %ANIMFOOD	-25 D097 %TOTn9	-31 Q192 dLIVEBRTH
-27 M109 ALLGIa	-27 R014 24:0	30 D033 PLNTPROT	-32 * D104 14:0	24 Q245 fHTadj
-29 M113 PERINATa	-24 R026 20:4n6	-28 D034 ANIMPROT	-32 * D136 %14:0	-24 G005 HEAT
-27 M115 BTHTRAUMa	27 U001 Cl/cre	30 D035 %PLNTPROT	-27 D141 %16:1	

- Analysis by spectrophotometric measurement of holo- and apo- forms of glutathione reductase.
- No clear geographic pattern, but wide spread of values. Note that *higher* values indicate *lower* riboflavin levels.
- By Western standards, values >1.4 are considered deficient. The highest counties average about 1.6, suggesting possibly widespread riboflavin deficiency. Assay values in Taiwan are much lower, consistent with better riboflavin status.
- Good correlations between xiangs and between males and females (64%†), but poor correlation between 1983 and 1989 (24%, not significant).
- The increase in riboflavin levels, demonstrated by the decrease in glutathione reductase activity coefficient measured, between 1983 and 1989 is consistent with improving nutrition, but some part of the increase could also be due to differences in analytic methods.
- Few strong correlations, but a paradoxic correlation with albumin (44%† P006:ALBUMIN) (i.e., greater riboflavin deficiency correlates with higher plasma albumin), which is usually considered a measure of good nutrition.

- 用分光光度法测量谷胱甘肽还原酶的醇和甘油酸脱氢酶来测定。
- 无明显的地理分布模式，但测定值很分散。注意测定值高是代表核黄素水平低。
- 根据西方国家的标准，测定值>1.4被认为是核黄素缺乏。最高县平均值约为1.6，表明核黄素缺乏很普遍。台湾省的测定值很低，与核黄素水平较好相一致。
- 两乡之间以及男性和女性之间具有很好的相关性（64%†），但是1983年和1989年测定值之间的相关性很差（24%，无显著性）。
- 所测定的谷胱甘肽还原酶活性系数下降表明1989年的核黄素水平比1983年有所增加，这与营养改善一致。但是这种增加可能部分是由分析方法不同造成的。
- 与其它指标表现出强相关的很少，但是与白蛋白具有显著相关性（44%† P006:ALBUMIN）（即严重核黄素缺乏与血浆高白蛋白水平相关），这一点无法理解，因为白蛋白通常被作为营养状况好的指标。

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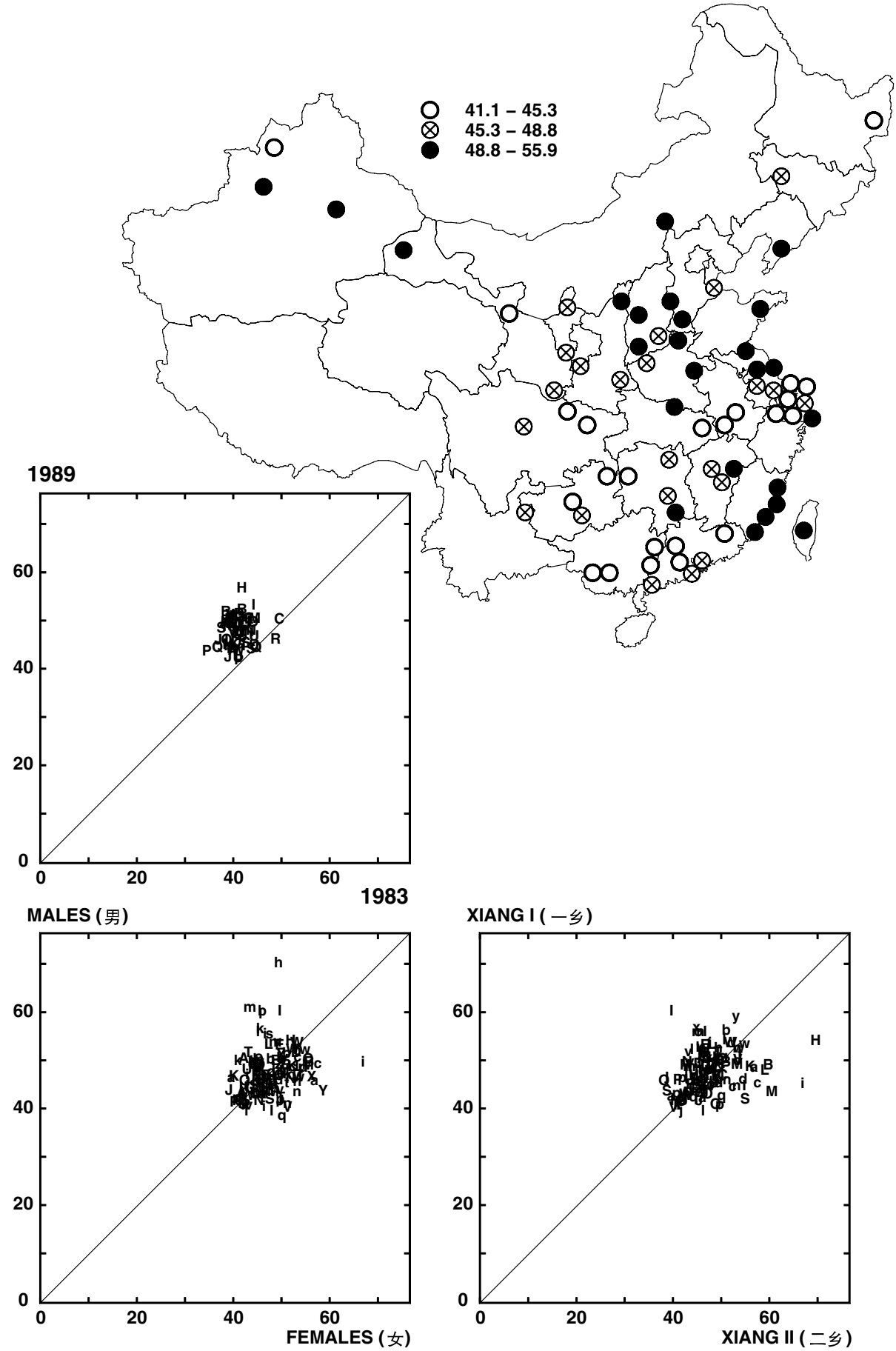
R003 SATFA – red blood cell TOTAL LIPID SATURATES
(14:0+16:0+18:0+20:0+22:0+24:0) (% of total fatty acid by weight)



R003 SATFA – 红细胞：总脂饱和脂肪酸 (14:0+16:0+18:0+20:0+22:0+24:0) (占总脂肪酸重量的百分比)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	48.0	51.2	QA	41.4	46.0	AA	45.0	52.3	KC	47.5	40.4	ZA	48.4	48.7
CC	48.2	48.0	QB	44.3	42.9	AB	42.4	43.7	LA	53.0	45.9	ZB	47.0	51.0
CD	48.0	51.0	QC	45.3	47.7	AC	47.7	40.7	LB	50.1	47.7	ZC	48.2	48.4
DA	48.6	52.4	RA	46.2	44.6	BA	49.8	53.2	LC	47.2	52.0	ZD	47.7	48.7
DB	48.0	49.9	SA	48.0	47.3	BB	53.9	48.3	LD	48.5	51.7	ZE	47.0	46.5
DC	46.8	47.0	SB	40.7	45.9	BC	49.3	48.1	PA	43.0	43.8	ZF	53.5	48.2
FA	47.4	48.5	SC	44.4	44.8	EA	49.5	49.6	PC	40.8	41.5	ZG	49.5	49.0
GA	43.8	44.7	TA	43.0	50.3	HA	61.4	50.5	PD	40.9	44.8	ZH	46.7	49.3
JA	43.0	47.5	TC	46.4	52.2	IA	47.7	50.3	PE	43.9	46.5	ZI	47.0	50.3
JB	43.3	40.2	TD	50.0	43.4	IB	49.2	55.6	UA	45.7	42.4	ZJ	48.0	49.8
MB	45.4	50.2	VA	39.7	47.0	IC	50.9	44.7	UB	45.7	47.8	ZK	47.2	48.1
MC	50.7	48.7	VB	51.3	49.6	ID	49.5	48.0	UC	45.2	46.8	ZL	50.3	59.1
MD	51.5	45.7	VC	45.8	47.4	IE	42.5	45.4	UD	46.5	49.2	ZM	47.9	48.4
NA	45.2	52.5	WA	42.1	44.0	IF	42.2	44.6	UE	44.2	45.9	ZN	49.4	51.5
NB	40.5	48.1	WB	48.6	52.6	IG	49.4	44.7	UF	41.4	41.5	ZO	47.3	46.5
NC	48.6	45.3	WC	52.2	53.7	KB	51.8	48.8				ZP	49.1	48.1
ND	45.8	48.5	XA	45.9	50.4									
OA	49.7	50.2	XB	48.0	48.5									
OB	44.5	46.0	YA	44.5	55.7									

Mean 平均值	Male (男)	Female (女)
Inland Provinces (内地)	46.2	48.1
Coastal Provinces (沿海)	47.3	47.0
Taiwan (台湾)	48.4	49.5

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	46.7	3.8	47.6	3.6	35	3.0	*
Xiang (乡) I	vs	Xiang (乡) II	65	46.9	3.5	47.4	3.8	41	3.6	†
1983	vs	1989	65	40.8	2.6	47.0	3.0	15	1.2	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-27	M001 ALL0-4	-26	M068 ALLRESPb	-27	P024 FOLATE	25	U014 VOLURmn	40 †	Q091 dWEIGHT
-28	M007 MEDICALb	-27	M070 PNEUMONb	-36 *	R004 MUFA	27	D006 %PROTKCAL	38 *	Q092 dBMI
-27	M011 INFECTb	-32 *	M073 DIGESTIVb	-40 †	R005 TOTn6	25	D008 %PLPRKCAL	25	Q110 dMIDBP
-37 *	M012 INFECTc	-26	M074 DIGESTIVc	-27	R007 PUFA	-31	D014 VITC	27	Q111 dFEV1adj
-26	M016 PULMTBc	-28	M075 PEPULCERc	-55 †	R008 P/S	30	D026 SeCARRY	25	Q112 dFVCadj
31	M023 ALLCAc	-31	M078 CIRRHOSb	37 *	R009 14:0	-38 *	D037 RICE	-39 †	Q157 dRICE
32 *	M027 OESOPHCAc	-35 *	M080 TOTLIVRb	74 †	R010 16:0	34 *	D038 WHTFLOUR	38 *	Q158 dWHEAT
25	M028 STOMCAc	-34 *	M103 INFANT	72 †	R011 18:0	24	D042 LIGHTVEG	30	Q161 dMILLET
-29	M030 LIVERCAb	-27	M105 ALLCUMa	34 *	R012 20:0	-35 *	D043 GREENVEG	-38 *	Q165 dSMOKFOOD
32 *	M036 LUNGCAfc	-27	M106 MEDICALa	43 †	R013 22:0	-27	D044 SALTVEG	-31 *	Q172 dGRNVEG
24	M041 LEUKEMIAb	-25	M108 RESPINFa	-37 *	R017 20:1n9	24	D046 NUTS	-27	Q205 eHRSWORK
-24	M043 ENDOCRINb	-27	M114 LOWBTHWTa	-33 *	R018 22:1n9	39 †	D067 GLUTAMINE	25	Q209 eBIRTHWT
45 †	M045 DIABETESc	-29	M117 NEOTETANa	-39 †	R019 24:1n9	28	D074 METH+CYS	-24	Q229 e%RESP
-26	M046 MALNUTRIb	-26	M118 MALNUTRIa	-27	R025 20:3n6	-26	D087 %MUFA	29	Q243 fWTadj
-35 *	M048 BLOODb	27	P003 NONHDL	-46 †	R026 20:4n6	-24	D094 TOTn9	35 *	G001 LATITUDE
25	M059 ALLVASCc	-27	P004 APOA1	43 †	U006 UREA/cre	-27	D097 %TOTn9	30	G004 ARIDITY
33 *	M063 IHDc	27	P005 APOB	26	U009 TAUR/cre	-28	D146 %18:1	-38 *	G005 HEAT
24	M067 VASC-STRc	24	P022 PHYTOFLU	26	U012 VOLURINE	35 *	Q090 dHEIGHT		

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- Somewhat lower levels in the south, but relatively little variation overall.
- Good correlation between xiangs (41%†), modest correlation between males and females (35%*), and poor correlation between 1983 and 1989 (15%, not significant).
- High outliers may be artefactual, or may represent extremes in diet, e.g., in HA the survey coincided with an annual nut harvest.
- The increase from 1983 to 1989 is consistent with changes in diet, but the lack of correlation demands a cautious interpretation.
- Correlations with other variables are generally uninformative because of the small amount of variation among counties in this measure.

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- 南方水平较低，但总体变异很小。
- 两乡之间具有很好的相关性（41%†），男性与女性之间呈中度相关（35%*），而1983年和1989年测定值之间的相关性较差（15%，无显著性）。
- 较高的偏离值可能是一种假象，或者可能反映了膳食的极端情况，例如，在HA县调查时间正好赶上该县的坚果收获季节。
- 从1983年到1989年，总饱和脂肪酸水平增加与膳食变化情况一致，但是缺乏相关性，因此需要谨慎解释。
- 由于各县之间该指标的差异很小，因此与其它指标的相关性并不能提供有用信息。

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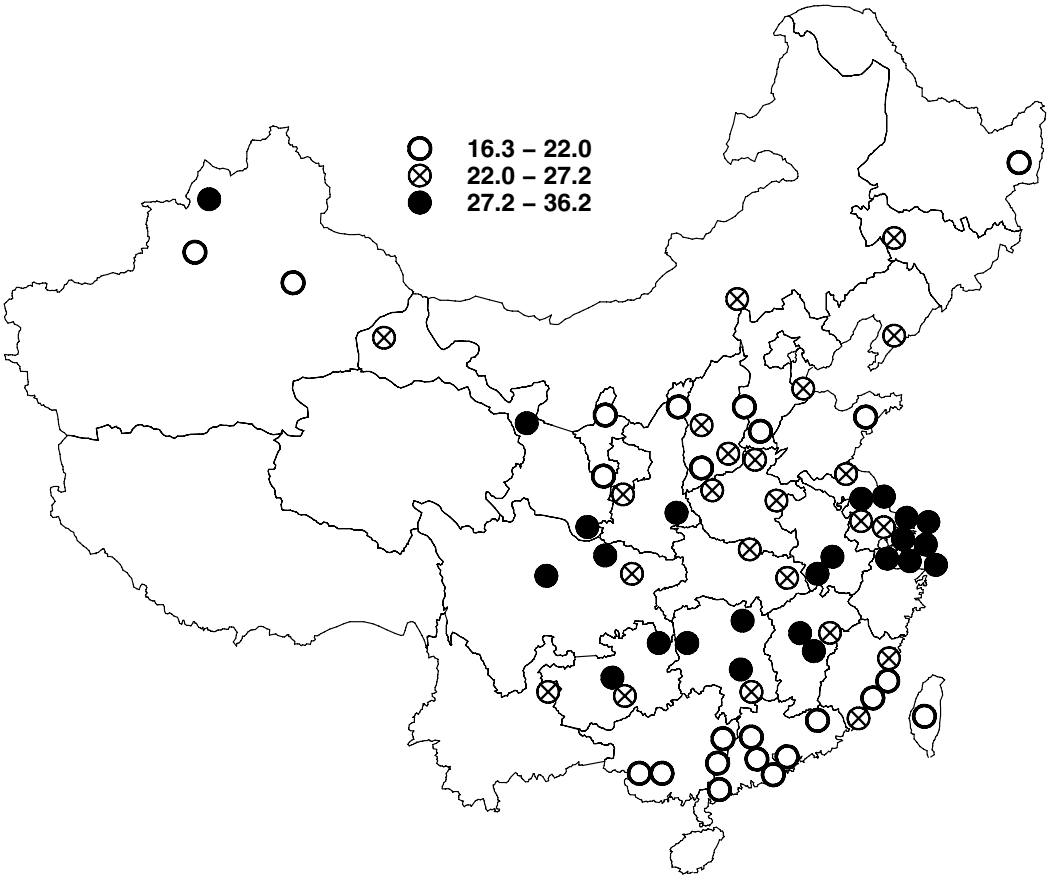
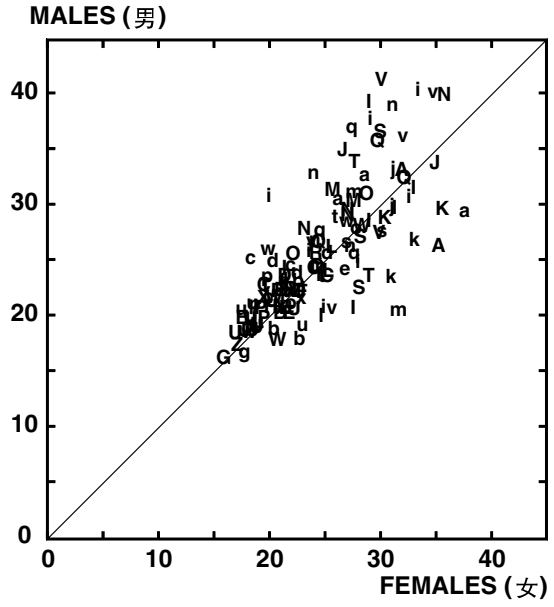
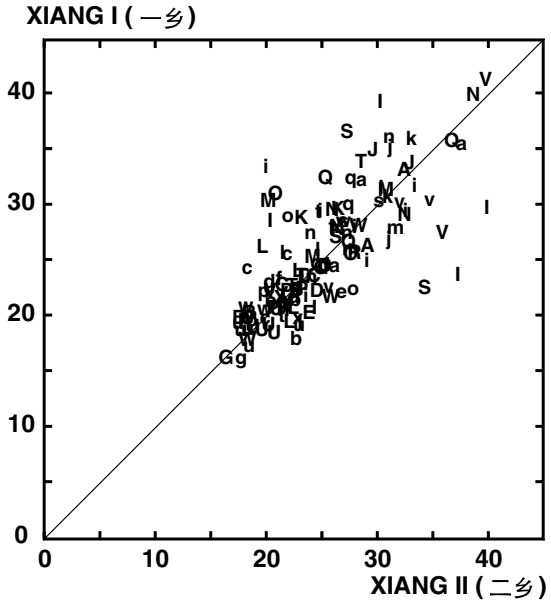
R004 MUFA – red blood cell TOTAL LIPID MONOUNSATURATES (16:1+18:1+20:1+22:1+24:1) (% of total fatty acid by weight)







R004 MUFA – 红细胞：总脂单不饱和脂肪酸 (16:1+18:1+20:1+22:1+24:1) (占总脂肪酸重量的百分比)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	21.8	19.5	QA	35.9	28.4	AA	30.0	25.1	KC	27.7	34.2	ZA	16.2	15.6
CC	23.6	23.4	QB	28.5	29.7	AB	32.4	30.1	LA	22.6	25.0	ZB	16.2	16.1
CD	24.3	21.0	QC	26.7	24.3	AC	27.4	36.3	LB	20.4	20.9	ZC	15.8	16.5
DA	23.2	21.8	RA	26.5	24.0	BA	19.0	20.5	LC	23.1	23.3	ZD	16.8	16.6
DB	23.1	21.4	SA	31.6	29.9	BB	18.4	20.0	LD	21.3	21.4	ZE	17.4	17.4
DC	24.6	24.6	SB	28.0	27.9	BC	22.2	21.7	PA	20.4	18.9	ZF	15.6	17.0
FA	22.1	22.0	SC	26.4	27.4	EA	21.7	24.2	PC	21.7	21.0	ZG	15.7	16.2
GA	16.0	16.6	TA	30.9	26.7	HA	20.3	20.8	PD	22.5	20.7	ZH	17.1	19.2
JA	31.9	28.7	TC	22.2	20.5	IA	24.5	22.4	PE	18.9	18.6	ZI	17.3	17.6
JB	33.0	32.9	TD	23.1	26.8	IB	30.6	26.4	UA	18.6	20.8	ZJ	18.2	17.4
MB	30.7	26.6	VA	40.2	32.3	IC	22.3	27.7	UB	18.8	17.9	ZK	18.4	17.9
MC	24.4	24.3	VB	21.0	23.8	ID	30.2	26.7	UC	19.4	18.1	ZL		
MD	24.9	29.5	VC	31.3	30.8	IE	34.5	30.7	UD	18.9	18.3	ZM	17.4	16.7
NA	26.8	23.5	WA	27.8	27.4	IF	34.5	32.3	UE	19.3	17.6	ZN	17.2	18.0
NB	39.0	33.3	WB	23.4	19.9	IG	24.1	26.9	UF	20.5	21.2	ZO	17.8	17.3
NC	27.4	27.1	WC	17.6	19.2	KB	25.6	30.6				ZP	15.6	15.6
ND	30.5	25.4	XA	21.1	21.0									
OA	26.2	24.8	XB	21.0	21.4									
OB	25.6	25.1	YA	26.9	23.7									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	26.5	25.2	23.6	23.9	16.8	17.0

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	25.2	5.3	24.6	4.6	82	11.9	†
Xiang (乡) I	vs	Xiang (乡) II	63	24.9	5.3	24.8	4.9	83	11.7	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

27	M019 VIRALHEPb	-37 *	P001 TOTCHOL	-57 †	R008 P/S	25	D004 SOLCARB
31	M021 SCHISTOc	-47 †	P003 NONHDL	-41 †	R011 18:0	-29	D006 %PROTKCAL
-24	M025 NASOPCAc	-53 †	P005 APOB	-58 †	R013 22:0	29	D014 VITC
26	M032 PANCRSCAc	-34 *	P009 B-CAROT	-41 †	R014 24:0	30	D017 NIACIN
-27	M034 LARYNXCAc	-31 *	P010 G-CAROT	48 †	R016 18:1n9	27	D018 Ca
-29	M045 DIABETESc	-26	P016 LYCOPENE	64 †	R017 20:1n9	47 †	D024 TOTNa
-35 *	M063 IHDc	-30	P030 Se	83 †	R018 22:1n9	53 †	D025 Na
-26	M067 VASC-STRc	26	P040 B2-MGLOB	94 †	R019 24:1n9	36 *	D028 PLNTFOOD
26	M077 INTESTOBc	-24	P041 TESTOSTm	-68 †	R022 22:6n3	33 *	D037 RICE
40 †	M082 GALLBILc	26	P047 COTIN>20m	-53 †	R023 18:2n6	30	D041 LEGUME
34 *	M089 ALLSKINc	-24	R001 Hb	-40 †	R025 20:3n6	30	D055 ADDEDFAT
-36 *	M095 ROADACCb	-36 *	R003 SATFA	-56 †	R026 20:4n6	36 *	D057 ADDEDSALT
30	M098 DROWNc	-65 †	R005 TOTn6	26	U003 Na/cre	24	D079 TRYPTOPH
30	M107 NONMEDa	-67 †	R006 TOTn3	-33 *	U009 TAUR/cre	-28	D086 LYS/ARG
30	M119 DROWNa	-80 †	R007 PUFA	30	D001 KCAL	-27	D140 %16:0
						25	Q007 cHHSIZE
						-34 *	Q018 aSCHOOLS
						-36 *	Q019 dCANREAD
						-30	Q050 c%H2OPIPE
						-39 †	Q051 c%FLUSHWC
						27	Q095 dSCHISTO
						25	Q096 dMALARIA
						-34 *	Q113 dMMEFadj
						34 *	Q149 dALCEVER
						34 *	Q157 dRICE
						32 *	Q171 dSALTVEG
						-38 *	Q173 dFRUIT
						-25	Q175 dMEAT
						-27	Q196 eM/F
						30	Q209 eBIRTHWT

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- Low in mainland south and north, higher through the mid-section, and very low in Taiwan.
- Very good correlations between xiangs (83%†) and between males and females (82%†).
- On average, red cell fatty acids are about half saturated, a quarter monounsaturated and a quarter polyunsaturated (R003: SATFA, R004: MUFA, R007: PUFA). As the proportion that is saturated shows little variation, the proportion that is monounsaturated is almost the complement of the proportion that is polyunsaturated (correlation coefficient -80%†).
- Correlated positively with indicators of dietary plant food (e.g., 36%* D028:PLNTFOOD), including strong negative correlations with plasma non-HDL cholesterol (-47%† P003:NONHDL) and apolipoprotein B (-53%† P005:APOB).

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- 大陆南方和北方水平低，而中部地区较高，台湾省的水平很低。
- 两乡之间（83%†）以及男性与女性之间（82%†）具有很好的相关性。
- 一般来说，红细胞脂肪酸有一半是饱和的，1/4是单不饱和的，1/4是多不饱和的（R003: SATFA, R004: MUFA, R007: PUFA）。当饱和脂肪酸变异很小时，单不饱和脂肪酸几乎就是多不饱和脂肪酸的补充（相关系数 -80%†）。
- 与膳食中植物性食物的指标呈正相关（如，36%* D028:PLNTFOOD），与血浆非HDL胆固醇水平（-47%† P003:NONHDL）和阿朴脂蛋白B水平（-53%† P005:APOB）呈很强的负相关。

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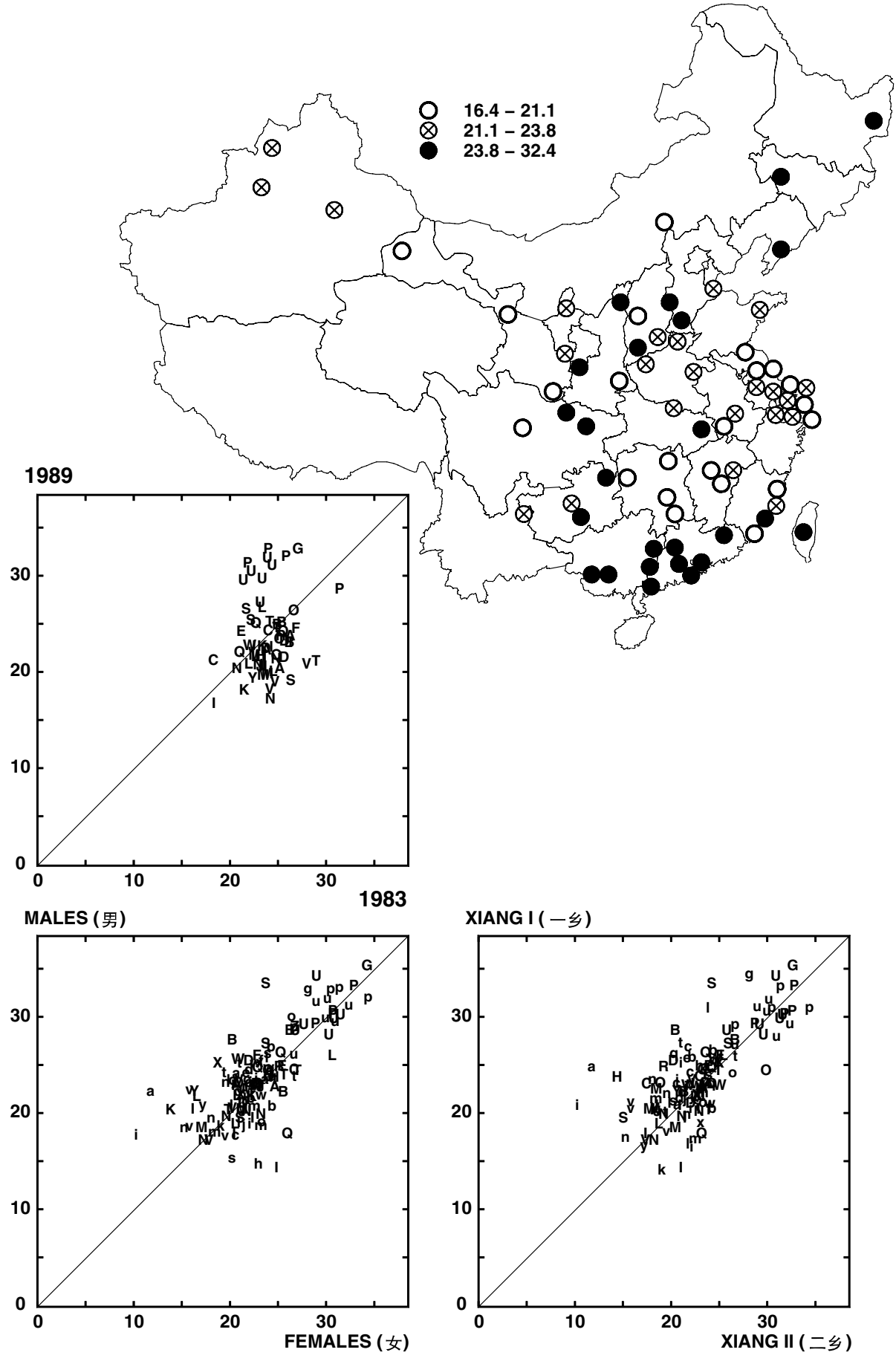
R005 TOTn6 – red blood cell TOTAL LIPID n6 POLYUNSATURATES (18:2+20:2+20:3+20:4) (% of total fatty acid by weight)



R005 TOTn6 – 红细胞：总脂n6多不饱和脂肪酸 (18:2+20:2+20:3+20:4) (占总脂肪酸重量的百分比)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	23.6	24.1	QA	20.3	23.0	AA	21.9	18.0	KC	22.0	22.5	ZA	29.9	29.6
CC	23.1	22.9	QB	24.1	23.4	AB	22.7	24.1	LA	18.6	20.6	ZB	30.1	25.1
CD	20.0	21.6	QC	24.6	24.7	AC	23.2	20.6	LB	25.5	27.1	ZC	30.2	29.5
DA	21.3	21.0	RA	21.8	25.0	BA	26.9	22.2	LC	21.8	19.1	ZD	27.9	27.2
DB	22.6	21.5	SA	17.0	20.5	BB	24.3	25.2	LD	22.2	20.2	ZE	29.6	30.8
DC	23.4	22.3	SB	28.6	23.6	BC	21.5	23.8	PA	30.8	32.5	ZF	24.3	26.7
FA	25.3	23.0	SC	26.3	23.7	EA	24.1	23.5	PC	32.8	32.0	ZG	27.4	25.5
GA	33.7	31.0	TA	21.9	19.6	HA	18.8	23.7	PD	28.8	27.7	ZH	31.5	24.2
JA	22.6	21.8	TC	24.4	24.0	IA	21.4	19.1	PE	31.4	30.5	ZI	29.3	22.6
JB	19.1	21.3	TD	23.5	26.1	IB	17.4	15.3	UA	30.3	29.8	ZJ	27.7	24.8
MB	19.2	19.7	VA	17.0	18.6	IC	22.9	21.5	UB	28.6	30.1	ZK	27.2	29.1
MC	20.2	22.5	VB	22.5	18.3	ID	17.5	22.9	UC	29.0	29.3	ZL	30.0	20.5
MD	18.8	19.8	VC	19.2	17.9	IE	20.3	21.9	UD	27.0	26.7	ZM	28.5	29.6
NA	21.3	20.6	WA	22.0	22.8	IF	19.5	21.1	UE	30.6	30.8	ZN	26.2	24.2
NB	17.5	16.1	WB	23.6	22.6	IG	22.4	22.9	UF	32.3	30.6	ZO	26.7	28.2
NC	20.1	20.6	WC	24.8	22.3	KB	19.1	16.4				ZP	31.0	28.9
ND	19.3	20.6	XA	24.9	20.8									
OA	20.7	22.0	XB	22.0	21.6									
OB	26.9	25.0	YA	21.2	16.7									

Mean 平均值	Male (男)	Female (女)
Inland Provinces (内地)	22.3	21.9
Coastal Provinces (沿海)	24.4	24.2
Taiwan (台湾)	28.6	26.7

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	23.2	4.1	22.9	3.9	85	13.0	†
Xiang (乡) I	vs	Xiang (乡) II	66	23.2	4.0	23.0	4.1	85	13.2	†
1983	vs	1989	65	23.8	2.2	23.1	4.0	17	1.4	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-27	M010 NONMEDc	48 †	M117 NEOTETANa	53 †	R014 24:0	-34 *	D019 Fe
26	M022 ALLCAb	31	P005 APOB	-42 †	R016 18:1n9	-33 *	D020 Cu
42 †	M025 NASOPCAc	-25	P006 ALBUMIN	-33 *	R017 20:1n9	-26	D021 K
-32 *	M028 STOMCAc	57 †	P009 B-CAROT	-43 †	R018 22:1n9	-36 *	D024 TOTNa
28	M030 LIVERCAb	37 *	P010 G-CAROT	-58 †	R019 24:1n9	-48 †	D025 Na
-26	M042 LEUKEMIAc	-29	P015 G-TOCOPH	27	R022 22:6n3	-33 *	D027 Zn
45 †	M048 BLOODb	34 *	P018 ANHYDLUT	61 †	R023 18:2n6	-32 *	D028 PLNTFOOD
26	M068 ALLRESPb	-27	P036 GLUCOSE	62 †	R025 20:3n6	30	D043 GREENVEG
27	M070 PNEUMONIb	31 *	P039 THYROXINE	94 †	R026 20:4n6	-25	D057 ADDEDSALT
29	M080 TOTLIVRb	-40 †	R003 SATFA	-29	U001 Cl/cre	-34 *	D074 METH+CYS
-33 *	M082 GALLBILc	-65 †	R004 MUFA	-32 *	U003 Na/cre	-33 *	D078 THREONINE
-30	M089 ALLSKINc	93 †	R007 PUFA	-30	U012 VOLURINE	-25	D079 TRYPTOPH
24	M103 INFANT	94 †	R008 P/S	-30	U014 VOLURmn	33 *	Q018 aSCHOOLS
26	M108 RESPINFa	-42 †	R009 14:0	-24	U024 INHIBPRO	32 *	Q019 dCANREAD
25	M113 PERINATa	-68 †	R010 16:0	-27	D001 KCAL	28	Q051 c%FLUSHWC
32 *	M114 LOWBTHWTa	-32 *	R012 20:0	-29	D004 SOLCARB	-29	Q068 dCOOKf
-24	Q091 dWEIGHT						
-29	Q092 dBMI						
29	Q094 dHEPATIT						
-26	Q096 dMALARIA						
-35 *	Q112 dFVCadj						
-31 *	Q139 dCIGCONSf						
-24	Q151 dBEERday						
25	Q173 dFRUIT						
-26	Q186 dMENCYCLE						
24	Q205 eHRSWORK						
-47 †	Q209 eBIRTHWT						
-27	Q243 fWTadj						
-33 *	Q247 fBMIadj						
-28	G001 LATITUDE						
41 †	G005 HEAT						

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- n6 fatty acids constitute the largest class of polyunsaturates in the diet, derived almost entirely from plant sources.
- Higher levels along the coast and in Taiwan.
- Very good correlations between xiangs (85%†) and between males and females (85%†), but little correlation with 1983 measurements (perhaps because the latter were somehow unsatisfactory).
- Slight downward trend in most areas, but upward in certain provinces (Heilongjiang, province G, Guangxi, province P, and Guangdong, province U).

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- n6脂肪酸是膳食中含量最多的一类多不饱和脂肪酸，几乎全部来源于植物性食物。
- 沿海各省和台湾省水平较高。
- 两乡之间（85%†）以及男性与女性之间（85%†）具有很好的相关性，1989年测定值与1983年的几乎不存在相关性（可能是因为后者的测定结果不理想）。
- 许多地区呈微小的下降趋势，但是在某些省（黑龙江[G]、广西[P]和广东[U]）则呈上升趋势。

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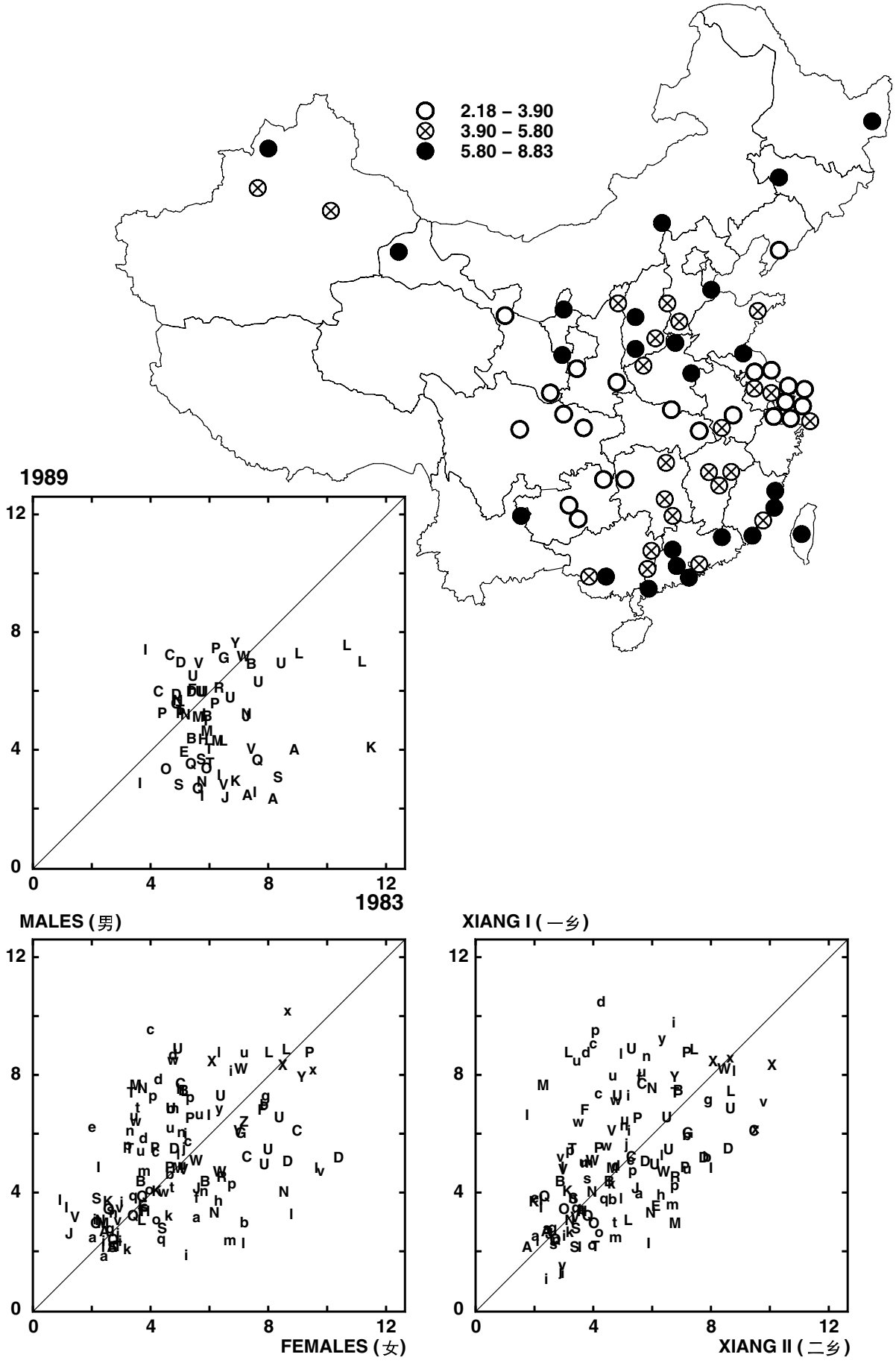
R006 TOTn3 – red blood cell TOTAL LIPID n3 POLYUNSATURATES (18:3+20:5+22:6) (% of total fatty acid by weight)



R006 TOTn3 – 红细胞：总脂n3多不饱和脂肪酸 (18:3+20:5+22:6) (占总脂肪酸重量的百分比)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	6.58	5.11	QA	2.45	2.63	AA	3.02	4.69	KC	2.74	2.85	ZA	5.61	6.28
CC	5.16	5.68	QB	3.01	4.00	AB	2.43	2.20	LA	5.87	8.38	ZB	6.72	7.74
CD	7.69	6.45	QC	3.41	3.36	AC	1.85	2.52	LB	4.03	4.29	ZC	5.84	5.67
DA	6.94	4.75	RA	5.56	6.38	BA	4.37	4.13	LC	7.96	5.72	ZD	7.59	7.59
DB	6.38	7.30	SA	3.47	2.37	BB	3.53	6.49	LD	8.06	6.75	ZE	6.09	5.38
DC	5.32	6.17	SB	2.66	2.66	BC	7.09	6.46	PA	5.91	4.97	ZF	6.62	8.18
FA	5.17	6.66	SC	3.01	4.05	EA	4.75	2.84	PC	4.78	5.43	ZG	7.43	9.26
GA	6.52	7.45	TA	4.30	3.45	HA	3.41	5.03	PD	7.88	6.72	ZH	4.80	6.94
JA	2.46	2.03	TC	7.00	3.43	IA	6.34	8.18	PE	5.93	4.25	ZI	6.45	9.61
JB	4.70	5.32	TD	3.04	3.79	IB	2.77	2.69	UA	5.44	6.25	ZJ	6.01	7.99
MB	4.78	3.54	VA	3.18	2.15	IC	4.01	6.16	UB	7.01	4.28	ZK	7.29	4.95
MC	4.64	4.33	VB	5.26	8.35	ID	2.79	2.04	UC	6.45	5.88	ZL	4.14	7.60
MD	4.87	5.07	VC	3.79	3.96	IE	2.91	1.65	UD	7.67	5.91	ZM	6.07	5.43
NA	6.68	3.49	WA	8.22	5.86	IF	3.83	2.15	UE	5.97	5.70	ZN	7.04	6.30
NB	3.05	2.49	WB	4.41	4.93	IG	4.12	5.59	UF	5.93	6.80	ZO	8.35	8.05
NC	3.91	7.15	WC	5.44	4.86	KB	3.49	4.38				ZP	4.38	7.35
ND	4.55	5.58	XA	8.18	7.77									
OA	3.38	3.01	XB	9.11	8.55									
OB	3.12	3.35	YA	7.26	7.71									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	4.96	4.87	4.91	4.88	6.28	7.14

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	4.94	1.80	4.88	1.83	69	7.8	†
Xiang (乡) I	vs	Xiang (乡) II	66	5.04	1.96	4.84	1.66	72	8.2	†
1983	vs	1989	65	6.28	1.57	4.80	1.60	6	0.5	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-27	M019 VIRALHEPb	24	P013 RBP	-27	U001 Cl/cre	36 *	D086 LYS/ARG	-26	Q156 dALCOday
-29	M020 VIRALHEPc	24	P016 LYCOPENE	-27	U003 Na/cre	29	D089 %SATFA	-37 *	Q157 dRICE
-29	M021 SCHISTOc	-25	P024 FOLATE	34 *	U009 TAUR/cre	-31 *	D093 TOTn6	25	Q158 dWHEAT
-32 *	M029 COLRECCAc	-34 *	P040 B2-MGLOB	32 *	D006 %PROTKCAL	28	D136 %14:0	-24	Q164 dOILFAT
-25	M032 PANCRSCAc	34 *	R001 Hb	-25	D013 VITE	32 *	D140 %16:0	-26	Q165 dSMOKFOOD
-27	M033 BLADDCAc	-67 †	R004 MUFA	-27	D018 Ca	25	D141 %16:1	-26	Q169 dVEGFAT
-28	M082 GALLBILc	57 †	R007 PUFA	-39 *	D024 TOTNa	25	Q007 cHHSIZE	-30	Q171 dSALTVEG
-27	M089 ALLSKINc	42 †	R008 P/S	-39 †	D025 Na	28	Q019 dCANREAD	-38 *	Q172 dGRNVEG
36 *	M095 ROADACCb	31	R011 18:0	27	D026 SeCARRY	-31 *	Q052 c%TOILET	28	Q175 dMEAT
29	M096 ROADACCc	79 †	R013 22:0	-37 *	D037 RICE	-29	Q067 dCOOKm	24	Q177 dMILK
-35 *	M097 DROWNb	24	R014 24:0	32 *	D038 WHTFLOUR	29	Q090 dHEIGHT	27	Q195 eMOTHERS
-38 *	M098 DROWNc	-37 *	R017 20:1n9	-27	D041 LEGUME	-24	Q095 dSCHISTO	24	Q196 eM/F
-40 *	M119 DROWNa	-77 †	R018 22:1n9	-31 *	D054 VEGOIL	-29	Q096 dMALARIA	-27	Q227 e%DIARRH
39 †	P001 TOTCHOL	-63 †	R019 24:1n9	-30	D055 ADDEDFAT	27	Q111 dFEV1adj	35 *	G004 ARIDITY
55 †	P003 NONHDL	31	R020 18:3n3	-33 *	D057 ADDEDSALT	41 †	Q113 dMMEFadj		
-33 *	P004 APOA1	31	R021 20:5n3	30	D067 GLUTAMINE	-38 *	Q149 dALCEVER		
38 *	P005 APOB	96 †	R022 22:6n3	-30	D083 PUFA	-25	Q155 dLIQRday		

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- In this population, n3 fatty acids, derived mainly from fish and plant sources, are the second most abundant major class of polyunsaturates.
- Higher levels along the coast and Taiwan.
- Very good correlations between xiangs (72%†) and between males and females (69%†), but little correlation with 1983 measurements (perhaps because the latter were somehow unsatisfactory).
- Downward trend in most provinces and a decline in mean values from 1983 to 1989.

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- 在该调查人群中，n3脂肪酸（主要来源于鱼类和植物性食物）是第二大类多不饱和脂肪酸。
- 沿海各省和台湾省水平较高。
- 两乡之间（72%†）以及男性与女性之间（69%†）具有很好的相关性，1989年测定值与1983年的几乎不存在相关性（可能是因为后者的测定结果不理想）。
- 大部分省呈下降趋势，1989年的平均值比1983年有所下降。

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methods: pages 10-11
实验室测定 表述格式: 第 332-333 页
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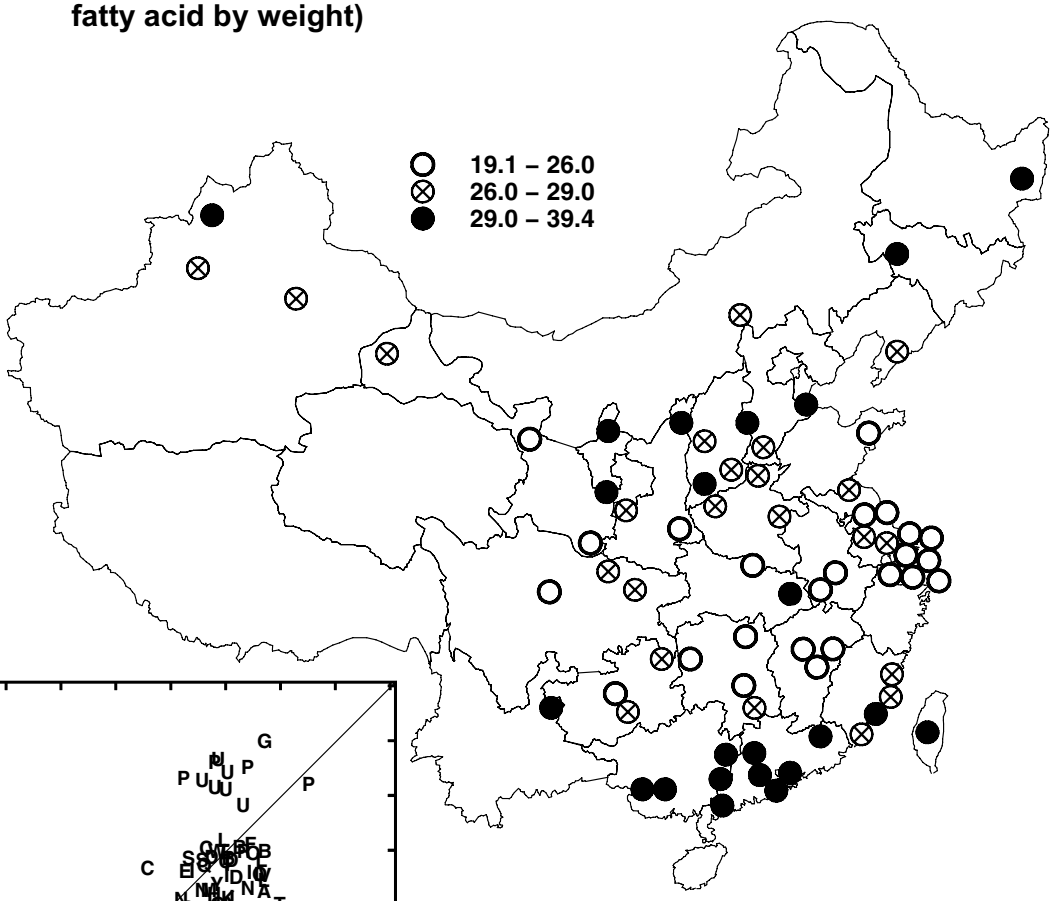
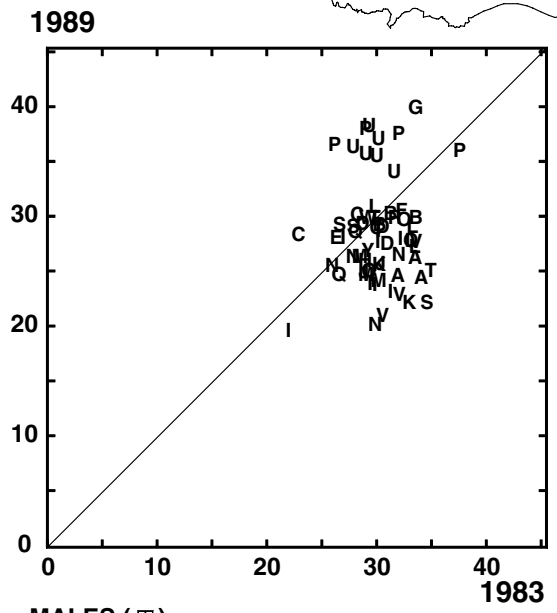
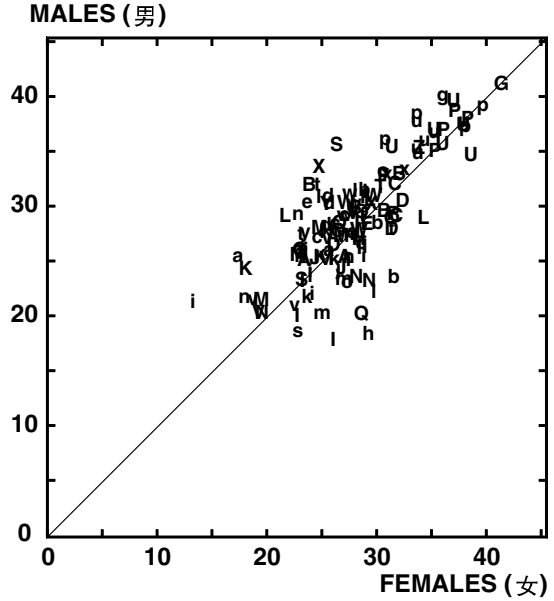
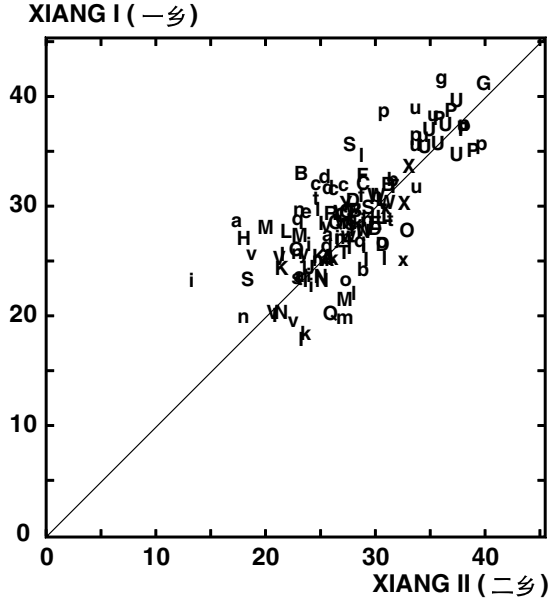
R007 PUFA – red blood cell TOTAL LIPID POLYUNSATURATES (18:2(6)+18:3(3)+20:2(6)+20:3(6)+20:4(6)+20:5(3)+22:6(3)) (% of total fatty acid by weight)









R007 PUFA – 红细胞：总脂多不饱和脂肪酸 (占总脂肪酸重量的百分比) (18:2(6)+18:3(3)+20:2(6)+20:3(6)+20:4(6)+20:5(3)+22:6(3))

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	30.2	29.3	QA	22.7	25.6	AA	25.0	22.8	KC	24.8	25.4	ZA	35.5	35.8
CC	28.3	28.6	QB	27.1	27.5	AB	25.2	26.3	LA	24.5	29.1	ZB	36.8	32.9
CD	27.7	28.1	QC	28.1	28.1	AC	25.0	23.1	LB	29.5	31.4	ZC	36.0	35.2
DA	28.3	25.7	RA	27.3	31.4	BA	31.3	26.3	LC	29.8	24.8	ZD	35.5	34.8
DB	28.9	28.8	SA	20.5	22.9	BB	27.8	31.7	LD	30.3	27.0	ZE	35.6	36.2
DC	28.6	28.4	SB	31.3	26.2	BC	28.6	30.3	PA	36.7	37.4	ZF	31.0	34.9
FA	30.5	29.6	SC	29.3	27.8	EA	28.9	26.3	PC	37.5	37.5	ZG	34.9	34.7
GA	40.2	38.6	TA	26.1	23.0	HA	22.2	28.8	PD	36.6	34.5	ZH	36.3	31.1
JA	25.1	23.9	TC	31.4	27.4	IA	27.8	27.4	PE	37.3	34.8	ZI	35.7	32.2
JB	23.9	26.6	TD	26.6	29.9	IB	20.1	18.0	UA	35.8	36.0	ZJ	33.7	32.8
MB	24.0	23.3	VA	20.1	20.8	IC	26.9	27.6	UB	35.7	34.3	ZK	34.5	34.0
MC	24.9	26.8	VB	27.8	26.6	ID	20.3	25.0	UC	35.4	35.1	ZL	34.1	28.1
MD	23.6	24.8	VC	22.9	21.9	IE	23.2	23.6	UD	34.7	32.5	ZM	34.5	35.0
NA	28.0	24.0	WA	30.1	28.6	IF	23.3	23.2	UE	36.6	36.5	ZN	33.3	30.5
NB	20.5	18.6	WB	28.1	27.5	IG	26.5	28.5	UF	38.2	37.4	ZO	35.1	36.3
NC	24.0	27.7	WC	30.3	27.1	KB	22.5	20.8				ZP	35.4	36.3
ND	23.9	26.1	XA	33.0	28.6									
OA	24.1	25.0	XB	31.1	30.1									
OB	30.0	28.4	YA	28.5	24.4									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	27.3	26.8	29.3	29.1	34.9	33.8

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	28.2	4.9	27.8	4.5	86	13.9	†
Xiang (乡) I	vs	Xiang (乡) II	66	28.3	4.9	27.8	4.7	86	13.3	†
1983	vs	1989	65	30.1	2.7	27.9	4.6	7	0.5	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-27	M010 NONMEDc	26	M103 INFANT	-80 †	R004 MUFA	-37 *	U003 Na/cre	26	D140 %16:0
27	M022 ALLCAb	26	M106 MEDICALa	93 †	R005 TOTn6	-25	U012 VOLURINE	25	Q007 cHHSIZE
41 †	M025 NASOPCAc	-28	M107 NONMEDa	57 †	R006 TOTn3	-25	U014 VOLURmn	35 *	Q018 aSCHOOLS
-27	M028 STOMCAc	29	M108 RESPINFa	95 †	R008 P/S	-29	D001 KCAL	38 *	Q019 dCANREAD
27	M030 LIVERCAb	28	M113 PERINATa	-41 †	R009 14:0	-28	D004 SOLCARB	30	Q051 c%FLUSHWC
-30	M032 PANCRSCAc	32 *	M114 LOWBTHWTa	-66 †	R010 16:0	-27	D017 NIACIN	25	Q094 dHEPATIT
25	M034 LARYNXCAc	39 *	M117 NEOTETANa	33 *	R013 22:0	-32 *	D019 Fe	-33 *	Q096 dMALARIA
-28	M040 LYMPHOMAc	30	P001 TOTCHOL	54 †	R014 24:0	-27	D020 Cu	-29	Q112 dFVCadj
-30	M042 LEUKEMIAc	34 *	P003 NONHDL	-44 †	R016 18:1n9	-24	D023 Mn	-25	Q151 dBEERday
39 *	M048 BLOODb	40 †	P005 APOB	-41 †	R017 20:1n9	-45 †	D024 TOTNa	29	Q173 dFRUIT
28	M068 ALLRESPb	-26	P006 ALBUMIN	-65 †	R018 22:1n9	-55 †	D025 Na	25	Q174 dFISH
29	M070 PNEUMONIb	51 †	P009 B-CAROT	-72 †	R019 24:1n9	-30	D027 Zn	27	Q187 dBLEED
26	M080 TOTLIVRb	40 †	P010 G-CAROT	58 †	R022 22:6n3	-35 *	D028 PLNTFOOD	-46 †	Q209 eBIRTHWT
-39 *	M082 GALLBILc	-25	P015 G-TOCOPH	58 †	R023 18:2n6	-24	D041 LEGUME	-25	Q247 fBMIadj
-36 *	M089 ALLSKINc	30	P018 ANHYDLUT	58 †	R025 20:3n6	-34 *	D057 ADDEDSALT	34 *	G005 HEAT
28	M095 ROADACCb	27	P039 THYROXINE	88 †	R026 20:4n6	-24	D074 METH+CYS		
-31	M098 DROWNc	-27	R003 SATFA	-35 *	U001 CI/cre	-25	D078 THREONINE		

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- This variable is the sum of n6 and n3 fatty acids (R005 and R006), with n6 predominating.
- Higher levels along the coast and in Taiwan.
- Very good correlations between xiangs (86%†) and between males and females (86%†), but little correlation with 1983 values (7%, not significant).
- On average, red cell fatty acids are about half saturated, a quarter monounsaturated and a quarter polyunsaturated (R003: SATFA, R004: MUFA, R007: PUFA). As the proportion that is saturated shows little variation, the proportion that is monounsaturated is almost the complement of the proportion that is polyunsaturated (correlation coefficient -80%†).
- Slight downward trend in most areas, but upward in certain provinces which reflects mainly the n6 component (see P005:TOTn6).

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- 该指标是n6和n3脂肪酸的总和（R005和R006），其中n6占主要部分。
- 沿海各省和台湾省水平较高。
- 两乡之间（86%†）以及男性与女性之间（86%†）具有很好的相关性，但1989年测定值与1983年的几乎不存在相关性（7%，无显著性差异）。
- 一般来说，红细胞脂肪酸有一半是饱和的，1/4是单不饱和的，1/4是多不饱和的（R003: SATFA, R004: MUFA, R007: PUFA）。当饱和脂肪酸变异很小时，单不饱和脂肪酸几乎就是多不饱和脂肪酸的补充（相关系数 -80%†）。
- 许多地区呈微小的下降趋势，但是在某些省份则呈上升趋势，主要反映了n6脂肪酸成分的增加。（见 P005:TOTn6）。

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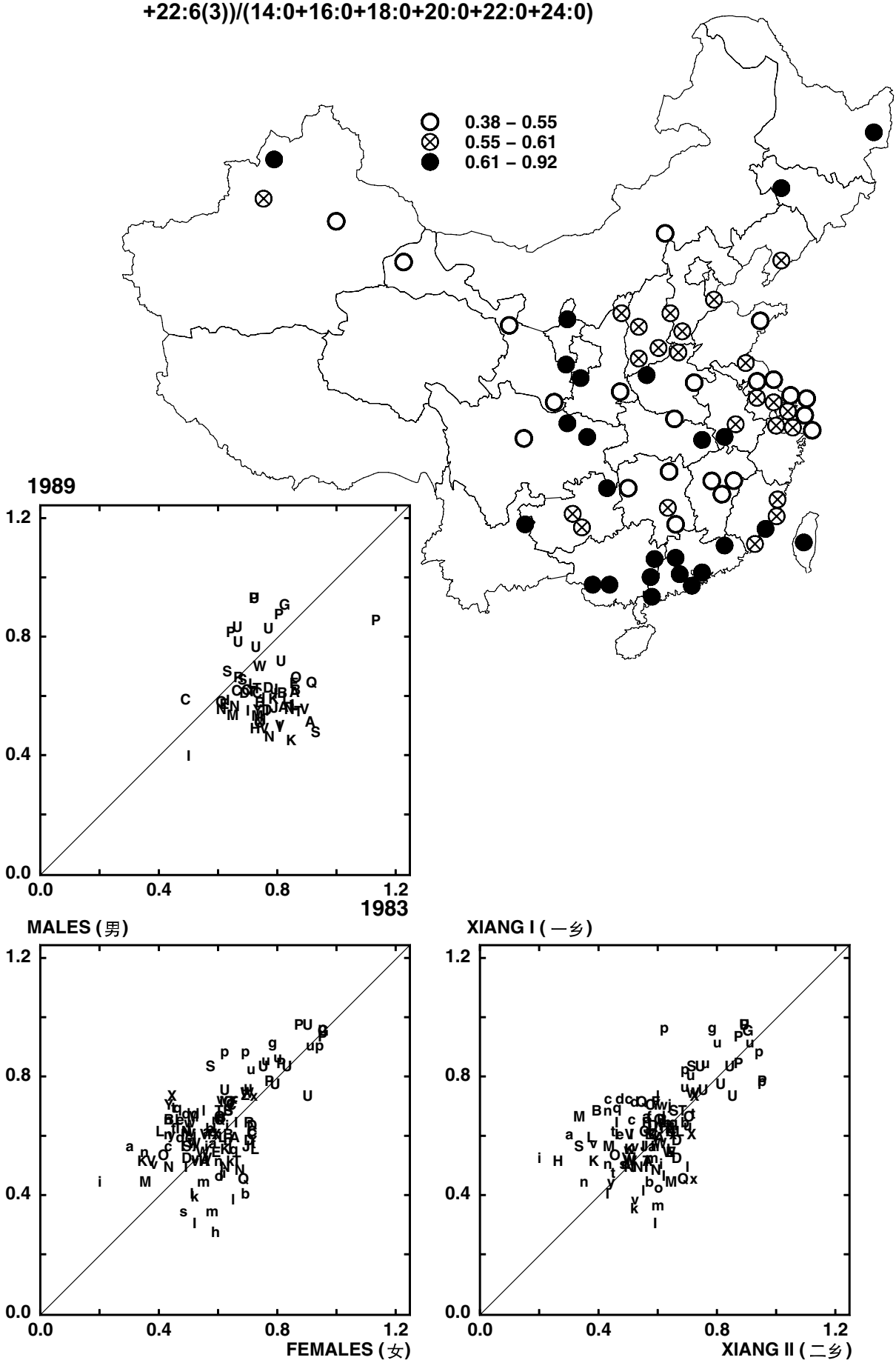
R008 P/S – red blood cell TOTAL LIPID POLYUNSATURATES/SATURATES (P:S RATIO) (18:2(6)+18:3(3)+20:2(6)+20:3(6)+20:4(6)+20:5(3) +22:6(3))/(14:0+16:0+18:0+20:0+22:0+24:0)



R008 P/S – 红细胞：总脂多不饱和脂肪酸/饱和脂肪酸 (P:S 比率)
(18:2(6)+18:3(3)+20:2(6)+20:3(6)+20:4(6)+20:5(3)+22:6(3))/(14:0+16:0+18:0+20:0+22:0+24:0)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	0.63	0.57	QA	0.56	0.57	AA	0.55	0.44	KC	0.52	0.63	ZA	0.74	0.74
CC	0.58	0.61	QB	0.62	0.64	AB	0.59	0.61	LA	0.47	0.63	ZB	0.78	0.65
CD	0.58	0.57	QC	0.62	0.59	AC	0.53	0.56	LB	0.59	0.66	ZC	0.75	0.73
DA	0.59	0.49	RA	0.60	0.70	BA	0.63	0.50	LC	0.64	0.48	ZD	0.75	0.72
DB	0.60	0.59	SA	0.44	0.49	BB	0.53	0.66	LD	0.63	0.52	ZE	0.76	0.78
DC	0.62	0.61	SB	0.76	0.57	BC	0.58	0.63	PA	0.86	0.86	ZF	0.59	0.73
FA	0.64	0.61	SC	0.66	0.62	EA	0.58	0.53	PC	0.93	0.91	ZG	0.71	0.71
GA	0.92	0.87	TA	0.61	0.46	HA	0.38	0.57	PD	0.90	0.79	ZH	0.78	0.63
JA	0.59	0.50	TC	0.68	0.53	IA	0.59	0.55	PE	0.85	0.75	ZI	0.76	0.65
JB	0.55	0.67	TD	0.53	0.69	IB	0.41	0.35	UA	0.79	0.85	ZJ	0.70	0.67
MB	0.54	0.48	VA	0.50	0.44	IC	0.54	0.62	UB	0.78	0.72	ZK	0.74	0.71
MC	0.49	0.55	VB	0.55	0.54	ID	0.44	0.52	UC	0.79	0.75	ZL	0.68	0.48
MD	0.49	0.55	VC	0.50	0.47	IE	0.55	0.52	UD	0.75	0.66	ZM	0.72	0.73
NA	0.62	0.46	WA	0.72	0.65	IF	0.55	0.52	UE	0.83	0.80	ZN	0.68	0.59
NB	0.50	0.39	WB	0.58	0.52	IG	0.55	0.64	UF	0.93	0.91	ZO	0.74	0.78
NC	0.49	0.61	WC	0.58	0.50	KB	0.44	0.43				ZP	0.72	0.75
ND	0.53	0.55	XA	0.72	0.58									
OA	0.48	0.50	XB	0.65	0.62									
OB	0.68	0.62	YA	0.64	0.44									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	0.60	0.56	0.63	0.63	0.73	0.69

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	0.61	0.13	0.59	0.12	75	9.3	†
Xiang (乡) I	vs	Xiang (乡) II	65	0.61	0.13	0.60	0.12	76	9.4	†
1983	vs	1989	65	0.75	0.10	0.60	0.12	6	0.5	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

25	M001 ALL0-4	25	M105 ALLCUMa	-48 †	R009 14:0	-31 *	D019 Fe	-27	Q068 dCOOKf
27	M007 MEDICALb	31	M106 MEDICALa	-81 †	R010 16:0	-31 *	D020 Cu	-25	Q091 dWEIGHT
-26	M010 NONMEDc	33 *	M108 RESPINFa	-24	R011 18:0	-25	D022 Mg	-31	Q092 dBMI
30	M022 ALLCAb	29	M113 PERINATa	-28	R012 20:0	-24	D023 Mn	25	Q094 dHEPATIT
-27	M023 ALLCAc	36 *	M114 LOWBTHWTa	52 †	R014 24:0	-37 *	D024 TOTNa	-29	Q096 dMALARIA
44 †	M025 NASOPCAc	45 †	M117 NEOTETANa	-25	R015 16:1n7	-47 †	D025 Na	-35 *	Q112 dFVCadj
-32 *	M028 STOMCAc	26	P005 APOB	-35 *	R016 18:1n9	-29	D027 Zn	-25	Q139 dCIGCONSf
36 *	M030 LIVERCAb	-27	P006 ALBUMIN	-46 †	R018 22:1n9	-29	D028 PLNTFOOD	-26	Q151 dBEERday
-27	M032 PANCRSCAc	53 †	P009 B-CAROT	-50 †	R019 24:1n9	-27	D042 LIGHTVEG	29	Q187 dBLEED
-27	M040 LYMPHOMAc	38 *	P010 G-CAROT	43 †	R022 22:6n3	28	D043 GREENVEG	26	Q205 eHRSWORK
-29	M042 LEUKEMIAc	-29	P015 G-TOCOPH	51 †	R023 18:2n6	-27	D057 ADDEDSALT	-47 †	Q209 eBIRTHWT
48 †	M048 BLOODb	33 *	P018 ANHYDLUT	59 †	R025 20:3n6	-30	D074 METH+CYS	-27	Q243 fWTadj
-25	M051 MENTALc	-27	P036 GLUCOSE	91 †	R026 20:4n6	-29	D078 THREONINE	-30	Q247 fBMIadj
32 *	M068 ALLRESPb	30	P039 THYROXINE	-36 *	U001 Cl/cre	24	D087 %MUFA	-30	G001 LATITUDE
33 *	M070 PNEUMONIb	-55 †	R003 SATFA	-37 *	U003 Na/cre	-24	D090 P/S	43 †	G005 HEAT
36 *	M080 TOTLIVRb	-57 †	R004 MUFA	-27	U006 UREA/cre	25	D097 %TOTn9		
-31	M082 GALLBILc	94 †	R005 TOTn6	-31 *	U012 VOLURINE	26	D146 %18:1		
-30	M089 ALLSKINc	42 †	R006 TOTn3	-30	U014 VOLURmn	32 *	Q018 aSCHOOLS		
33 *	M103 INFANT	95 †	R007 PUFA	-26	D004 SOLCARB	32 *	Q019 dCANREAD		

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- Higher levels along the coast and in Taiwan.
- Very good correlations between xiangs (76%†) and between males and females (75%†), but little correlation with 1983 measurements (perhaps because the latter were somehow unsatisfactory).
- The ratio of polyunsaturates to saturates shows a pattern similar to the pattern for total polyunsaturates. The percentage of saturated fatty acids (P003:SATFA) varies very little among counties, but the percentage of polyunsaturates does show variation from place to place, so the main source of variation is in the ratio of monounsaturates to polyunsaturates.
- The ratio has declined in most provinces, but the increase in n6 polyunsaturates in certain provinces (see R005:TOTn6) is also seen as an increase in this ratio.

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- 沿海各省和台湾省水平较高。
- 两乡之间（76%†）以及男性与女性之间（75%†）具有很好的相关性，但1989年测定值与1983年的几乎不存在相关性（可能是因为后者的测定结果不理想）。
- P:S 比率与总多不饱和脂肪酸的分布模式相似。各县饱和脂肪酸百分比（P003:SATFA）的变化很小，但是多不饱和脂肪酸百分比各地变化较大，因此变化的主要来源是单不饱和脂肪酸与多不饱和脂肪酸之比。
- 在大部分省份该比率下降，但是某些省份的n6多不饱和脂肪酸升高（见 R005:TOTn6），该比率也增加。

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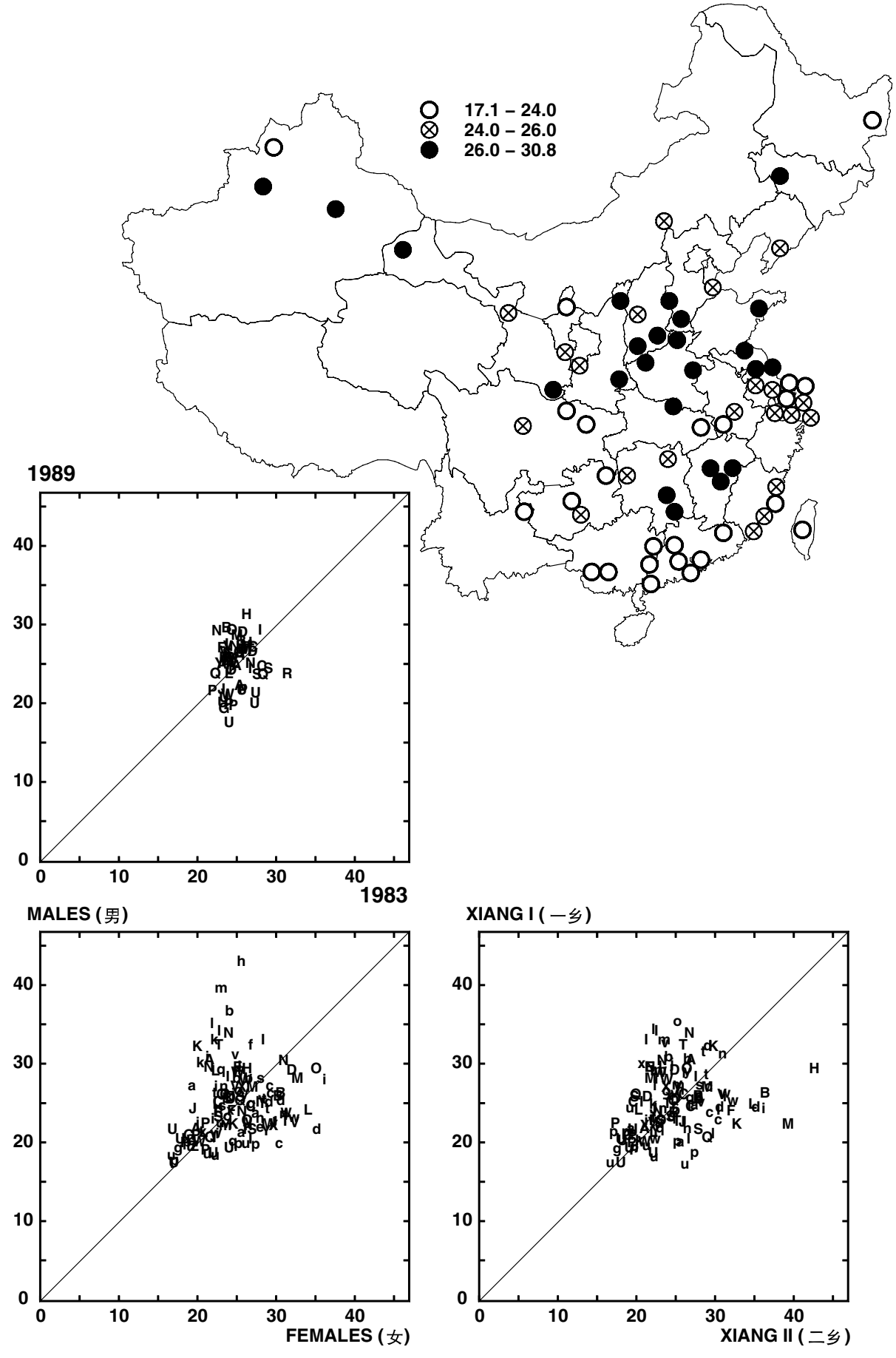
R010 16:0 – red blood cell TOTAL LIPID PALMITIC ACID (16:0) (% of total fatty acid by weight)



R010 16:0 – 红细胞：总脂棕榈酸 (16:0) (占总脂肪酸重量的百分比)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	25.4	27.9	QA	22.7	23.6	AA	23.2	25.8	KC	30.7	20.0	ZA	18.4	18.6
CC	25.7	26.3	QB	24.5	22.1	AB	21.0	22.6	LA	29.5	22.0	ZB	17.3	19.2
CD	22.1	26.4	QC	24.6	26.0	AC	28.4	20.3	LB	25.4	24.0	ZC	18.5	19.8
DA	26.7	30.4	RA	24.0	22.5	BA	26.6	28.3	LC	21.9	28.0	ZD	18.6	18.4
DB	24.9	27.3	SA	24.5	27.4	BB	31.0	27.2	LD	21.4	25.2	ZE	19.7	17.9
DC	23.3	29.5	SB	22.5	25.3	BC	26.4	24.3	PA	19.6	19.0	ZF	23.1	17.3
FA	27.7	25.5	SC	23.5	22.8	EA	25.3	26.5	PC	19.1	19.8	ZG	19.1	18.9
GA	19.6	18.1	TA	23.6	29.8	HA	35.7	25.9	PD	19.4	22.8	ZH	17.8	22.4
JA	23.9	27.0	TC	24.1	28.5	IA	26.1	28.3	PE	19.9	22.4	ZI	17.7	19.8
JB	22.9	19.6	TD	28.9	22.4	IB	27.6	29.9	UA	20.3	21.4	ZJ	18.8	19.5
MB	24.7	28.0	VA	22.0	27.9	IC	28.1	22.3	UB	20.1	22.4	ZK	20.1	19.8
MC	27.6	26.0	VB	28.2	25.3	ID	26.9	27.1	UC	19.0	20.0	ZL	19.0	27.3
MD	30.4	25.9	VC	25.9	26.4	IE	23.3	24.5	UD	18.9	21.5	ZM	18.6	17.7
NA	26.5	30.9	WA	20.2	21.1	IF	22.7	25.1	UE	19.0	20.2	ZN	19.6	21.0
NB	23.0	26.7	WB	25.6	28.4	IG	27.0	21.8	UF	17.4	16.8	ZO	19.3	17.1
NC	30.0	23.5	WC	25.5	28.5	KB	27.2	23.3				ZP	19.0	17.7
ND	25.4	23.9	XA	21.3	25.1									
OA	27.6	30.0	XB	25.1	24.8									
OB	22.6	24.9	YA	21.6	27.5									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	24.7	25.9*	24.1	23.5*	19.0	19.5

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	24.4	3.5	24.8	3.3	36	3.2	*
Xiang (乡) I	vs	Xiang (乡) II	66	24.6	3.3	24.7	3.4	47	4.3	†
1983	vs	1989	65	24.9	1.8	24.6	2.9	9	0.7	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-27 M001 ALL0-4	-29 P010 G-CAROT	28 U012 VOLURINE	27 D039 OTHCEREAL	31 * D147 %18:2
24 M005 ALL35-69	24 P011 Z-CAROT	25 U014 VOLURmn	34 * D042 LIGHTVEG	-27 Q019 dCANREAD
24 M006 ALL70-79	35 * P015 G-TOCOPH	-32 * D002 TOTFAT	-35 * D043 GREENVEG	32 * Q068 dCOOKf
-24 M022 ALLCAb	28 P019 A-CRYPT	29 D004 SOLCARB	-41 † D049 MEAT	29 Q091 dWEIGHT
-44 † M025 NASOPCAc	24 P022 PHYTOFLU	-40 † D005 %FATKCAL	-40 † D050 REDMEAT	29 Q092 dBMI
28 M027 OESOPHCAc	-26 P042 HBsAg	-38 * D007 %ANPRKCAL	-34 * D052 FISH	-35 * Q094 dHEPATIT
28 M028 STOMCAc	33 * R002 RIBOFDEF	36 * D008 %PLPRKCAL	38 * D059 TOTNDF	35 * Q112 dFVCadj
-29 M030 LIVERCAb	74 † R003 SATFA	38 * D009 %CARBKCAL	36 * D067 GLUTAMINE	-27 Q157 dRICE
27 M045 DIABETESc	-68 † R005 TOTn6	25 D015 THIAMINE	33 * D074 METH+CYS	37 * Q158 dWHEAT
-41 † M048 BLOODb	-66 † R007 PUFA	33 * D019 Fe	-37 * D082 MUFA	27 Q161 dMILLET
-31 M068 ALLRESPb	-81 † R008 P/S	33 * D020 Cu	-34 * D084 SATFA	-29 Q165 dSMOKFOOD
-32 * M070 PNEUMONb	60 † R009 14:0	36 * D022 Mg	-31 * D085 CHOL	-24 Q166 dSALTFISH
-27 M080 TOTLIVRb	37 * R011 18:0	27 D023 Mn	-24 D086 LYS/ARG	-26 Q167 dSALTFKID
-33 * M103 INFANT	33 * R012 20:0	25 D027 Zn	-35 * D087 %MUFA	-28 Q172 dGRNVEG
-27 M105 ALLCUMa	-65 † R014 24:0	-31 * D029 ANIMFOOD	30 D088 %PUFA	-39 † Q174 dFISH
-28 M106 MEDICALa	41 † R015 16:1n7	38 * D031 %PLNTFOOD	26 D090 P/S	-28 Q175 dMEAT
-32 * M108 RESPINFa	32 * R016 18:1n9	-38 * D032 %ANIMFOOD	-27 D091 M/P	-26 Q187 dBLEED
-39 * M114 LOWBTHWTa	-35 * R021 20:5n3	38 * D033 PLNTPROT	-37 * D094 TOTn9	42 † Q209 eBIRTHWT
-32 * M117 NEOTETANa	-77 † R026 20:4n6	-36 * D034 ANIMPROT	31 * D096 %TOTn6	29 Q243 fWTadj
-27 P001 TOTCHOL	42 † U001 Cl/cre	40 † D035 %PLNTPROT	-34 * D097 %TOTn9	32 * Q247 fBMIadj
-33 * P004 APOA1	41 † U003 Na/cre	-40 † D036 %ANIMPROT	-29 D141 %16:1	39 * G001 LATITUDE
-25 P005 APOB	25 U004 Ca/cre	-28 D037 RICE	-25 D145 %18:0	25 G004 ARIDITY
-45 † P009 B-CAROT	43 † U006 UREA/cre	30 D038 WHTFLOUR	-34 * D146 %18:1	-49 † G005 HEAT

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- Higher levels in north.
- Moderate correlation between xiangs (47%†), poorer between males and females (36%*), and very poor correlation with 1983 measurements (perhaps because the latter were somehow unsatisfactory).
- Outliers on male/female and xiang I/xiang II graphs may represent real variation or artefacts of analysis. The county with the highest rate, Laoshan (county HA) is a nut-growing area and the survey took place during the nut harvest, which may account for the high values.
- In this population palmitic acid, mainly from plant sources, is the most abundant saturated RBC fatty acid, constituting about a quarter of the total RBC fatty acids.
- Correlated positively with variables related to plant food intake (e.g., 36%* D008:PLPRKCAL; 40%† D035 %PLNTPROT) and negatively with variables related to animal food intake (e.g., -40%† D036 %ANIMPROT; -41%† D049:MEAT)

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- 北方各省水平较高。
- 两乡之间呈中度相关（47%†），男性与女性之间相关性较差（36%*），而与1983年测定值之间的相关性很差（可能是因为后者的测定结果不理想）。
- 男性/女性以及乡I/乡II图中的偏离值可能反映了真正的变异或者由测定造成的假性偏离。崂山县（HA）的总棕榈酸水平最高，该县为坚果种植地区，本次调查在坚果收获时进行，这可以用来解释该县水平最高的原因。
- 在这个人群中，主要来自植物性食物的棕榈酸是最丰富的红细胞饱和脂肪酸，大约占红细胞总脂肪酸的1/4。
- 与植物性食物的相关指标呈正相关（如，36%* D008:PLPRKCAL; 40%† D035 %PLNTPROT），与动物性食物的相关指标呈负相关（如，-40%† D036 %ANIMPROT; -41%† D049:MEAT）。

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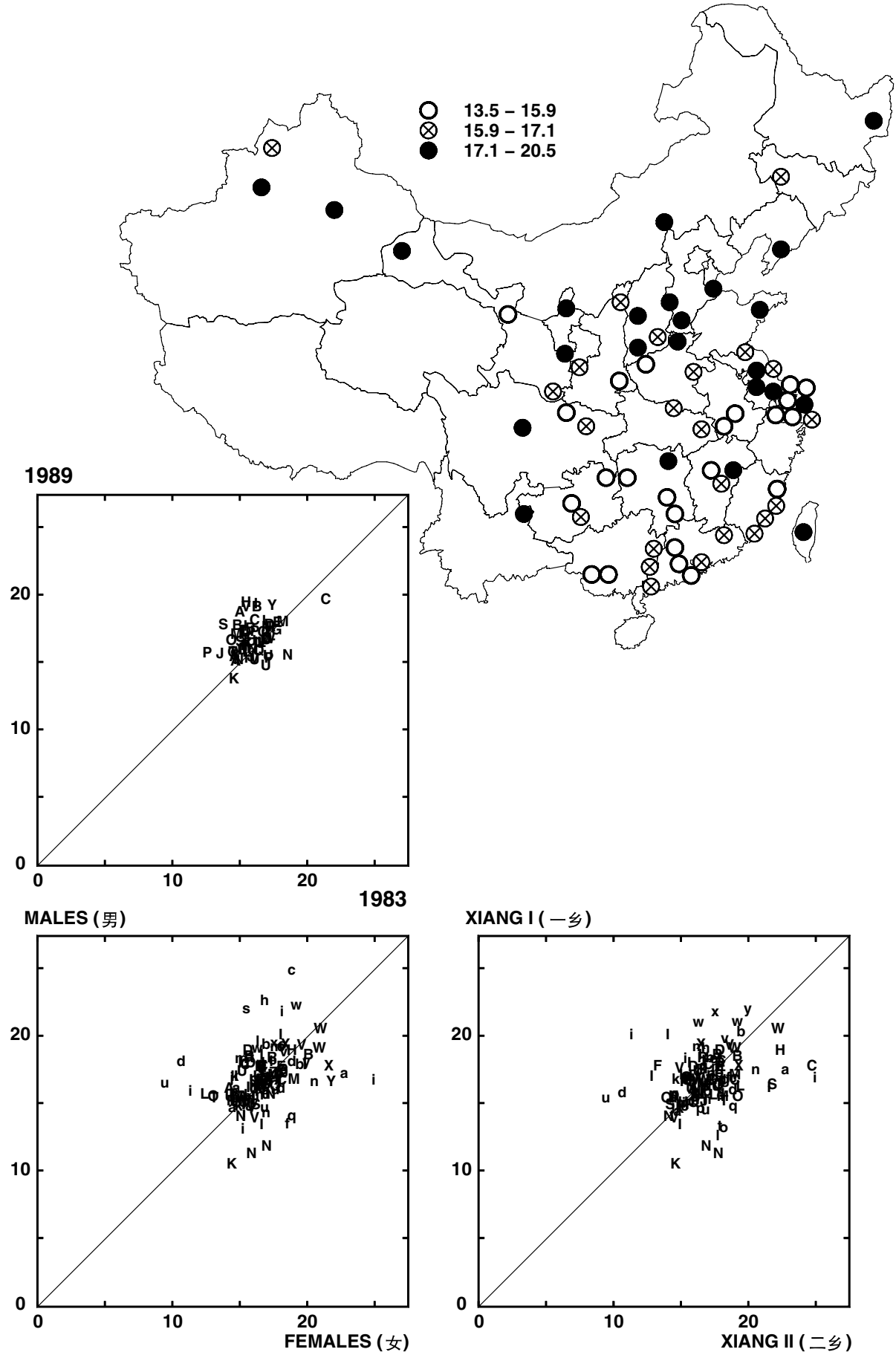
R011 18:0 – red blood cell TOTAL LIPID STEARIC ACID (18:0) (% of total fatty acid by weight)



R011 18:0 – 红细胞：总脂硬脂酸 (18:0) (占总脂肪酸重量的百分比)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	17.6	18.0	QA	14.5	16.6	AA	16.9	20.0	KC	12.4	14.6	ZA	16.9	16.6
CC	17.3	16.6	QB	15.3	15.6	AB	15.8	14.4	LA	17.6	16.3	ZB	16.0	18.3
CD	21.1	17.7	QC	16.8	17.1	AC	14.8	14.8	LB	17.5	15.9	ZC	17.4	16.8
DA	16.6	17.2	RA	17.3	17.3	BA	18.0	19.7	LC	15.9	15.0	ZD	17.3	17.3
DB	17.8	17.3	SA	18.9	16.1	BB	18.7	16.3	LD	16.3	16.0	ZE	16.6	17.2
DC	18.2	13.1	SB	14.4	16.1	BC	16.8	17.6	PA	15.8	16.1	ZF	19.1	16.5
FA	15.4	17.6	SC	16.0	16.4	EA	17.6	17.7	PC	15.1	14.9	ZG	16.5	15.8
GA	16.9	17.4	TA	15.5	15.4	HA	20.5	17.8	PD	15.4	15.4	ZH	16.3	17.3
JA	14.9	15.8	TC	16.8	17.3	IA	16.7	15.6	PE	16.6	17.4	ZI	16.3	18.1
JB	15.8	14.4	TD	16.5	15.8	IB	17.4	20.8	UA	16.7	12.3	ZJ	17.6	17.3
MB	15.9	17.6	VA	14.0	15.9	IC	17.8	17.0	UB	15.8	16.8	ZK	14.9	17.2
MC	17.9	17.6	VB	18.8	18.9	ID	16.9	16.6	UC	14.8	15.5	ZL	17.8	21.9
MD	16.6	14.9	VC	16.0	16.2	IE	14.0	16.0	UD	15.9	16.5	ZM	17.4	17.1
NA	14.1	17.1	WA	16.3	16.6	IF	14.8	14.9	UE	15.0	14.9	ZN	17.6	18.9
NB	13.9	15.9	WB	18.8	18.5	IG	18.7	16.9	UF	16.3	16.5	ZO	16.9	16.6
NC	14.4	16.1	WC	21.1	20.0	KB	16.4	15.6				ZP	17.3	16.5
ND	15.8	18.9	XA	18.4	19.5									
OA	16.9	16.0	XB	17.8	18.0									
OB	17.1	15.5	YA	17.0	20.8									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	16.7	16.9	16.4	16.3	17.0	17.5

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	16.6	1.7	16.6	1.6	46	4.2	†
Xiang (乡) I	vs	Xiang (乡) II	66	16.4	1.7	16.8	1.7	38	3.3	*
1983	vs	1989	65	15.9	1.3	16.4	1.3	35	3.0	*

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

25 M008 MEDICALc	-30 P002 HDLCHOL	-34 * R017 20:1n9	-25 D043 GREENVEG	34 * Q139 dCIGCONSf
-37 * M012 INFECTc	26 P003 NONHDL	-41 † R018 22:1n9	26 D047 MILK	-27 Q156 dALCOday
-30 M016 PULMTBc	-32 * P004 APOA1	-37 * R019 24:1n9	-36 * D052 FISH	-50 † Q157 dRICE
-40 † M019 VIRALHEPb	29 P011 Z-CAROT	35 * R022 22:6n3	48 † D067 GLUTAMINE	46 † Q158 dWHEAT
-29 M020 VIRALHEPc	34 * P015 G-TOCOPH	-26 R026 20:4n6	32 * D074 METH+CYS	28 Q161 dMILLET
-27 M021 SCHISTOc	39 † P016 LYCOPENE	26 U005 P/cre	24 D078 THREONINE	-27 Q165 dSMOKFOOD
-31 M025 NASOPCAc	34 * P022 PHYTOFLU	29 U006 UREA/cre	-29 D087 %MUFA	-27 Q166 dSALTFISH
27 M027 OESOPHCAc	-29 P024 FOLATE	27 U007 URIC/cre	-30 D097 %TOTn9	-29 Q167 dSALTFKID
34 * M059 ALLVASCc	-25 P025 VITC	28 U011 COT/cre	-31 D146 %18:1	-32 * Q172 dGRNVEG
31 M062 HYPTENSc	-24 P040 B2-MGLOB	-37 * U023 NO3mn	26 Q021 eCANREAD	-31 * Q174 dFISH
44 † M063 IHDc	29 P048 COTIN>20f	-24 U026 SUMNITa	-25 Q052 c%TOILET	31 * Q177 dMILK
42 † M067 VASC-STRc	72 † R003 SATFA	26 D003 TOTPROT	37 * Q057 dCOALKID	-24 Q234 eWORMS
-26 M074 DIGESTIVc	-41 † R004 MUFA	31 D008 %PLPRKCAL	40 † Q064 dCOALNOW	33 * Q243 fWTadj
-27 M078 CIRRHOSb	31 R006 TOTn3	28 D020 Cu	25 Q068 dCOOKf	40 † Q247 fBMIadj
-27 M079 CIRRHOSc	-24 R008 P/S	27 D021 K	32 * Q090 dHEIGHT	51 † G001 LATITUDE
-28 M080 TOTLIVRb	27 R009 14:0	35 * D026 SeCARRY	47 † Q091 dWEIGHT	47 † G004 ARIDITY
-35 * M082 GALLBILc	37 * R010 16:0	31 D033 PLNTPROT	50 † Q092 dBMI	-49 † G005 HEAT
-30 M089 ALLSKINc	28 R012 20:0	-45 † D037 RICE	28 Q098 dTHYROID	
41 * M095 ROADACCb	52 † R013 22:0	46 † D038 WHTFLOUR	26 Q099 dBRTHFAST	
42 † M096 ROADACCc	-30 R014 24:0	28 D042 LIGHTVEG	29 Q131 dSMOKNOWf	

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- Somewhat higher in the north, but relatively little variability among counties.
- Moderate correlation between xiangs (38%*), stronger between males and females (46%†), and moderate correlation with 1983 values (35%*).
- Stearic acid is the main saturated fatty acid derived from animal foods, constituting about 16% of all RBC fatty acids.
- Correlations are not highly informative because of the relatively small range of mean values.

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- 北方较高，但是各县之间的差异很小。
- 两乡之间呈中度相关（38%*），男性与女性之间呈强相关性（46%†），而与1983年测定值亦呈中度相关（35%*）。
- 硬脂酸是来源于动物性食品的主要饱和脂肪酸，约占红细胞总脂肪酸的16%。
- 由于平均值范围较小，因此与其它指标的相关性并无太大的价值。

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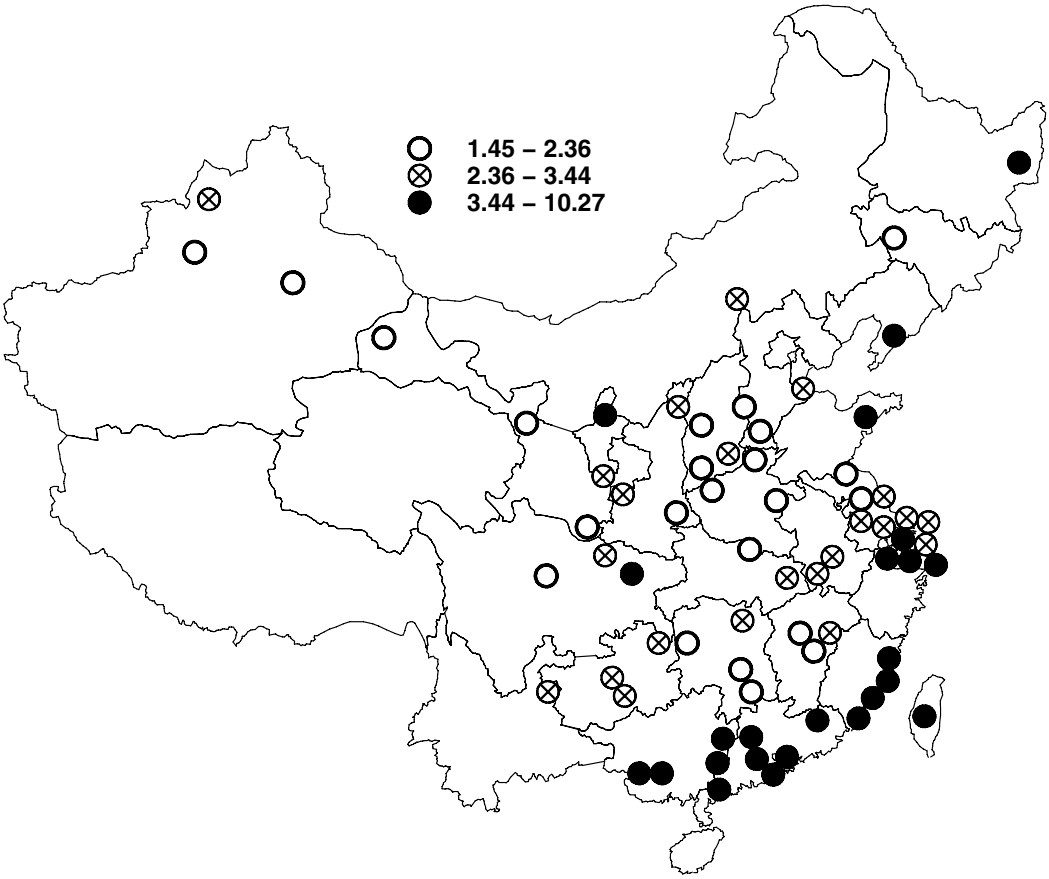
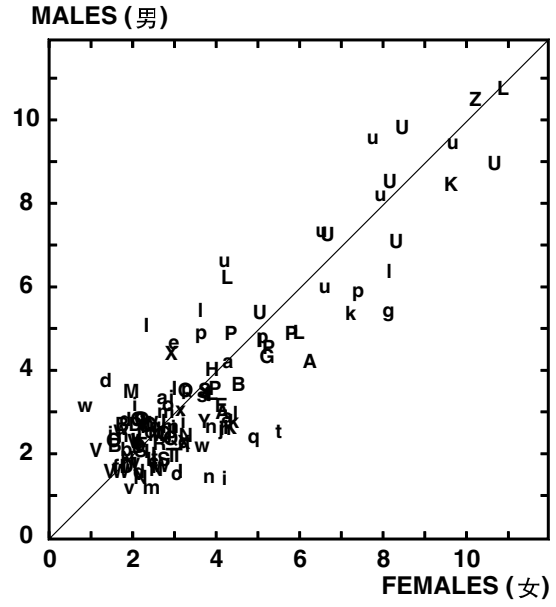
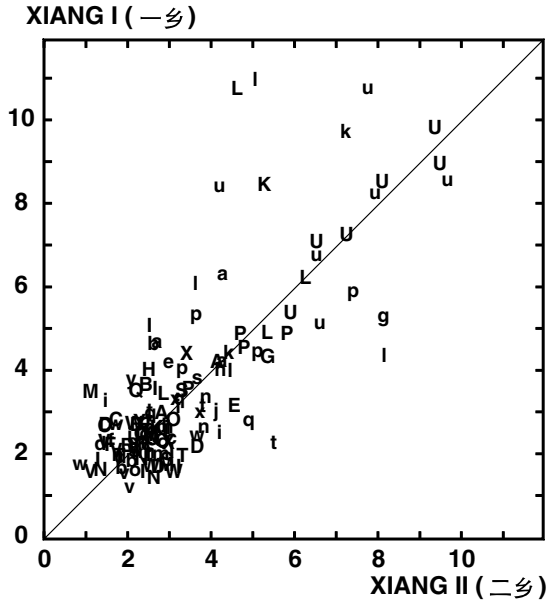
R014 24:0 – red blood cell TOTAL LIPID LIGNOCERIC ACID (24:0) (% of total fatty acid by weight)







R014 24:0 – 红细胞：总脂正二十四烷酸 (24:0) (占总脂肪酸重量的百分比)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	2.18	2.28	QA	2.32	3.79	AA	3.22	3.63	KC	2.57	4.35	ZA	11.21	11.62
CC	2.49	2.37	QB	2.76	3.21	AB	4.08	5.23	LA	3.07	4.15	ZB	11.29	10.99
CD	1.98	2.64	QC	2.38	2.69	AC	2.81	4.17	LB	5.03	4.78	ZC	10.64	9.82
DA	2.13	1.81	RA	2.23	2.60	BA	2.38	1.89	LC	6.16	6.18	ZD	9.85	10.28
DB	2.00	2.08	SA	2.04	2.12	BB	2.02	1.68	LD	7.59	7.93	ZE	8.50	9.83
DC	2.83	1.72	SB	2.31	2.71	BC	2.96	3.55	PA	5.26	6.58	ZF	8.65	12.45
FA	1.82	1.89	SC	3.33	3.66	EA	3.78	3.53	PC	4.71	4.71	ZG	11.70	11.74
GA	4.76	6.63	TA	1.80	2.72	HA	3.19	4.05	PD	3.43	3.61	ZH	11.07	7.11
JA	2.51	2.75	TC	2.41	3.82	IA	1.90	2.30	PE	4.59	4.43	ZI	11.07	9.91
JB	2.45	3.51	TD	2.55	3.41	IB	2.48	2.18	UA	6.72	6.24	ZJ	9.66	10.34
MB	2.25	2.34	VA	1.82	1.55	IC	2.39	2.71	UB	7.17	6.58	ZK	9.97	8.89
MC	2.42	2.71	VB	1.25	1.65	ID	3.73	2.28	UC	9.14	9.19	ZL	12.24	6.70
MD	2.21	2.18	VC	1.79	2.05	IE	3.04	3.10	UD	9.51	9.04	ZM	9.88	11.71
NA	2.02	1.80	WA	2.33	2.97	IF	2.16	2.74	UE	8.23	8.03	ZN	10.02	9.31
NB	1.41	3.17	WB	2.03	2.14	IG	1.50	3.29	UF	5.57	5.81	ZO	8.43	10.49
NC	1.94	2.22	WC	2.24	1.23	KB	6.77	8.40				ZP	11.56	11.77
ND	2.41	3.55	XA	3.82	3.30									
OA	2.49	1.82	XB	2.54	3.16									
OB	2.86	2.50	YA	2.46	2.87									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	2.36†	2.67†	4.42†	4.72†	10.36	10.19

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	3.29	1.87	3.59	1.90	93	20.4	†
Xiang (乡) I	vs	Xiang (乡) II	66	3.48	2.12	3.45	1.79	85	12.9	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-25 M014 INTESTINc	28 P031 Zn	32 * D002 TOTFAT	38 * D051 POULTRY	-26 Q064 dCOALNOW
-31 * M018 OTHERTBc	-25 P035 TRANSFE	-51 † D004 SOLCARB	76 † D052 FISH	-41 † Q068 dCOOKf
60 † M025 NASOPCAc	39 † P041 TESTOSTm	50 † D005 %FATKCAL	-36 * D057 ADDEDSALT	-26 Q091 dWEIGHT
46 † M031 LIVERCAc	24 P042 HBsAg	71 † D007 %ANPRKCAL	-48 † D059 TOTNDF	-30 Q092 dBMI
34 * M035 LUNGCAmc	-27 R002 RIBOFDEF	-45 † D008 %PLPRKCAL	-41 † D067 GLUTAMINE	32 * Q093 dPEPULCER
34 * M036 LUNGCAfc	-41 † R004 MUFA	-53 † D009 %CARBKCAL	33 * D072 LYSINE	26 Q094 dHEPATIT
26 M039 BRAINCAc	53 † R005 TOTn6	29 D010 RETINOL	-36 * D074 METH+CYS	-26 Q112 dFVCadj
-29 M059 ALLVASCc	24 R006 TOTn3	-27 D015 THIAMINE	41 † D082 MUFA	32 * Q117 dDIARRH
-26 M062 HYPTENSc	54 † R007 PUFA	-48 † D019 Fe	31 D084 SATFA	38 * Q151 dBEERday
-26 M065 STROKEc	52 † R008 P/S	-48 † D020 Cu	55 † D085 CHOL	30 Q157 dRICE
-27 M067 VASC-STRc	-60 † R009 14:0	-39 † D021 K	42 † D086 LYS/ARG	-41 † Q158 dWHEAT
-29 M077 INTESTOBc	-65 † R010 16:0	-42 † D022 Mg	38 * D087 %MUFA	-24 Q159 dMAIZE
45 † M081 TOTLIVRc	-30 R011 18:0	-38 * D023 Mn	-31 * D088 %PUFA	71 † Q166 dSALTFISH
27 M082 GALLBILc	-33 * R012 20:0	-26 D024 TOTNa	-28 D090 P/S	74 † Q167 dSALTFKID
26 M097 DROWNb	-33 * R015 16:1n7	-35 * D027 Zn	27 D091 M/P	30 Q172 dGRNVEG
56 † P001 TOTCHOL	-42 † R016 18:1n9	-40 † D028 PLNTFOOD	41 † D094 TOTn9	40 † Q173 dFRUIT
48 † P002 HDLCHOL	-26 R017 20:1n9	51 † D029 ANIMFOOD	-33 * D096 %TOTn6	85 † Q174 dFISH
41 † P003 NONHDL	-30 R019 24:1n9	-57 † D031 %PLNTFOOD	37 * D097 %TOTn9	38 * Q175 dMEAT
42 † P004 APOA1	68 † R021 20:5n3	57 † D032 %ANIMFOOD	44 † D141 %16:1	34 * Q201 eDOCVIS
60 † P005 APOB	68 † R026 20:4n6	-59 † D033 PLNTPROT	36 * D146 %18:1	-36 * Q209 eBIRTHWT
-24 P006 ALBUMIN	-49 † U001 Cl/cre	67 † D034 ANIMPROT	-33 * D147 %18:2	-28 Q243 fWTadj
46 † P009 B-CAROT	-28 U002 K/cre	-71 † D035 %PLNTPROT	-24 D148 %18:3	-54 † Q247 fBMIadj
-31 P011 Z-CAROT	-50 † U003 Na/cre	71 † D036 %ANIMPROT	-28 Q017 aPRIMARY	-51 † G001 LATITUDE
-50 † P015 G-TOCOPH	-28 U006 UREA/cre	28 D037 RICE	24 Q018 aSCHOOLS	26 G002 LONGITUDE
-25 P017 LUTEIN	-30 U007 URIC/cre	-39 * D038 WHTFLOUR	25 Q019 dCANREAD	-38 * G003 ELEVATION
27 P018 ANHYDLUT	30 U008 CREAT	-28 D039 OTHCEREAL	38 * Q031 aINCOME	-39 * G004 ARIDITY
-30 P022 PHYTOFLU	75 † U009 TAUR/cre	-36 * D042 LIGHTVEG	26 Q051 c%FLUSHWC	59 † G005 HEAT
-28 P023 PHYTOENE	34 * U023 NO3mn	44 † D049 MEAT	29 Q052 c%TOILET	
40 † P030 Se	-35 * D001 KCAL	39 † D050 REDMEAT	-26 Q057 dCOALKID	

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- Higher levels on the coast, south, and Taiwan and a wide spread of values among counties.
- Very good correlations between xiangs (85%†) and between males and females (93%†).
- Strongly correlated with variables related to fish consumption and animal food intake (e.g., 51%† D029:ANIMFOOD, 76%† D052:FISH), and negatively correlated with plant food intake (e.g., -71%† D035:PLNTPROT, -51%† D004:SOLCARB).
- Positively correlated with all measures of plasma lipids (56%† P001:TOTCHOL, 48%† P002:HDLCHOL, 41%† P003:NONHDL, 42%† P004:APOA1, 60%† P005:APOB).

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- 沿海各省、南方和台湾省的水平较高，各县的总正二十四烷酸水平很分散。
- 两乡之间（85%†）以及男性与女性之间（93%†）具有很强的相关性。
- 与鱼消费和动物性食物摄入量相关指标呈正相关（如，51%† D029:ANIMFOOD，76%† D052:FISH），与植物性食物摄入量呈负相关（如，-71%† D035:PLNTPROT，-51%† D004:SOLCARB）。
- 与血脂各指标呈正相关（56%† P001:TOTCHOL，48%† P002:HDLCHOL，41%† P003:NONHDL，42%† P004:APOA1，60%† P005:APOB）。

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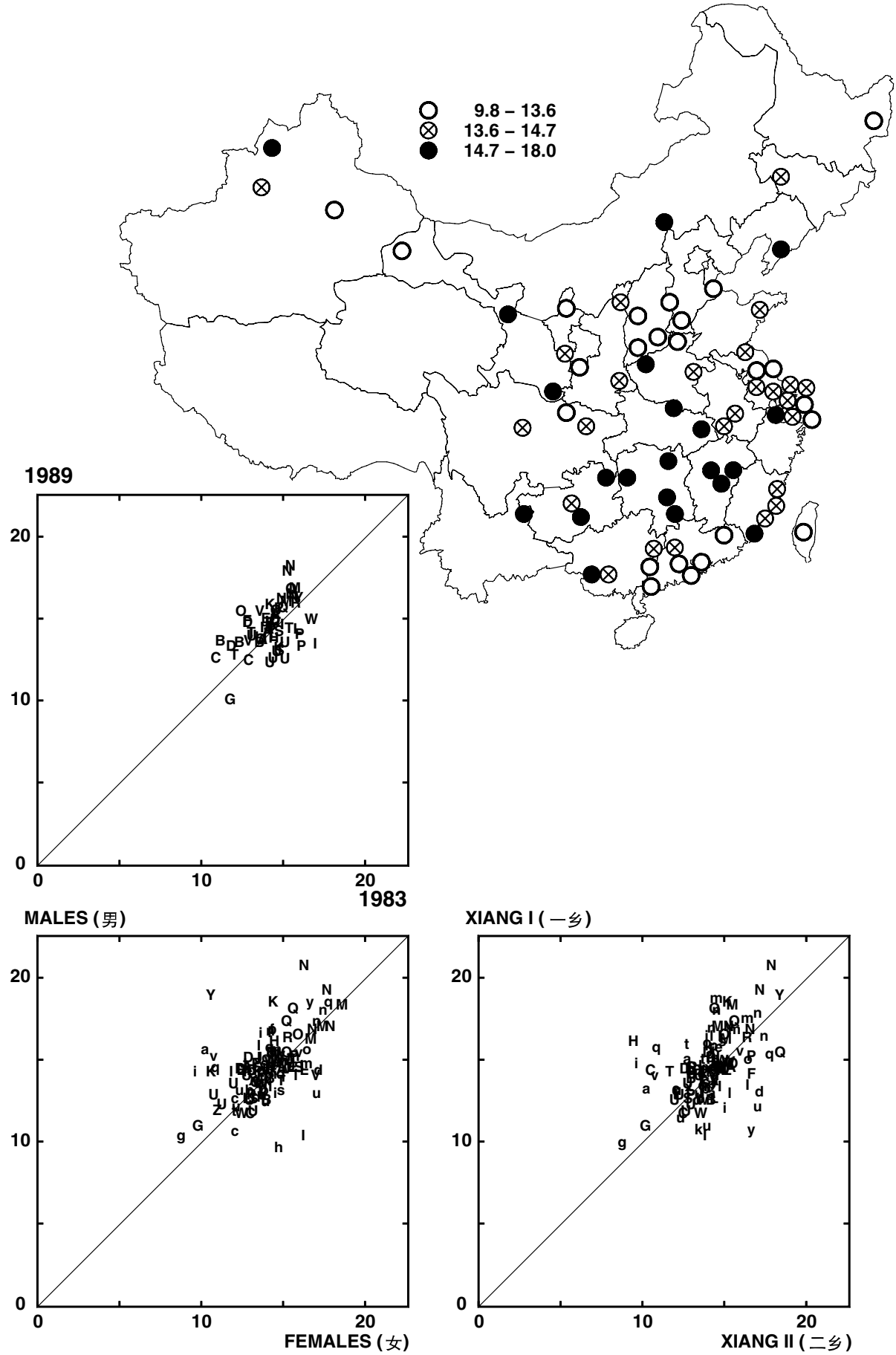
R016 18:1n9 – red blood cell TOTAL LIPID OLEIC ACID (18:1(9)) (% of total fatty acid by weight)



R016 18:1n9 – 红细胞：总脂油酸 (18:1(9)) (占总脂肪酸重量的百分比)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	11.9	12.4	QA	16.1	13.2	AA	15.4	11.6	KC	16.7	14.6	ZA	11.4	10.9
CC	13.6	13.4	QB	16.8	16.4	AB	14.8	13.4	LA	14.6	15.5	ZB	10.7	10.0
CD	12.3	12.5	QC	16.3	14.6	AC	14.2	13.8	LB	14.6	13.7	ZC	11.8	11.4
DA	14.6	14.5	RA	16.2	15.2	BA	13.3	13.5	LC	14.0	15.2	ZD	11.9	10.9
DB	13.4	12.8	SA	13.6	15.4	BB	13.7	12.9	LD	13.4	14.0	ZE	11.8	11.8
DC	14.5	15.0	SB	12.6	13.1	BC	13.2	13.4	PA	13.7	13.9	ZF	9.9	10.8
FA	15.3	14.0	SC	14.4	13.6	EA	14.5	15.1	PC	15.8	15.0	ZG	11.1	10.6
GA	10.4	9.2	TA	14.2	14.2	HA	12.6	14.6	PD	14.4	13.8	ZH	12.5	13.8
JA	14.3	14.9	TC	13.6	14.3	IA	13.9	13.4	PE	12.8	13.4	ZI	11.9	9.9
JB	14.6	13.9	TD	12.8	12.3	IB	14.4	12.1	UA	13.0	14.4	ZJ	12.0	10.7
MB	15.5	16.1	VA	14.0	16.0	IC	14.8	14.0	UB	12.1	13.4	ZK	12.1	11.9
MC	15.6	16.9	VB	14.6	12.3	ID	12.0	15.1	UC	12.4	12.3	ZL	12.4	7.9
MD	16.8	16.5	VC	14.9	15.6	IE	13.9	14.6	UD	12.1	12.5	ZM	12.3	11.8
NA	18.1	17.3	WA	14.7	14.8	IF	13.4	14.3	UE	12.4	11.8	ZN	12.0	10.7
NB	16.0	16.1	WB	14.9	14.4	IG	14.8	13.8	UF	13.6	13.1	ZO	11.4	10.7
NC	19.1	16.8	WC	12.4	13.0	KB	14.1	11.9				ZP	12.0	11.1
ND	16.6	15.5	XA	13.9	13.0									
OA	14.9	15.6	XB	13.8	14.2									
OB	15.6	14.9	YA	18.5	13.6									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	14.8	14.4	13.8	13.7	11.7	10.9

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	14.3	1.6	14.1	1.4	62	6.5	†
Xiang (乡) I	vs	Xiang (乡) II	66	14.3	1.6	14.1	1.5	57	5.6	†
1983	vs	1989	65	14.2	1.3	14.2	1.4	46	4.1	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

30 M002 ALL5-14	35 * M078 CIRRHOSb	-42 † R005 TOTn6	47 † D053 ANIMFAT	-32 * Q051 c%FLUSHWC
38 * M003 ALL15-34	38 * M089 ALLSKINc	-44 † R007 PUFA	-40 † D054 VEGOIL	33 * Q068 dCOOKf
33 * M004 ALL0-34	44 † M090 MUSCSKELc	-35 * R008 P/S	26 D057 ADDEDSALT	25 Q069 dUNVENT
37 * M009 NONMEDb	-27 M095 ROADACCb	34 * R009 14:0	-38 * D083 PUFA	-35 * Q090 dHEIGHT
45 † M010 NONMEDc	28 M098 DROWNc	32 * R010 16:0	45 † D087 %MUFA	-32 * Q091 dWEIGHT
25 M011 INFECTb	34 * M099 SUICIDEb	-42 † R014 24:0	-48 † D088 %PUFA	-24 Q092 dBMI
52 † M012 INFECTc	45 † M100 SUICIDEc	49 † R015 16:1n7	46 † D089 %SATFA	-27 Q111 dFEV1adj
31 * M014 INTESTINc	31 M109 ALLGIa	25 R017 20:1n9	-46 † D090 P/S	-29 Q113 dMMEFadj
44 † M016 PULMTBc	-31 M111 NTDa	-24 R023 18:2n6	47 † D091 M/P	26 Q117 dDIARRH
-29 M034 LARYNXCAc	27 M118 MALNUTRIa	-43 † R026 20:4n6	-42 † D092 TOTn3	24 Q149 dALCEVER
-27 M036 LUNGCAfc	-24 P001 TOTCHOL	-31 * U006 UREA/cre	-38 * D093 TOTn6	29 Q153 dWINEday
29 M043 ENDOCRINb	-30 P003 NONHDL	-28 U009 TAUR/cre	-45 † D095 %TOTn3	33 * Q157 dRICE
-25 M044 ENDOCRINc	-39 † P005 APOB	-24 D003 TOTPROT	-46 † D096 %TOTn6	-26 Q158 dWHEAT
-41 † M045 DIABETESc	34 * P007 TOTPROT	-29 D006 %PROTKCAL	45 † D097 %TOTn9	24 Q165 dSMOKFOOD
28 M046 MALNUTRIb	-35 * P009 B-CAROT	-44 † D013 VITE	26 D136 %14:0	48 † Q168 dANIMFAT
25 M047 MALNUTRIc	-37 * P010 G-CAROT	-31 * D015 THIAMINE	38 * D140 %16:0	-44 † Q169 dVEGFAT
-37 * M063 IHDc	-35 * P016 LYCOPENE	30 D024 TOTNa	51 † D145 %18:0	-29 Q176 dEGGS
30 M071 PNEUMONc	-26 P018 ANHYDLUT	28 D025 Na	45 † D146 %18:1	34 * Q192 dLIVEBRTH
38 * M073 DIGESTIVb	43 † P020 B-CRYPT	31 * D037 RICE	-46 † D147 %18:2	-28 Q201 eDOCVIS
30 M074 DIGESTIVc	-34 * P039 THYROXINE	-26 D038 WHTFLOUR	-44 † D148 %18:3	-25 Q245 fHTadj
27 M075 PEPULCERc	44 † P040 B2-MGLOB	35 * D041 LEGUME	-26 Q031 alNCOME	
29 M076 ENTCOLc	48 † R004 MUFA	33 * D045 FRUIT	-32 * Q050 c%H2OPIPE	

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- Somewhat lower values on the coast and in Taiwan.
- Good correlations between xiangs (57%†), between males and females (62%†), and with 1983 values (46%†).
- Oleic acid is the main monounsaturate (nervonic acid makes up most of the rest), constituting about 14% of RBC fatty acids overall.
- Correlated positively with variables related to animal fat intake (e.g, 47%† D053:ANIMFAT, 46%† D089:%SATFA) and negatively with plant fat intake (e.g., -40%† D054:VEGOIL, -48%† D088:%PUFA).

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- 沿海各省和台湾省水平较低。
- 两乡之间（57%†）、男性与女性之间（62%†）以及与1983年测定值（46%†）之间具有很好的相关性。
- 油酸是主要的单不饱和脂肪酸（二十四烯酸是其它单不饱和脂肪酸的主要部分），约占红细胞总脂肪酸的14%。
- 与动物性脂肪摄入相关指标呈正相关（如，47%† D053:ANIMFAT, 46%†），与植物性脂肪摄入呈负相关（如，-40%† D054:VEGOIL, -48%† D088:%PUFA）。

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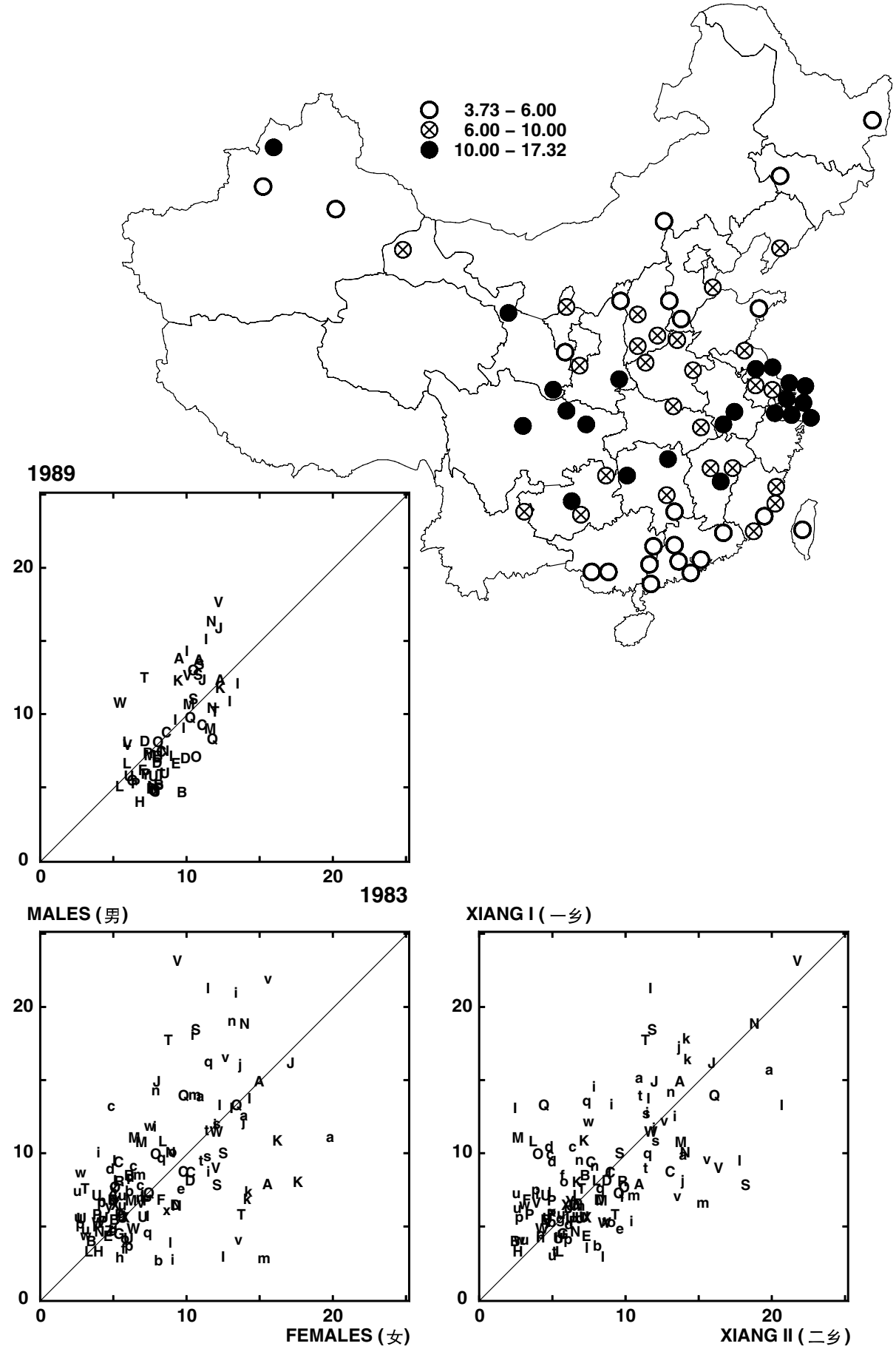
R019 24:1n9 – red blood cell TOTAL LIPID NERVONIC ACID (24:1(9)) (% of total fatty acid by weight)



R019 24:1n9 – 红细胞：总脂二十四烯酸 (24:1(9)) (占总脂肪酸重量的百分比)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	8.30	6.03	QA	14.82	10.57	AA	12.29	11.75	KC	7.16	15.83	ZA	4.15	4.22
CC	8.63	8.26	QB	8.65	10.30	AB	14.11	12.87	LA	7.06	8.58	ZB	4.98	5.10
CD	10.70	7.23	QC	8.21	7.77	AC	9.20	17.60	LB	4.20	5.28	ZC	3.53	4.26
DA	7.32	5.48	RA	8.76	5.33	BA	4.82	4.95	LC	7.89	5.59	ZD	4.46	4.99
DB	6.32	7.04	SA	14.94	11.27	BB	3.04	5.72	LD	6.70	5.91	ZE	5.16	3.49
DC	8.24	7.44	SB	12.83	11.99	BC	7.68	6.02	PA	5.74	4.18	ZF	5.15	4.61
FA	4.84	6.92	SC	9.61	11.89	EA	5.65	7.07	PC	4.44	4.92	ZG	4.13	5.18
GA	4.91	5.39	TA	14.38	10.03	HA	2.79	4.67	PD	5.70	5.53	ZH	4.01	4.63
JA	13.24	10.87	TC	7.11	4.08	IA	8.24	5.45	PE	5.20	4.02	ZI	4.89	5.82
JB	15.84	15.33	TD	7.37	12.34	IB	12.49	11.05	UA	4.62	4.27	ZJ	4.68	6.13
MB	12.08	8.69	VA	22.25	12.40	IC	5.54	11.97	UB	5.66	3.43	ZK	4.86	4.08
MC	7.37	6.45	VB	5.07	10.14	ID	13.49	7.72	UC	6.23	4.74	ZL	2.65	4.74
MD	6.66	10.81	VC	12.48	12.26	IE	16.34	11.69	UD	6.08	4.91	ZM	4.44	3.67
NA	5.43	4.07	WA	11.38	9.63	IF	16.81	12.80	UE	4.94	3.86	ZN	4.60	4.31
NB	18.64	13.48	WB	6.67	3.24	IG	7.60	11.04	UF	5.76	5.57	ZO	5.84	5.29
NC	6.40	8.02	WC	4.34	4.61	KB	8.82	15.17				ZP	2.91	3.98
ND	11.89	8.35	XA	6.01	6.82									
OA	8.60	6.99	XB	6.30	5.34									
OB	6.80	6.76	YA	6.28	4.88									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	9.46	8.38	7.62	7.88	4.40	4.66

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	8.64	4.02	8.15	3.49	64	6.9	†
Xiang (乡) I	vs	Xiang (乡) II	66	8.34	3.65	8.25	3.65	75	9.0	†
1983	vs	1989	65	8.99	2.07	8.58	3.42	67	7.3	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

27	M019 VIRALHEPb	-27	P009 B-CAROT	53 †	R017 20:1n9	45 †	D024 TOTNa	-30	Q007 cHHSIZE
30	M021 SCHISTOc	-28	P013 RBP	83 †	R018 22:1n9	52 †	D025 Na	-34 *	Q018 aSCHOOLS
-25	M025 NASOPCAc	-31	P030 Se	-63 †	R022 22:6n3	37 *	D028 PLNTFOOD	-33 *	Q019 dCANREAD
36 *	M032 PANCRSCAc	-25	P041 TESTOSTm	-53 †	R023 18:2n6	26	D037 RICE	-31 *	Q051 c%FLUSHWC
-25	M063 IHDc	26	P047 COTIN>20m	-45 †	R025 20:3n6	35 *	D054 VEGOIL	27	Q052 c%TOILET
24	M077 INTESTOBc	-28	R001 Hb	-46 †	R026 20:4n6	34 *	D055 ADDEDFAT	26	Q095 dSCHISTO
38 *	M082 GALLBILc	-39 †	R003 SATFA	25	U001 Cl/cre	34 *	D057 ADDEDSALT	-25	Q113 dMMEFadj
-33	M095 ROADACCb	94 †	R004 MUFA	27	U003 Na/cre	26	D079 TRYPTOPH	29	Q149 dALCEVER
26	M107 NONMEDa	-58 †	R005 TOTn6	-28	U009 TAUR/cre	31 *	D083 PUFA	27	Q157 dRICE
-24	M117 NEOTETANa	-63 †	R006 TOTn3	34 *	D001 KCAL	-26	D086 LYS/ARG	26	Q169 dVEGFAT
30	M119 DROWNa	-72 †	R007 PUFA	27	D004 SOLCARB	-30	D089 %SATFA	31 *	Q171 dSALTVEG
-35 *	P001 TOTCHOL	-50 †	R008 P/S	-25	D006 %PROTKCAL	30	D090 P/S	-32 *	Q173 dFRUIT
-44 †	P003 NONHDL	-37 *	R011 18:0	34 *	D013 VITE	28	D092 TOTn3	-27	Q175 dMEAT
-48 †	P005 APOB	-57 †	R013 22:0	29	D014 VITC	31 *	D093 TOTn6	-24	Q196 eM/F
27	P006 ALBUMIN	-30	R014 24:0	32 *	D017 NIACIN	-41 †	D140 %16:0	24	Q209 eBIRTHWT

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- Strong geographic pattern with lower levels on the coast and much lower levels in Taiwan.
- Strong correlations between xiangs (75%†), between males and females (64%†), and with 1983 values (67%†).
- Nervonic is the second most abundant RBC monounsaturate (after oleic acid).
- Negative correlations with plasma lipids (-35%* P001:TOTCHOL, -44%† P003:NONHDL, and -48%† P005:APOB).

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- 具有很强的地理分布模式，沿海各省水平较低，台湾省更低。
- 两乡之间（75%†）、男性与女性之间（64%†）以及与1983年测定值（67%†）之间具有很强的相关性。
- 二十四烯酸是红细胞中继油酸之后的第二大单不饱和脂肪酸。
- 二十四烯酸与血浆脂类呈负相关（-35%* P001:TOTCHOL，-44%† P003:NONHDL，-48%† P005:APOB）。

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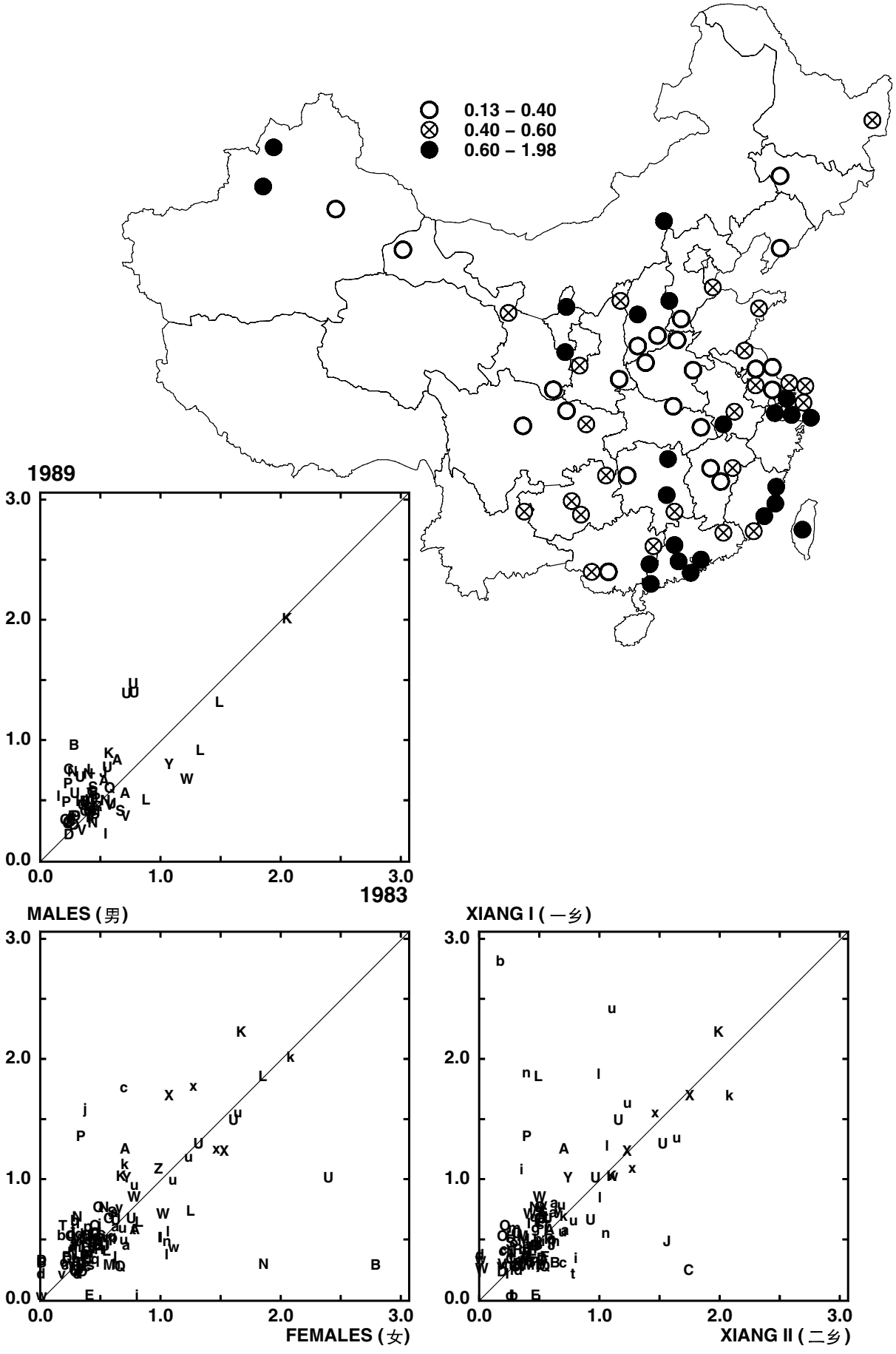
R021 20:5n3 – red blood cell TOTAL LIPID EICOSAPENTAENOIC ACID (20:5(3)) (% of total fatty acid by weight)



R021 20:5n3 – 红细胞：总脂二十碳五烯酸 (20:5(3)) (占总脂肪酸重量的百分比)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	0.28	0.29	QA	0.38	0.55	AA	0.42	0.63	KC	1.04	0.68	ZA	1.14	1.22
CC	0.26	0.28	QB	0.61	0.53	AB	0.56	0.69	LA	0.40	0.55	ZB	1.04	0.92
CD	0.97	0.48	QC	0.41	0.44	AC	0.96	0.65	LB	0.55	0.91	ZC	1.08	1.09
DA	0.19	0.17	RA	0.34	0.48	BA	0.45	0.14	LC	0.62	1.15	ZD	0.71	0.95
DB	0.40	0.13	SA	0.34	0.41	BB	0.38	1.48	LD	1.15	1.42	ZE	0.67	0.81
DC	0.41	0.26	SB	0.35	0.36	BC	0.44	0.47	PA	0.44	0.53	ZF	1.25	1.45
FA	0.43	0.24	SC	0.61	0.55	EA	0.23	0.40	PC	0.52	0.38	ZG	1.80	1.48
GA	0.56	0.51	TA	0.34	0.29	HA	0.38	0.54	PD	0.37	0.30	ZH	0.90	0.50
JA	0.50	0.38	TC	0.41	0.38	IA	0.30	0.70	PE	0.86	0.36	ZI	0.84	0.84
JB	1.00	0.40	TD	0.56	0.48	IB	0.21	0.17	UA	0.60	0.72	ZJ	1.07	0.74
MB	0.42	0.34	VA	0.45	0.41	IC	0.50	0.33	UB	0.78	0.70	ZK	1.19	0.95
MC	0.42	0.38	VB	0.22	0.21	ID	0.31	0.32	UC	1.31	1.42	ZL	1.25	1.02
MD	0.33	0.43	VC	0.29	0.37	IE	0.46	0.49	UD	1.39	1.48	ZM	0.80	0.88
NA	0.58	0.34	WA	0.65	0.63	IF	0.42	0.56	UE	0.97	1.75	ZN	0.96	0.86
NB	0.31	0.25	WB	0.54	1.05	IG	0.09	0.56	UF	0.44	0.61	ZO	0.91	0.75
NC	0.29	1.12	WC	0.11	0.15	KB	2.09	1.87				ZP	1.24	1.20
ND	0.59	0.78	XA	1.70	1.16									
OA	0.34	0.27	XB	1.21	1.49									
OB	0.39	0.36	YA	0.86	0.68									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	0.50	0.47*	0.63	0.74*	1.05	0.98

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	0.56	0.36	0.59	0.40	71	8.3	†
Xiang (乡) I	vs	Xiang (乡) II	66	0.61	0.42	0.56	0.36	69	7.7	†
1983	vs	1989	65	0.50	0.33	0.55	0.33	70	7.7	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

29 M001 ALL0-4	39 † P001 TOTCHOL	-27 U007 URIC/cre	-53 † D031 %PLNTFOOD	24 D084 SATFA
31 * M031 LIVERCAc	41 † P002 HDLCHOL	52 † U008 CREAT	53 † D032 %ANIMFOOD	51 † D085 CHOL
28 M035 LUNGCAmc	25 P003 NONHDL	70 † U009 TAUR/cre	-34 * D033 PLNTPROT	49 † D086 LYS/ARG
29 M036 LUNGCAfc	40 † P005 APOB	-28 D004 SOLCARB	66 † D034 ANIMPROT	48 † D141 %16:1
38 * M039 BRAINCAc	-35 * P015 G-TOCOPH	30 D005 %FATKCAL	-64 † D035 %PLNTPROT	35 * Q031 alNCOME
31 M045 DIABETESc	-37 * P017 LUTEIN	28 D006 %PROTKCAL	64 † D036 %ANIMPROT	29 Q052 c%TOILET
-35 * M064 STROKEb	-32 * P019 A-CRYPT	66 † D007 %ANPRKCAL	-29 D039 OTHCEREAL	45 † Q151 dBEERday
33 * M081 TOTLIVRc	34 * P030 Se	-30 D008 %PLPRKCAL	-28 D042 LIGHTVEG	-30 Q159 dMAIZE
44 † M082 GALLBILc	-24 P043 HBsAb	-38 * D009 %CARBKCAL	37 * D049 MEAT	45 † Q166 dSALTFISH
28 M103 INFANT	31 R006 TOTn3	39 † D010 RETINOL	33 * D050 REDMEAT	52 † Q167 dSALTFKID
29 M105 ALLCUMa	-24 R009 14:0	31 D016 RIBOFLAV	30 D051 POULTRY	26 Q173 dFRUIT
26 M106 MEDICALa	-35 * R010 16:0	-27 D019 Fe	66 † D052 FISH	67 † Q174 dFISH
38 * M113 PERINATa	68 † R014 24:0	-33 * D022 Mg	-28 D057 ADDEDSALT	26 Q175 dMEAT
30 M114 LOWBTHWTa	26 R026 20:4n6	27 D026 SeCARRY	-39 * D059 TOTNDF	33 * Q201 eDOCVIS
40 † M115 BTHTRAUMa	-34 * U001 Cl/cre	-25 D027 Zn	47 † D072 LYSINE	
25 M116 RDSa	-32 * U003 Na/cre	54 † D029 ANIMFOOD	24 D082 MUFA	

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- Higher levels on the coast (and possibly along rivers), much higher levels in Taiwan and very low levels in most other places.
- Strong correlations between xiangs (69%†), between males and females (71%†), and with 1983 values (70%†).
- Eicosapentaenoic acid and docosahexaenoic acids are the mainly found in fish.
- Strong positive correlations with variables related to fish (hence, animal food) intake (53%† D032:%ANIMFOOD, 66%† D052:FISH).

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- 沿海各省（可能是沿江一带）水平较高，台湾省水平更高，而其它许多地方水平很低。
- 两乡之间（69%†）、男性与女性之间（71%†）以及与1983年测定值（70%†）之间具有很强的相关性。
- 二十碳五烯酸和二十二碳六烯酸主要存在于鱼类中。
- 与鱼（动物性食物）摄入的相关指标具有很强的正相关（53%† D032:%ANIMFOOD, 66%† D052:FISH）。

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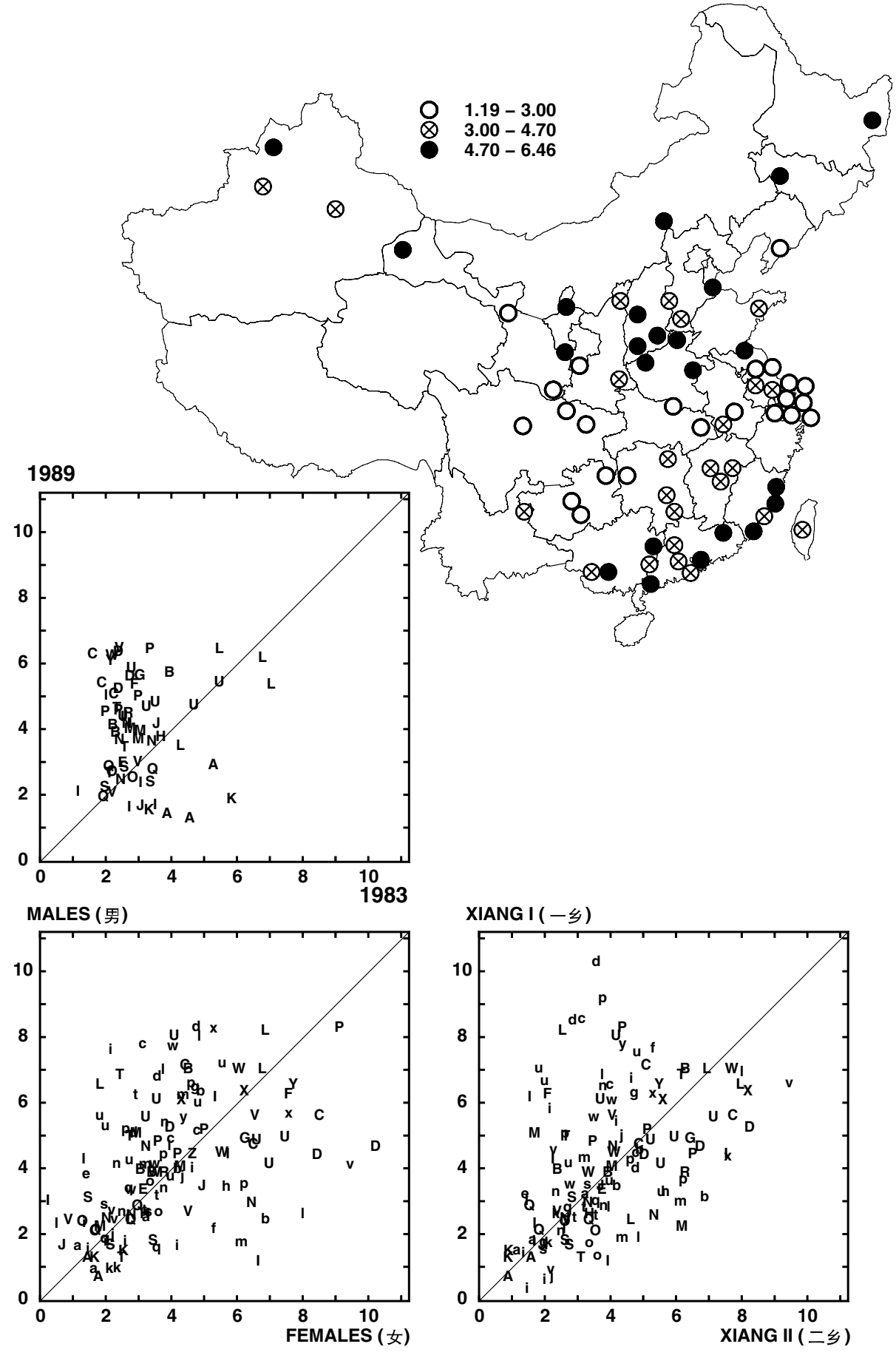
R022 22:6n3 – red blood cell TOTAL LIPID DOCOSAHEXAENOIC ACID (22:6(3)) (% of total fatty acid by weight)



R022 22:6n3 – 红细胞：总脂二十二碳六烯酸 (22:6(3)) (占总脂肪酸重量的百分比)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	6.04	4.56	QA	1.89	1.79	AA	2.42	3.16	KC	1.00	1.86	ZA	4.29	4.51
CC	4.72	5.20	QB	2.12	3.22	AB	1.36	1.26	LA	5.29	7.41	ZB	5.68	5.43
CD	6.59	5.78	QC	2.81	2.69	AC	0.71	1.67	LB	3.45	3.32	ZC	3.59	4.28
DA	6.67	4.32	RA	5.00	3.74	BA	3.83	3.77	LC	7.18	3.31	ZD	4.55	4.60
DB	5.63	6.86	SA	2.90	1.67	BB	3.10	4.93	LD	6.91	5.24	ZE	4.64	3.31
DC	4.64	5.61	SB	2.13	2.10	BC	6.58	4.67	PA	5.41	4.37	ZF	4.37	4.47
FA	4.09	6.41	SC	2.14	3.33	EA	3.48	2.24	PC	4.07	4.88	ZG	4.58	6.20
GA	5.60	5.45	TA	3.74	2.95	HA	2.91	4.41	PD	6.26	6.41	ZH	3.68	4.15
JA	1.72	1.41	TC	6.43	2.66	IA	5.92	3.93	PE	5.08	3.78	ZI	4.57	5.84
JB	3.50	4.61	TD	2.12	3.01	IB	1.66	2.32	UA	4.77	4.38	ZJ	4.16	6.23
MB	4.12	3.07	VA	2.47	1.49	IC	2.48	5.63	UB	6.03	3.38	ZK	5.00	3.11
MC	3.98	3.71	VB	4.76	7.96	ID	1.95	1.24	UC	4.98	4.27	ZL	2.54	3.99
MD	3.30	4.51	VC	2.45	3.35	IE	2.18	0.84	UD	6.28	4.36	ZM	4.37	3.81
NA	4.30	2.76	WA	7.26	4.99	IF	3.20	1.33	UE	4.82	3.74	ZN	4.33	4.14
NB	2.47	2.24	WB	3.51	3.07	IG	3.80	4.74	UF	5.38	6.11	ZO	6.38	5.43
NC	3.07	5.08	WC	4.20	4.45	KB	1.12	2.41				ZP	2.56	4.34
ND	3.87	3.26	XA	5.76	5.91									
OA	2.74	2.47	XB	7.20	5.72									
OB	2.41	2.41	YA	5.95	6.01									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	4.06	3.94	3.99	3.72	4.33	4.62

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	4.03	1.75	3.84	1.63	64	6.8	†
Xiang (乡) I	vs	Xiang (乡) II	66	4.08	1.90	3.87	1.47	65	6.9	†
1983	vs	1989	65	3.03	1.17	3.87	1.52	6	0.5	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

26 M018 OTHERTBc	31 * P001 TOTCHOL	84 † R013 22:0	-35 * D055 ADDEDFAT	-32 * Q096 dMALARIA
-35 * M019 VIRALHEPb	-25 P002 HDLCHOL	-43 † R017 20:1n9	-26 D057 ADDEDSALT	26 Q111 dFEV1adj
-35 * M020 VIRALHEPc	51 † P003 NONHDL	-81 † R018 22:1n9	32 * D067 GLUTAMINE	43 † Q113 dMMEFadj
-35 * M021 SCHISTOc	-37 * P004 APOA1	-63 † R019 24:1n9	-35 * D083 PUFA	-38 * Q149 dALCEVER
-34 * M029 COLRECCAc	33 * P005 APOB	24 U009 TAUR/cre	27 D086 LYS/ARG	-29 Q156 dALCOday
-31 * M032 PANCRSCAc	25 P010 G-CAROT	26 U011 COT/cre	28 D089 %SATFA	-42 † Q157 dRICE
-33 * M033 BLADDCAc	27 P016 LYCOPENE	-25 U023 NO3mn	-28 D092 TOTn3	30 Q158 dWHEAT
-27 M040 LYMPHOMAc	27 P023 PHYTOENE	27 D006 %PROTKCAL	-36 * D093 TOTn6	-25 Q164 dOILFAT
27 M063 IHDc	-26 P024 FOLATE	-24 D012 VITA	24 D136 %14:0	-29 Q165 dSMOKFOOD
-39 * M082 GALLBILc	-35 * P040 B2-MGLOB	-30 D013 VITE	34 * D140 %16:0	-28 Q169 dVEGFAT
-35 * M089 ALLSKINc	35 * R001 Hb	-30 D018 Ca	26 Q007 cHHSIZE	-29 Q171 dSALTVEG
34 * M095 ROADACCb	-68 † R004 MUFA	-35 * D024 TOTNa	24 Q018 aSCHOOLS	-39 † Q172 dGRNVEG
26 M096 ROADACCc	27 R005 TOTn6	-39 † D025 Na	28 Q019 dCANREAD	24 Q195 eMOTHERS
-41 * M097 DROWNb	96 † R006 TOTn3	-42 † D037 RICE	-38 * Q052 c%TOILET	29 Q196 eM/F
-42 † M098 DROWNc	58 † R007 PUFA	36 * D038 WHTFLOUR	-29 Q067 dCOOKm	-24 Q227 e%DIARRH
-32 * M107 NONMEDa	43 † R008 P/S	-31 D041 LEGUME	30 Q090 dHEIGHT	39 † G004 ARIDITY
-45 † M119 DROWNa	35 * R011 18:0	-35 * D054 VEGOIL	-31 Q095 dSCHISTO	

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- No strong geographic pattern, but higher values in Taiwan and moderate variability among counties.
- Strong correlations between xiangs (65%†), between males and females (64%†), but no correlation with 1983 measurements (perhaps because the latter were somehow unsatisfactory).
- Expected correlations with fish and animal food intake are not apparent.

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- 无明显的地理分布模式，台湾省水平较高，各县之间呈现中等变异。
- 两乡之间（65%†）以及男性与女性之间（64%†）具有很强相关性，而与1983年测定值无相关性（可能是因为后者的测定结果不理想）。
- 与鱼和动物性食物摄入量未出现明显的预期相关性。

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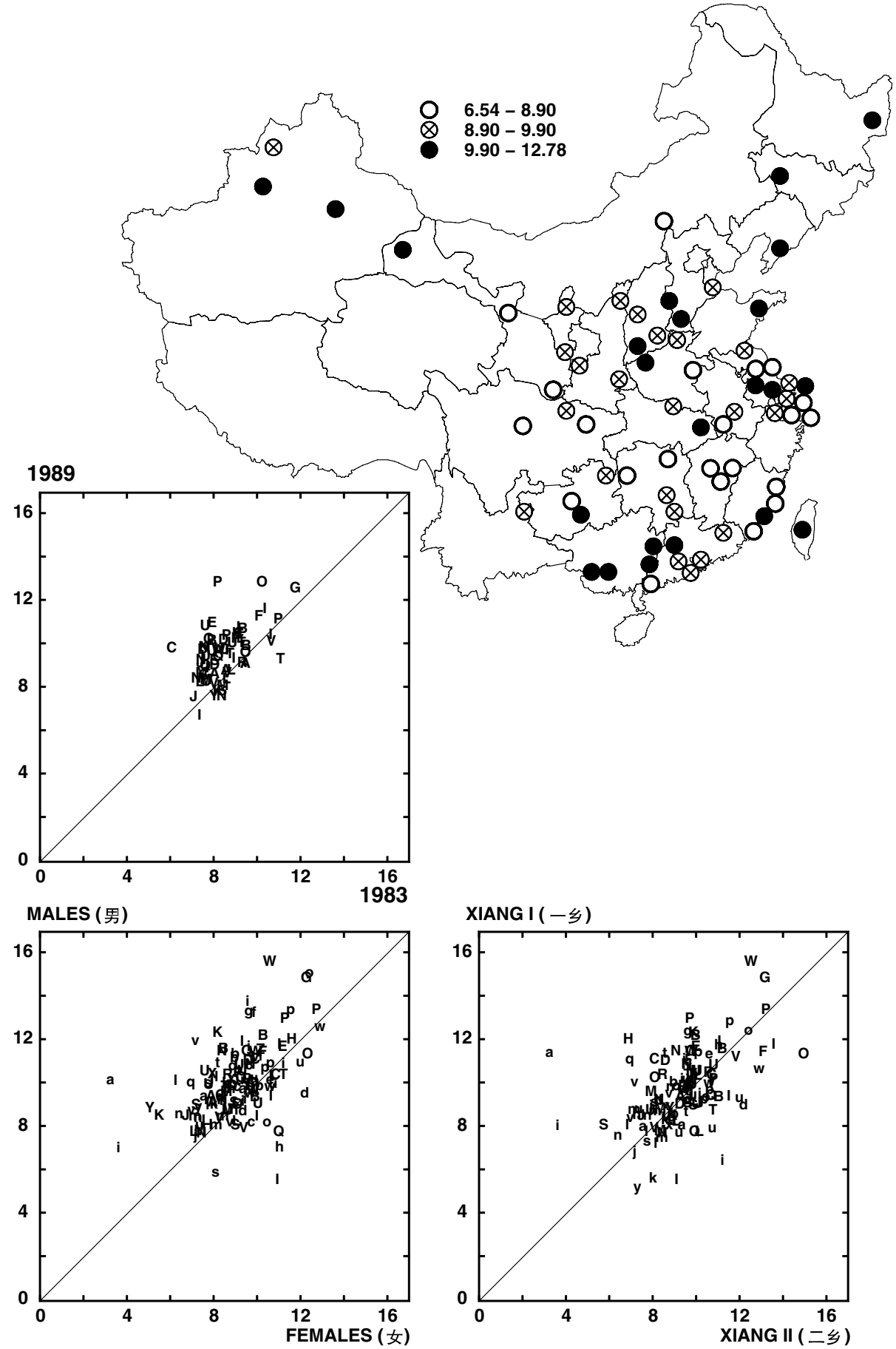
R023 18:2n6 – red blood cell TOTAL LIPID LINOLEIC ACID (18:2(6)) (% of total fatty acid by weight)



R023 18:2n6 – 红细胞：总脂亚油酸 (18:2(6)) (占总脂肪酸重量的百分比)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	10.42	10.20	QA	8.71	8.91	AA	9.97	7.22	KC	10.97	8.34	ZA	11.71	11.35
CC	9.72	9.36	QB	9.92	8.55	AB	9.23	8.60	LA	8.54	8.66	ZB	11.88	9.40
CD	9.47	9.77	QC	10.49	9.55	AC	9.22	7.66	LB	10.09	10.04	ZC	12.30	11.81
DA	9.01	8.66	RA	9.30	8.58	BA	11.27	8.68	LC	8.45	7.64	ZD	11.30	10.18
DB	9.68	9.42	SA	6.78	8.48	BB	10.96	10.04	LD	8.84	7.57	ZE	11.76	11.66
DC	9.52	10.48	SB	9.22	8.89	BC	10.08	9.38	PA	10.42	9.70	ZF	8.81	9.36
FA	12.14	10.03	SC	9.30	7.41	EA	10.72	10.85	PC	13.19	12.10	ZG	10.66	10.02
GA	13.88	10.89	TA	9.65	8.60	HA	9.34	11.29	PD	11.23	10.65	ZH	12.51	11.00
JA	9.50	8.34	TC	9.88	9.87	IA	10.32	8.71	PE	10.37	10.05	ZI	10.99	7.20
JB	7.85	6.89	TD	9.67	9.01	IB	7.35	5.72	UA	10.70	10.56	ZJ	10.65	8.53
MB	7.95	7.86	VA	7.88	9.02	IC	11.40	9.72	UB	9.43	9.76	ZK	12.03	11.80
MC	8.64	8.31	VB	11.39	8.49	ID	7.22	10.18	UC	9.76	9.23	ZL	12.01	7.51
MD	8.45	7.86	VC	8.39	7.57	IE	10.36	10.11	UD	8.21	7.97	ZM	11.23	11.27
NA	10.10	9.21	WA	9.40	9.66	IF	8.63	9.65	UE	10.20	9.55	ZN	10.78	9.20
NB	7.95	6.89	WB	10.46	10.18	IG	12.57	10.28	UF	10.15	8.36	ZO	11.14	10.66
NC	10.15	8.03	WC	13.90	11.66	KB	8.58	6.72				ZP	12.18	10.99
ND	8.63	7.80	XA	10.02	8.31									
OA	9.05	9.80	XB	9.82	8.67									
OB	13.01	12.31	YA	8.69	6.14									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	9.68	8.94	9.93	9.19	11.37	10.12

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	9.79	1.45	9.05	1.33	66	7.2	†
Xiang (乡) I	vs	Xiang (乡) II	66	9.50	1.42	9.40	1.39	69	7.6	†
1983	vs	1989	65	8.47	1.09	9.36	1.23	53	4.9	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

36	*	M022 ALLCAb	-27		M107 NONMEDa	51	†	R008 P/S	-30		U024 INHIBPRO	27		Q090 dHEIGHT
28		M030 LIVERCAb	29		M117 NEOTETANa	-24		R016 18:1n9	-40	†	U026 SUMNITa	26		Q091 dWEIGHT
27		M063 IHDc	-29		P007 TOTPROT	-28		R017 20:1n9	26		D008 %PLPRKCAL	-34	*	Q139 dCIGCONSf
29		M064 STROKEb	30		P016 LYCOPENE	-32	*	R018 22:1n9	-24		D024 TOTNa	-25		Q153 dWINEday
24		M067 VASC-STRc	24		P023 PHYTOENE	-53	†	R019 24:1n9	-38	*	D025 Na	-28		Q157 dRICE
27		M080 TOTLIVRb	-32	*	P047 COTIN>20m	38	*	R025 20:3n6	-27		D037 RICE	26		Q169 dVEGFAT
-31		M082 GALLBILc	-53	†	R004 MUFA	31	*	R026 20:4n6	-24		D141 %16:1	-24		Q171 dSALTVEG
-29		M089 ALLSKINc	61	†	R005 TOTn6	-31		U008 CREAT	34	*	Q019 dCANREAD	-24		Q185 dAGEMENS
-25		M090 MUSCSKELc	58	†	R007 PUFA	-28		U023 NO3mn	30		Q021 eCANREAD			

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- No strong geographic pattern, but higher in Taiwan than mainland.
- Strong correlations between xiangs (69%†), between males and females (66%†), and with 1983 values (53%†).
- Linoleic and arachidonic are the main n6 RBC fatty acids.
- Increase from 1983 to 1989 may be at least partly artefactual, due to improved analytic methods in 1989.
- Few strong correlations with other variables.

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- 无明显的地理分布模式，但台湾省水平高于大陆。
- 两乡之间（69%†）、男性与女性之间（66%†）以及与1983年测定值之间（53%†）具有很强的相关性。
- 亚油酸和花生四烯酸是红细胞中主要的n6脂肪酸。
- 由于1989年改善了分析方法，因此1989年测定值的增加（与1983年比）可能至少部分是假性增加。
- 与其它指标之间几乎无强相关性。

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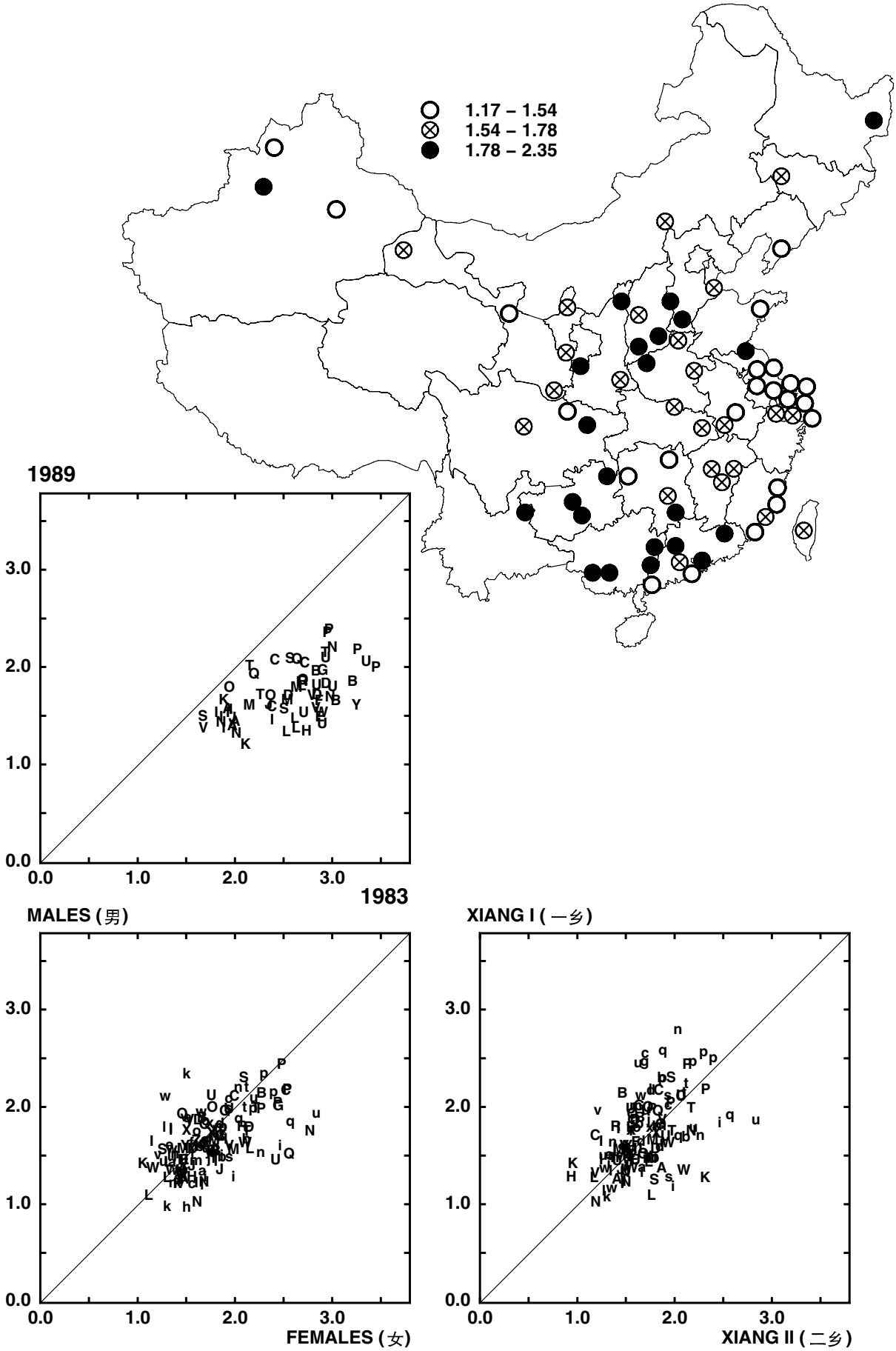
R025 20:3n6 – red blood cell TOTAL LIPID DI-HOMO-GAMMA-LINOLENIC ACID (20:3(6)) (% of total fatty acid by weight)



R025 20:3n6 – 红细胞：总脂Di-Homo-γ-亚麻油酸 (20:3(6)) (占总脂肪酸重量的百分比)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	1.98	2.10	QA	1.57	2.20	AA	1.30	1.50	KC	1.76	1.48	ZA	1.54	1.47
CC	2.06	1.96	QB	1.81	1.85	AB	1.31	1.41	LA	1.20	1.48	ZB	1.42	1.51
CD	1.42	1.70	QC	1.87	2.22	AC	1.59	1.48	LB	1.60	1.95	ZC	1.60	1.51
DA	1.66	1.70	RA	1.57	2.06	BA	1.74	1.88	LC	1.56	1.32	ZD	1.25	1.63
DB	1.71	1.63	SA	1.49	1.59	BB	1.77	2.06	LD	1.40	1.19	ZE	1.59	1.63
DC	1.64	1.94	SB	1.50	1.41	BC	1.53	1.71	PA	2.26	2.43	ZF	1.91	1.54
FA	1.60	1.63	SC	2.11	2.00	EA	1.50	1.40	PC	1.98	2.31	ZG	1.36	1.31
GA	1.80	2.06	TA	1.58	1.78	HA	1.09	1.52	PD	1.85	2.07	ZH	1.83	1.82
JA	1.42	1.46	TC	2.06	2.16	IA	1.48	2.13	PE	2.23	2.41	ZI	1.73	1.79
JB	1.38	1.78	TD	1.84	2.11	IB	1.32	1.35	UA	1.78	2.33	ZJ	1.75	1.72
MB	1.53	1.61	VA	1.23	1.45	IC	1.58	1.42	UB	1.74	1.82	ZK	1.33	1.41
MC	1.69	1.81	VB	1.85	1.50	ID	1.32	1.73	UC	1.39	1.60	ZL	1.58	1.82
MD	1.47	1.79	VC	1.51	1.57	IE	1.33	1.56	UD	1.40	1.36	ZM	1.78	1.82
NA	1.94	2.39	WA	1.69	1.30	IF	1.43	1.56	UE	1.50	2.02	ZN	1.45	1.41
NB	1.38	1.41	WB	1.75	1.86	IG	1.34	1.49	UF	2.07	1.97	ZO	1.98	1.55
NC	1.34	1.97	WC	1.43	1.24	KB	1.16	1.17				ZP	1.73	1.55
ND	1.08	1.48	XA	1.63	1.52									
OA	1.72	1.62	XB	1.75	1.75									
OB	1.84	1.68	YA	1.53	1.60									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	1.64	1.76	1.56	1.71	1.61	1.59

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	1.61	0.26	1.74	0.32	69	7.7	†
Xiang (乡) I	vs	Xiang (乡) II	66	1.67	0.32	1.68	0.27	64	6.8	†
1983	vs	1989	65	2.53	0.45	1.68	0.27	53	5.0	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

25	M001 ALL0-4	36 *	M070 PNEUMONb	-24	P014 A-TOCOPH	-31	D024 TOTNa	31 *	Q069 dUNVENT
25	M004 ALL0-34	37 *	M071 PNEUMONc	-25	P036 GLUCOSE	-45 †	D025 Na	-28	Q090 dHEIGHT
35 *	M007 MEDICALb	39 *	M073 DIGESTIVb	-34 *	P037 BUN	-31	D026 SeCARRY	-33 *	Q091 dWEIGHT
38 *	M011 INFECTb	36 *	M074 DIGESTIVc	24	P040 B2-MGLOB	-31	D034 ANIMPROT	-32 *	Q092 dBMI
-34 *	M023 ALLCAc	32 *	M075 PEPULCERc	-27	R003 SATFA	26	D035 %PLNTPROT	-24	Q093 dPEPULCER
-27	M028 STOMCAc	32 *	M076 ENTCOLc	-40 †	R004 MUFA	-26	D036 %ANIMPROT	-26	Q109 dDBP
-32 *	M031 LIVERCAc	49 †	M078 CIRRHOSb	62 †	R005 TOTn6	-30	D052 FISH	-26	Q110 dMIDBP
-45 †	M032 PANCRSCAc	36 *	M079 CIRRHOSc	58 †	R007 PUFA	-33 *	D054 VEGOIL	-27	Q111 dFEV1adj
-32 *	M035 LUNGCAmc	25	M080 TOTLIVRb	59 †	R008 P/S	-35 *	D055 ADDEDFAT	-33 *	Q112 dFVCadj
-34 *	M036 LUNGCAfc	-38 *	M082 GALLBILc	-36 *	R018 22:1n9	-33 *	D056 STCHSUGAR	27	Q134 dSMOK<25m
-34 *	M039 BRAINCAc	-30	M091 ILL-DEFb	-45 †	R019 24:1n9	-37 *	D072 LYSINE	-28	Q138 dCIGCONSm
-33 *	M040 LYMPHOMAc	30	M103 INFANT	38 *	R023 18:2n6	-28	D078 THREONINE	-25	Q139 dCIGCONSf
-26	M042 LEUKEMIAc	25	M105 ALLCUMa	33 *	R024 20:2n6	-32 *	D083 PUFA	-46 †	Q151 dBEERday
30	M047 MALNUTRIc	33 *	M106 MEDICALa	52 †	R026 20:4n6	-30	D085 CHOL	-25	Q169 dVEGFAT
37 *	M048 BLOODb	-29	M107 NONMEDa	-31 *	U008 CREAT	-28	D092 TOTn3	-30	Q174 dFISH
35 *	M055 MENINGITc	35 *	M108 RESPINFa	-35 *	U009 TAUR/cre	-32 *	D093 TOTn6	-41 †	Q176 dEGGS
31	M058 ALLVASCb	31	M113 PERINATa	-26	U014 VOLURmn	34 *	D140 %16:0	-43 †	Q209 eBIRTHWT
39 *	M060 RHEUMHDb	51 †	M117 NEOTETANa	-28	D002 TOTFAT	-29	D141 %16:1	-28	Q243 fWTadj
39 *	M061 RHEUMHDc	-24	P001 TOTCHOL	-27	D007 %ANPRKCAL	35 *	Q017 aPRIMARY	-35 *	Q245 fHTadj
31	M066 VASC-STRb	-26	P002 HDLCHOL	25	D009 %CARBKCAL	-31 *	Q031 aINCOME		
36 *	M068 ALLRESPb	26	P009 B-CAROT	-32 *	D013 VITE	-26	Q052 c%TOILET		

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- No strong geographic pattern, with similar average inland, coastal, and Taiwan values.
- Good correlations between xiangs (64%†), between males and females (69%†), and with 1983 values (53%†).
- Decrease from 1983 to 1989 may be at least partly artefactual, due to improved analytic methods in 1989.
- Few strong correlations with other variables.

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- 无明显的地理分布模式，内地、沿海和台湾省平均水平基本相似。
- 两乡之间（64%†）、男性与女性之间（69%†）以及与1983年测定值之间（53%†）具有很强的相关性。
- 由于1989年改善了分析方法，因此1989年测定值的降低（与1983年比）可能至少部分是假性降低。
- 与其它指标之间几乎无强相关性。

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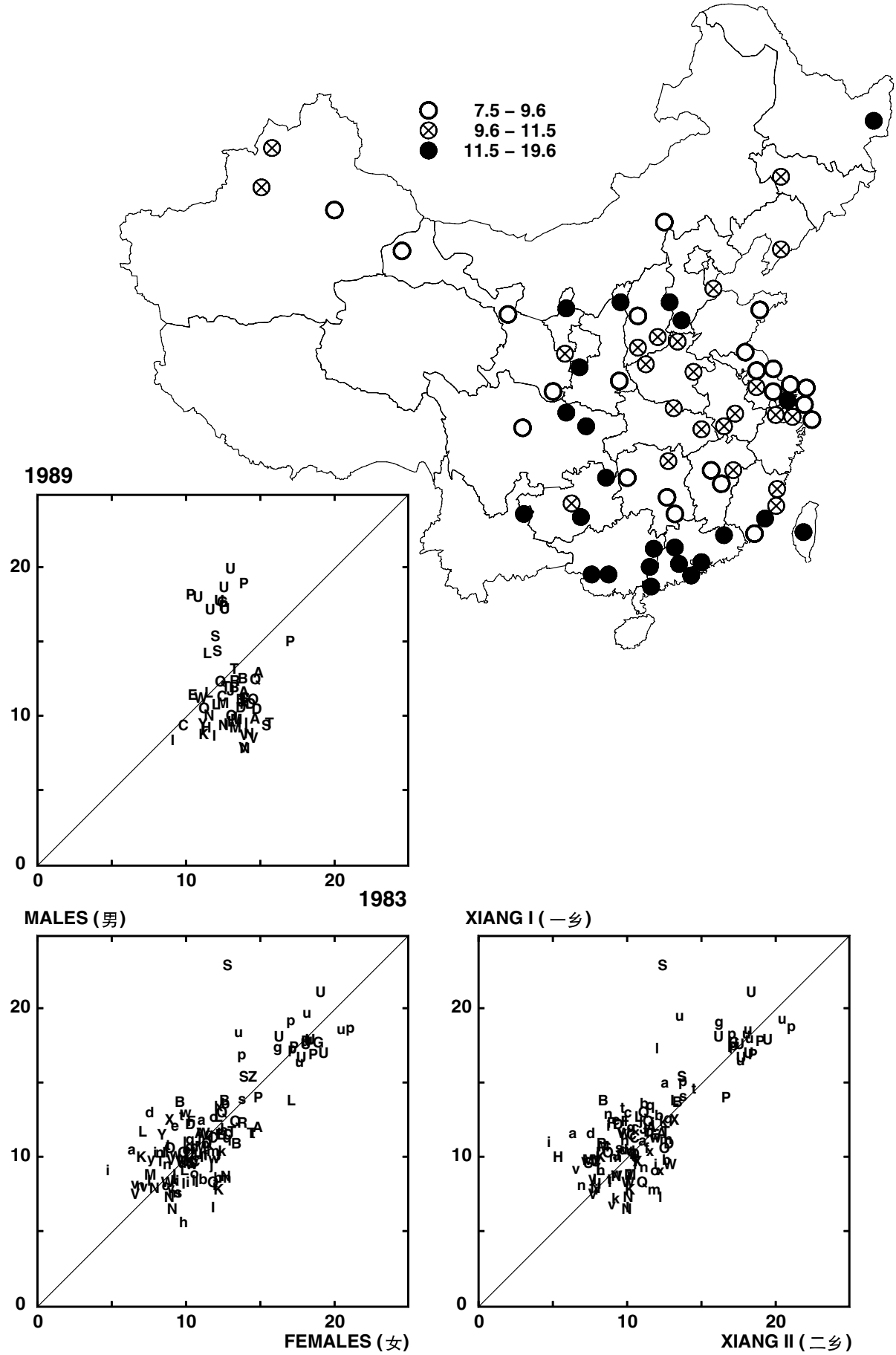
R026 20:4n6 – red blood cell TOTAL LIPID ARACHIDONIC ACID (20:4(6)) (% of total fatty acid by weight)



R026 20:4n6 – 红细胞：总脂花生四烯酸 (20:4(6)) (占总脂肪酸重量的百分比)

Inland Provinces (内地)						Coastal Provinces (沿海)						Taiwan (台湾)		
Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女	Area 地区	Male 男	Fem. 女
CB	10.7	11.4	QA	9.4	10.9	AA	10.2	8.8	KC	8.8	12.3	ZA	16.2	16.3
CC	10.7	11.1	QB	11.9	12.5	AB	11.6	13.6	LA	8.5	10.2	ZB	16.3	13.9
CD	8.6	9.6	QC	11.7	12.4	AC	11.8	10.9	LB	13.3	14.5	ZC	15.9	15.6
DA	10.1	10.2	RA	10.4	13.7	BA	13.4	11.1	LC	11.4	9.6	ZD	14.9	14.9
DB	10.6	9.9	SA	8.3	9.9	BB	10.9	12.3	LD	11.6	11.0	ZE	15.8	17.1
DC	11.7	9.4	SB	17.5	12.7	BC	9.4	12.2	PA	17.5	19.8	ZF	13.1	15.4
FA	11.0	10.8	SC	14.4	13.8	EA	11.5	10.7	PC	17.1	17.2	ZG	15.1	13.8
GA	17.3	17.5	TA	9.9	8.5	HA	7.5	10.3	PD	15.2	14.3	ZH	16.6	10.8
JA	11.3	11.6	TC	11.9	11.4	IA	9.1	7.7	PE	18.2	17.5	ZI	16.1	13.1
JB	9.5	11.9	TD	11.3	14.4	IB	8.4	7.7	UA	17.4	16.4	ZJ	14.8	14.2
MB	9.3	9.7	VA	7.4	7.7	IC	9.4	9.9	UB	17.0	18.0	ZK	13.4	15.6
MC	9.4	11.8	VB	8.7	7.7	ID	8.2	10.3	UC	17.4	18.0	ZL	15.9	9.7
MD	8.4	9.4	VC	8.6	8.3	IE	8.0	9.6	UD	17.0	16.9	ZM	15.0	16.0
NA	8.5	8.5	WA	10.5	11.4	IF	9.0	9.3	UE	18.5	18.2	ZN	13.5	13.1
NB	7.7	7.4	WB	10.9	10.1	IG	8.0	10.6	UF	19.5	19.7	ZO	13.1	15.6
NC	8.1	10.1	WC	8.9	8.9	KB	8.9	8.1				ZP	16.6	15.9
ND	8.8	10.7	XA	12.7	10.5									
OA	9.3	10.1	XB	10.0	10.8									
OB	11.4	10.3	YA	10.4	8.0									

Mean 平均值	Male (男)	Female (女)	Male (男)	Female (女)	Male (男)	Fem. (女)
	10.4	10.6*	12.4	12.8*	15.1	14.4

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Male (男)	vs	Female (女)	69	11.3	3.2	11.6	3.1	88	15.2	†
Xiang (乡) I	vs	Xiang (乡) II	66	11.5	3.2	11.3	3.2	89	15.9	†
1983	vs	1989	65	12.8	1.5	11.5	3.1	12	0.9	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-26	M010 NONMEDc	34 *	P039 THYROXINE	-28	U012 VOLURINE	-30	D042 LIGHTVEG	-38 *	Q091 dWEIGHT
51 †	M025 NASOPCAc	26	P041 TESTOSTm	-27	U014 VOLURmn	35 *	D043 GREENVEG	-42 †	Q092 dBMI
-35 *	M028 STOMCAc	-24	R002 RIBOFDEF	-27	D001 KCAL	24	D049 MEAT	28	Q094 dHEPATIT
-27	M032 PANCRSCAc	-46 †	R003 SATFA	-25	D003 TOTPROT	30	D052 FISH	-25	Q096 dMALARIA
-26	M040 LYMPHOMAc	-56 †	R004 MUFA	-31 *	D004 SOLCARB	-25	D057 ADDEDSALT	-40 *	Q112 dFVCadj
-27	M042 LEUKEMIAc	94 †	R005 TOTn6	28	D005 %FATKCAL	-32 *	D059 TOTNDF	-27	Q158 dWHEAT
44 †	M048 BLOODb	88 †	R007 PUFA	28	D007 %ANPRKCAL	-33 *	D067 GLUTAMINE	28	Q166 dSALTFISH
-29	M051 MENTALc	91 †	R008 P/S	-25	D008 %PLPRKCAL	-36 *	D074 METH+CYS	29	Q167 dSALTFKID
26	M068 ALLRESPb	-55 †	R009 14:0	-25	D009 %CARBKCAL	-33 *	D078 THREONINE	26	Q173 dFRUIT
27	M070 PNEUMONb	-77 †	R010 16:0	-26	D017 NIACIN	-24	D079 TRYPTOPH	37 *	Q174 dFISH
-24	M082 GALLBILc	-26	R011 18:0	-38 *	D019 Fe	24	D082 MUFA	-29	Q186 dMENCYCLE
-25	M089 ALLSKINc	-41 †	R012 20:0	-40 †	D020 Cu	31 *	D087 %MUFA	26	Q187 dBLEED
27	M103 INFANT	68 †	R014 24:0	-33 *	D021 K	-28	D088 %PUFA	27	Q205 eHRSWORK
27	M108 RESPINFa	-27	R015 16:1n7	-29	D022 Mg	-28	D090 P/S	-54 †	Q209 eBIRTHWT
26	M113 PERINATa	-43 †	R016 18:1n9	-27	D023 Mn	24	D091 M/P	25	Q231 e%FEVER
33 *	M114 LOWBTHWTa	-29	R017 20:1n9	-32 *	D024 TOTNa	24	D094 TOTn9	-39 †	Q243 fWTadj
44 †	M117 NEOTETANa	-38 *	R018 22:1n9	-39 †	D025 Na	-28	D096 %TOTn6	-43 †	Q247 fBMIadj
24	P001 TOTCHOL	-46 †	R019 24:1n9	-33 *	D027 Zn	31 *	D097 %TOTn9	-43 †	G001 LATITUDE
34 *	P005 APOB	-26	R020 18:3n3	-34 *	D028 PLNTFOOD	33 *	D146 %18:1	-25	G003 ELEVATION
-25	P006 ALBUMIN	26	R021 20:5n3	-29	D031 %PLNTFOOD	-28	D147 %18:2	-27	G004 ARIDITY
62 †	P009 B-CAROT	31 *	R023 18:2n6	29	D032 %ANIMFOOD	31 *	Q018 aSCHOOLS	54 †	G005 HEAT
36 *	P010 G-CAROT	52 †	R025 20:3n6	-35 *	D033 PLNTPROT	26	Q019 dCANREAD		
-37 *	P015 G-TOCOPH	-33 *	U001 Cl/cre	-30	D035 %PLNTPROT	31 *	Q051 c%FLUSHWC		
35 *	P018 ANHYDLUT	-35 *	U003 Na/cre	30	D036 %ANIMPROT	-31 *	Q068 dCOOKf		
-27	P036 GLUCOSE	-29	U006 UREA/cre	-24	D038 WHTFLOUR	-25	Q090 dHEIGHT		

- Analysis by gas chromatographic detection of methylated red blood cell fatty acids.
- Higher values in the south and in Taiwan, and scattered high and low values in the north and central provinces.
- Good correlations between xiangs (89%†) and between males and females (88%†), but no correlation with 1983 values (12%, not significant).
- Values decreased in most place from 1983 to 1989, but increased in southern counties, which may account for the poor correlation between 1983 and 1989 values.
- Arachidonic acid is the precursor of prostaglandins, thromboxanes, and leukotrienes, collectively known as eicosanoids, a class of highly active compounds that participate in platelet aggregation.
- Moderate positive correlations with variables related to animal food intake (e.g., 24%, p<0.05, D049:MEAT) and negative correlations with plant food intake (e.g., -29%, p<0.05, D031:%PLNTFOOD).

- 红细胞脂肪酸甲基化后，用气相色谱测定。
- 南方各省和台湾省水平较高，北方和中部各省的花生四烯酸水平高低较分散。
- 两乡之间（89%†）以及男性与女性之间（89%†）具有很好的相关性，但与1983年测定值无相关性（12%，无显著性）。
- 从1983年到1989年，大部分地区花生四烯酸水平下降，但南方各县的水平增加，这可能说明了1989年与1983年测定值的相关性差。
- 花生四烯酸是前列环素、血栓素和白三烯的前体，这三类物质被统称为二十烷类物质，它是一类参与血小板凝聚的高活性物质。
- 与动物性食物摄入相关指标呈中度正相关（如，24%，p<0.05，D049:MEAT），与动物性食物摄入量呈负相关（如，-29%，p<0.05，D031:%PLNTFOOD）。

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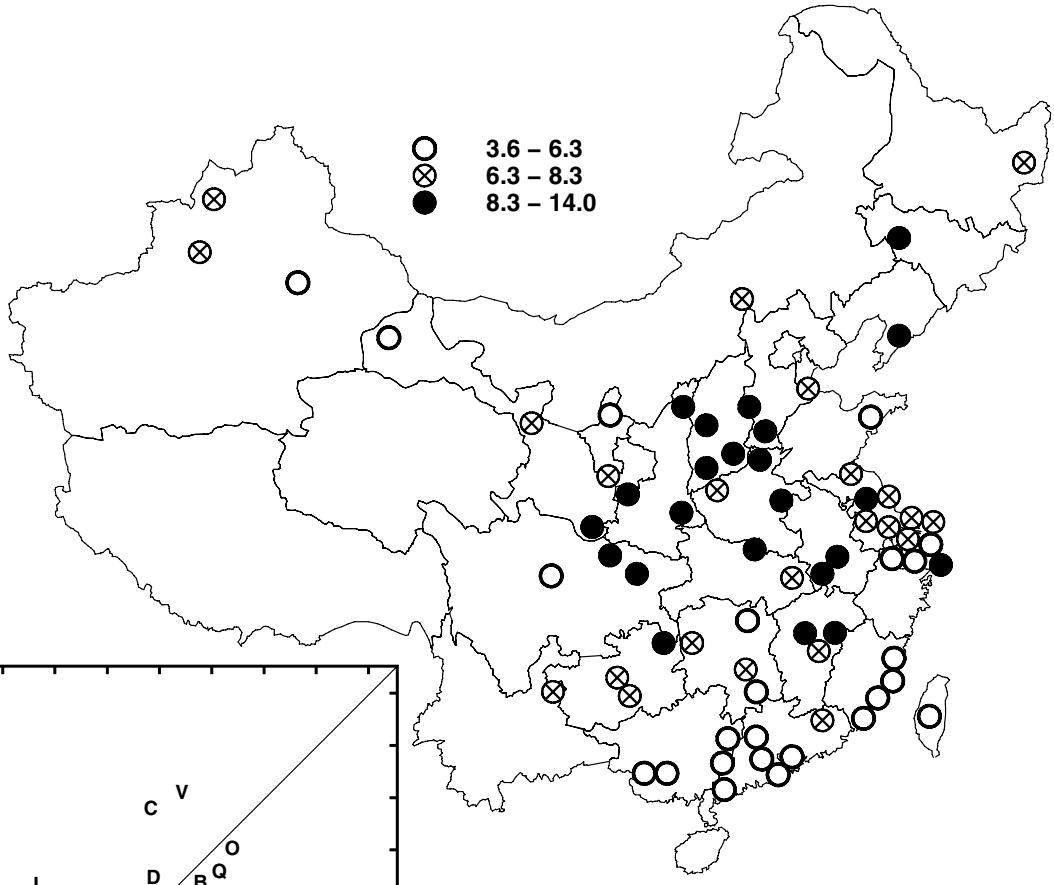
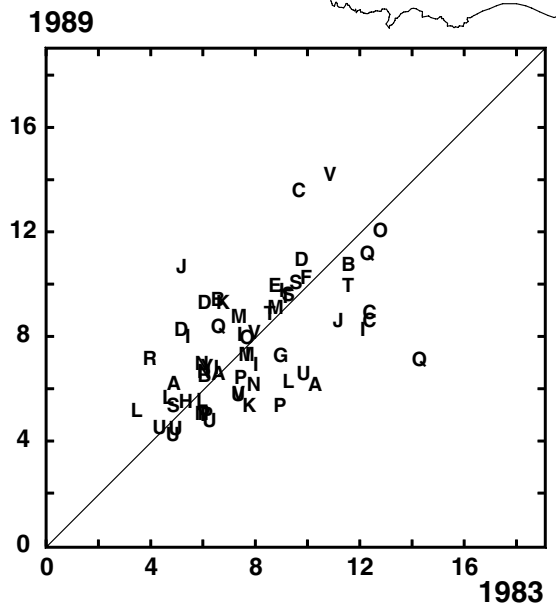
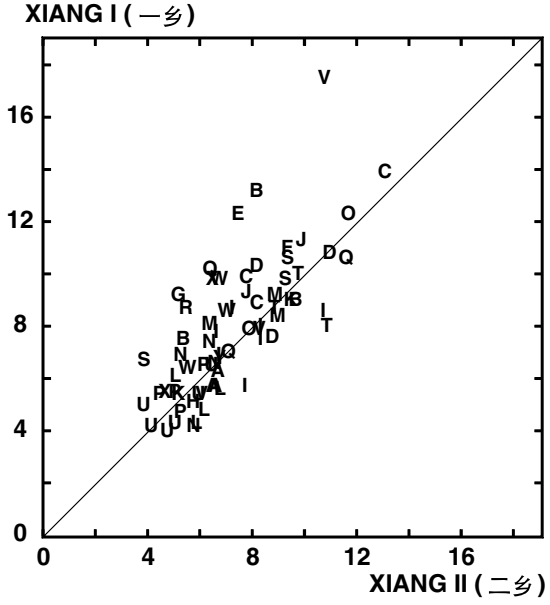
U001 Cl/cre – urine CHLORIDE (mg/mg creatinine)





- 通过测定电解质中Cl选择电极和参照电极的电势差来进行定量分析。仪器：IL Monarch Chemistry System。
- 仅收集男性受试者的尿样。
- 两乡之间（73%†）以及1989年与1983年测定值之间（57%†）具有很好的相关性。
- 尿液中氯的摩尔浓度大约与钠相等，尿液中氯浓度（U001: Cl/cre）与钠（U003: Na/cre）浓度的相关性达98%。
- 北方水平较高，台湾最低，测定值的范围较大。因此，通常与北方膳食特征（如，小麦消费高于大米，植物性食物高于动物性食物，等。）有关。
- 与膳食调查的Na摄入无相关性，与添加盐呈弱相关性。
- 与中年血管性疾病死亡率（M058: ALLVASCb）呈一定的相关性（32%*），与两个年龄组脑卒中的死亡率也具有相似的相关性。



U001 Cl/cre – 尿：氯化物 (毫克/毫克肌酐)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	13.3	QA	8.2	AA	6.0	KC	5.2	ZA	3.7
CC	8.7	QB	11.0	AB	6.3	LA	5.3	ZB	3.3
CD	8.4	QC	6.9	AC	6.0	LB	6.1	ZC	3.8
DA	9.1	RA	7.0	BA	10.6	LC	5.5	ZD	3.4
DB	10.8	SA	5.2	BB	9.2	LD	5.0	ZE	4.2
DC	8.1	SB	9.4	BC	6.3	PA	4.9	ZF	3.1
FA	10.1	SC	9.9	EA	9.8	PC	4.8	ZG	4.1
GA	7.0	TA	9.8	HA	5.3	PD	5.2	ZH	4.1
JA	10.5	TC	9.3	IA	7.1	PE	6.2	ZI	3.1
JB	8.4	TD	8.7	IB	9.6	UA	4.5	ZJ	3.8
MB	7.1	VA	8.0	IC	6.6	UB	4.3	ZK	3.6
MC	8.9	VB	5.6	ID	7.8	UC	4.3	ZL	3.3
MD	8.6	VC	14.0	IE	7.9	UD	5.6	ZM	3.3
NA	4.9	WA	8.1	IF	6.7	UE	4.0	ZN	3.0
NB	6.5	WB	7.7	IG	8.1	UF	6.4	ZO	3.7
NC	6.8	WC	5.8	KB	9.1			ZP	3.8
ND	6.0	XA	5.0						
OA	11.8	XB	8.0						
OB	7.8	YA	6.7						

Mean 平均值	Male (男)	Male (男)	Male (男)
	8.3†	6.4†	3.6

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs	Xiang (乡) II	69	7.7	2.6	7.2	2.1	73	8.9	†
M1983	vs	M1989	64	7.8	2.5	7.5	2.2	57	5.4	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

29 M005 ALL35-69	-25 P010 G-CAROT	-25 U023 NO3mn	-65 † D049 MEAT	30 Q017 aPRIMARY
28 M008 MEDICALc	-27 P013 RBP	-54 † D002 TOTFAT	-61 † D050 REDMEAT	-43 † Q019 dCANREAD
33 * M015 PULMTBb	27 P015 G-TOCOPH	25 D003 TOTPROT	-41 † D051 POULTRY	-52 † Q031 aINCOME
34 * M017 OTHERTBb	38 * P017 LUTEIN	45 † D004 SOLCARB	-49 † D052 FISH	27 Q057 dCOALKID
28 M018 OTHERTBc	44 † P019 A-CRYPT	-63 † D005 %FATKCAL	-25 D055 ADDEDFAT	-25 Q093 dPEPULCER
-25 M022 ALLCAb	-33 * P030 Se	-57 † D007 %ANPRKCAL	29 D057 ADDEDSALT	-32 * Q094 dHEPATIT
-52 † M025 NASOPCAc	-51 † P041 TESTOSTm	52 † D008 %PLPRKCAL	69 † D059 TOTNDF	29 Q112 dFVCadj
32 * M027 OESOPHCAc	24 P047 COTIN>20m	62 † D009 %CARBKCAL	26 D067 GLUTAMINE	-34 * Q157 dRICE
28 M028 STOMCAc	27 R002 RIBOFDEF	-43 † D010 RETINOL	-43 † D072 LYSINE	31 Q158 dWHEAT
-30 M031 LIVERCAc	-29 R005 TOTn6	51 † D015 THIAMINE	-58 † D082 MUFA	42 † Q159 dMAIZE
-25 M035 LUNGCAmc	-27 R006 TOTn3	33 * D019 Fe	-52 † D084 SATFA	44 † Q161 dMILLET
40 † M038 CERVIXCAc	-35 * R007 PUFA	54 † D020 Cu	-59 † D085 CHOL	-33 * Q165 dSMOKFOOD
-25 M039 BRAINCAc	-36 * R008 P/S	52 † D021 K	-28 D086 LYS/ARG	-45 † Q166 dSALTFISH
-35 * M042 LEUKEMIAc	40 † R009 14:0	47 † D022 Mg	-39 * D087 %MUFA	-44 † Q167 dSALTFKID
32 * M058 ALLVASCb	42 † R010 16:0	28 D023 Mn	35 * D088 %PUFA	29 Q171 dSALTVEG
26 M064 STROKEb	-49 † R014 24:0	32 * D027 Zn	29 D090 P/S	-43 † Q172 dGRNVEG
27 M065 STROKEc	33 * R015 16:1n7	44 † D028 PLNTFOOD	-31 * D091 M/P	-45 † Q173 dFRUIT
27 M066 VASC-STRb	25 R019 24:1n9	-51 † D029 ANIMFOOD	-57 † D094 TOTn9	-50 † Q174 dFISH
46 † M077 INTESTOBc	-34 * R021 20:5n3	56 † D031 %PLNTFOOD	29 D095 %TOTn3	-51 † Q175 dMEAT
26 M087 PREGBRTHb	-33 * R026 20:4n6	-56 † D032 %ANIMFOOD	35 * D096 %TOTn6	-39 † Q201 eDOCVIS
-29 M096 ROADACCc	60 † U002 K/cre	56 † D033 PLNTPROT	-36 * D097 %TOTn9	-24 Q213 eDPT3rd
-31 M114 LOWBTHWTa	98 † U003 Na/cre	-56 † D034 ANIMPROT	-28 D104 14:0	31 Q247 fBMIadj
-50 † P001 TOTCHOL	45 † U006 UREA/cre	62 † D035 %PLNTPROT	-55 † D141 %16:1	41 † G001 LATITUDE
-34 * P002 HDLCHOL	47 † U007 URIC/cre	-62 † D036 %ANIMPROT	-29 D145 %18:0	31 G003 ELEVATION
-41 † P003 NONHDL	-24 U008 CREAT	-35 * D037 RICE	-35 * D146 %18:1	26 G004 ARIDITY
-26 P004 APOA1	-41 † U009 TAUR/cre	25 D038 WHTFLOUR	35 * D147 %18:2	-46 † G005 HEAT
-51 † P005 APOB	30 U011 COT/cre	56 † D039 OTHCEREAL	33 * D148 %18:3	
29 P006 ALBUMIN	44 † U012 VOLURINE	33 * D040 STCHTUBER	-30 Q007 cHHSIZE	
-36 * P009 B-CAROT	43 † U014 VOLURmn	-27 D048 EGGS	-25 Q016 aCANREADm	

- Analysis of electrolyte is by measurement of potential difference between Cl-selective electrode and reference electrode. Analyser: IL Monarch Chemistry System.
- Urine was collected only from males.
- Good correlations between xiangs (73%†) and between 1983 and 1989 (57%†).
- Chloride is present in about the same molar concentration as sodium in the urine, and there is a 98% correlation between U001: Cl/cre and U003: Na/cre.
- Higher values in north, lowest in Taiwan, with wide range. Hence, general correlation with Northern dietary characteristics (e.g., wheat rather than rice, plant rather than animal foods, etc.).
- No correlation with diet survey Na and weak with added salt.
- Some correlation (32%*) with vascular disease mortality in middle age (M058: ALLVASCb) and similar with stroke (both age groups).

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methods: pages 10-11

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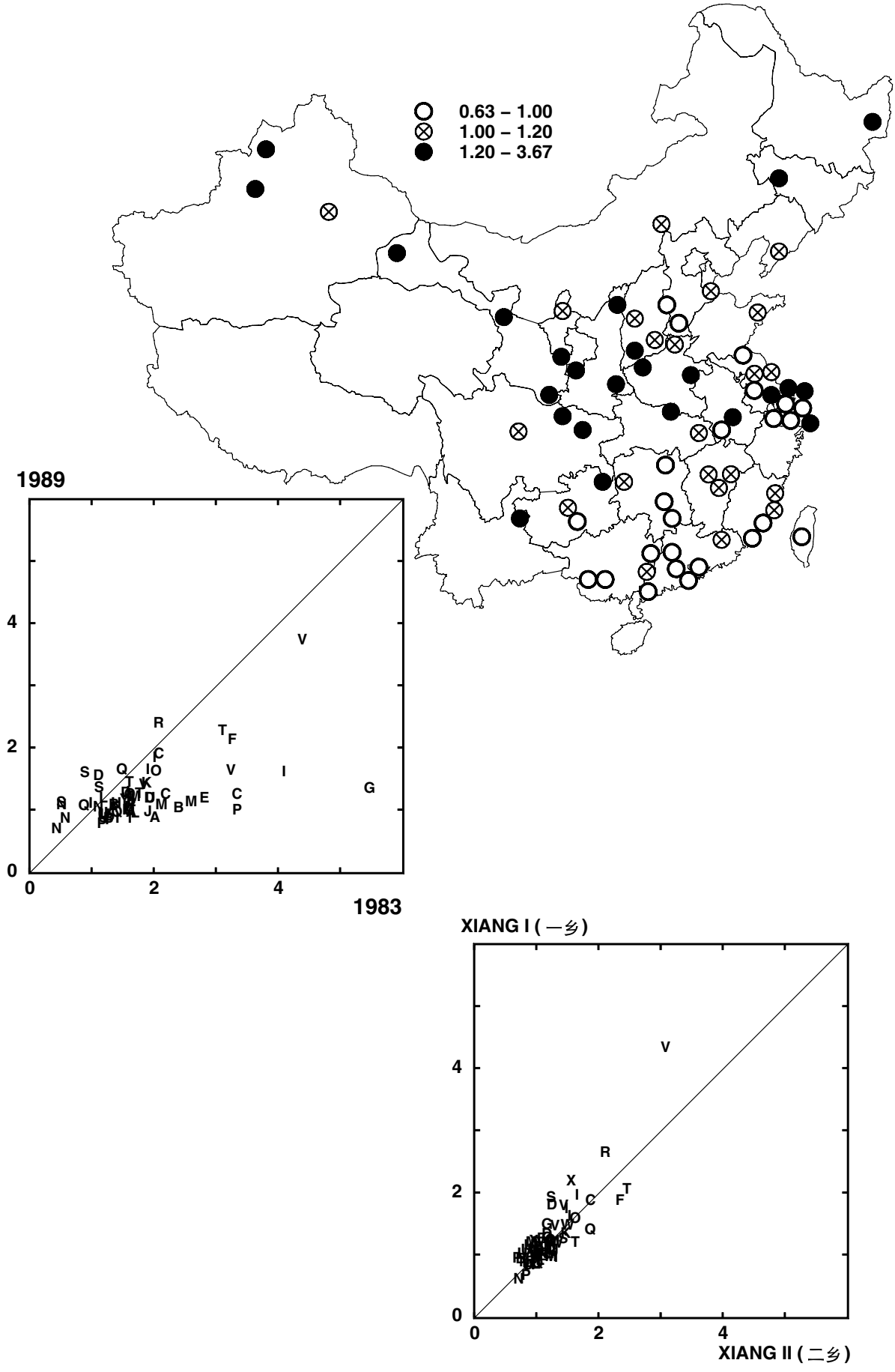
U002 K/cre – urine POTASSIUM (mg/mg creatinine)



U002 K/cre – 尿：钾 (毫克/毫克肌酐)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	1.83	QA	1.01	AA	0.82	KC	0.94	ZA	0.93
CC	1.19	QB	1.59	AB	0.90	LA	0.94	ZB	0.94
CD	1.18	QC	0.90	AC	0.97	LB	0.89	ZC	0.82
DA	1.49	RA	2.33	BA	0.80	LC	1.07	ZD	0.84
DB	1.13	SA	1.05	BB	0.97	LD	1.13	ZE	0.74
DC	1.21	SB	1.30	BC	1.02	PA	0.71	ZF	0.88
FA	2.07	SC	1.54	EA	1.13	PC	0.78	ZG	1.09
GA	1.28	TA	1.38	HA	1.04	PD	0.94	ZH	0.89
JA	1.23	TC	2.21	IA	0.81	PE	1.03	ZI	0.86
JB	0.91	TD	1.20	IB	1.10	UA	0.92	ZJ	1.04
MB	1.15	VA	1.34	IC	0.81	UB	0.89	ZK	0.81
MC	1.01	VB	1.57	ID	1.04	UC	0.98	ZL	0.83
MD	1.06	VC	3.67	IE	1.77	UD	0.81	ZM	0.75
NA	0.63	WA	1.20	IF	1.58	UE	0.86	ZN	0.89
NB	1.02	WB	1.44	IG	1.55	UF	1.13	ZO	0.85
NC	0.81	WC	1.10	KB	1.36			ZP	0.95
ND	0.98	XA	1.05						
OA	1.56	XB	1.83						
OB	1.18	YA	1.09						

Mean 平均值	Male (男)	Male (男)	Male (男)
	1.36*	1.02*	0.88

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs	Xiang (乡) II	69	1.21	0.53	1.21	0.42	85	13.5	†
M1983	vs	M1989	64	1.80	0.92	1.20	0.47	52	4.8	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

31	M003	ALL15-34	33 *	P011	Z-CAROT	-34 *	D005	%FATKCAL	27	D044	SALTVEG	33 *	Q111	dFEV1adj
31	M017	OTHERTBb	30	P017	LUTEIN	-34 *	D007	%ANPRKCAL	-25	D048	EGGS	53 †	Q112	dFVCadj
44 †	M018	OTHERTBc	32 *	P019	A-CRYPT	41 †	D008	%PLPRKCAL	-45 †	D049	MEAT	25	Q130	dSMOKNOWm
-33 *	M025	NASOPCAc	38 *	P022	PHYTOFLU	31	D009	%CARBKCAL	-42 †	D050	REDMEAT	28	Q142	dTOBCONSm
44 †	M038	CERVIXCAc	35 *	P023	PHYTOENE	-29	D010	RETINOL	-33 *	D051	POULTRY	-40 †	Q157	dRICE
27	M052	NERVOUSb	30	P025	VITC	31	D015	THIAMINE	-28	D052	FISH	26	Q158	dWHEAT
38 *	M053	NERVOUSc	24	P028	K	34 *	D020	Cu	55 †	D059	TOTNDF	50 †	Q159	dMAIZE
35 *	M055	MENINGITc	38 *	P032	Fe	65 †	D021	K	-28	D072	LYSINE	24	Q161	dMILLET
25	M056	EPILEPSYb	-55 †	P041	TESTOSTm	32 *	D022	Mg	-36 *	D082	MUFA	-35 *	Q166	dSALTFISH
31	M058	ALLVASCb	28	R001	Hb	41 †	D028	PLNTFOOD	-32 *	D084	SATFA	-33 *	Q167	dSALTFKID
30	M064	STROKEb	26	R009	14:0	-30	D029	ANIMFOOD	-40 †	D085	CHOL	38 *	Q171	dSALTVEG
26	M066	VASC-STRb	-28	R014	24:0	35 *	D031	%PLNTFOOD	-24	D087	%MUFA	-41 †	Q172	dGRNVEG
34 *	M074	DIGESTIVc	60 †	U001	Cl/cre	-35 *	D032	%ANIMFOOD	-36 *	D094	TOTn9	-30	Q174	dFISH
30	M075	PEPULCERc	64 †	U003	Na/cre	38 *	D033	PLNTPROT	-33 *	D141	%16:1	-26	Q175	dMEAT
41 †	M077	INTESTOBc	-30	U004	Ca/cre	-34 *	D034	ANIMPROT	-27	Q016	aCANREADm	-31 *	Q201	eDOCVIS
28	M079	CIRRHOSc	33 *	U007	URIC/cre	39 *	D035	%PLNTPROT	29	Q017	aPRIMARY	33 *	Q247	fBMIadj
26	M084	GENITURmc	-29	U009	TAUR/cre	-39 *	D036	%ANIMPROT	-26	Q019	dCANREAD	31 *	G001	LATITUDE
29	M085	GENITURfc	36 *	U012	VOLURINE	-39 †	D037	RICE	33 *	Q090	dHEIGHT	47 †	G003	ELEVATION
33 *	M087	PREGBRTHb	37 *	U014	VOLURmn	51 †	D039	OTHCEREAL	28	Q091	dWEIGHT	37 *	G004	ARIDITY
-33 *	P005	APOB	-31 *	D002	TOTFAT	53 †	D040	STCHTUBER	-26	Q093	dPEPULCER	-34 *	G005	HEAT

- Analysis of electrolyte is by measurement of potential difference between K-selective electrode and reference electrode. Analyser: IL Monarch Chemistry System.
- Urine was collected only from males.
- Higher values in north, lowest in Taiwan. Hence, general correlation with Northern dietary characteristics (e.g., wheat rather than rice, plant rather than animal foods, etc.).
- Strong correlations between xiangs (85%†) and between 1983 and 1989 (52%†).
- Strong correlation with dietary K (65%† D021:K).
- Strongly correlated with urinary salt/creatinine ratio (U001: Cl/cre, U003: Na/cre), but present at much lower concentrations than sodium.
- Weakly positively correlated with vascular mortality rates.

- 通过测定电解质中K选择电极和参照电极的电势差来进行定量分析。仪器：IL Monarch Chemistry System。
- 仅收集男性受试者的尿样。
- 北方水平较高，台湾最低，测定值的范围较大。因此，通常与北方膳食特征（如，小麦消费高于大米，植物性食物高于动物性食物，等。）有关。
- 两乡之间（85%†）以及1989年与1983年测定值之间（52%†）具有很强的相关性。
- 与膳食中K摄入呈强相关性（65%† D021:K）。
- 与尿液中盐浓度（U001: Cl/cre，U003: Na/cre）具有很强的相关性，但其浓度远低于钠。
- 与血管性疾病死亡率呈弱的正相关。

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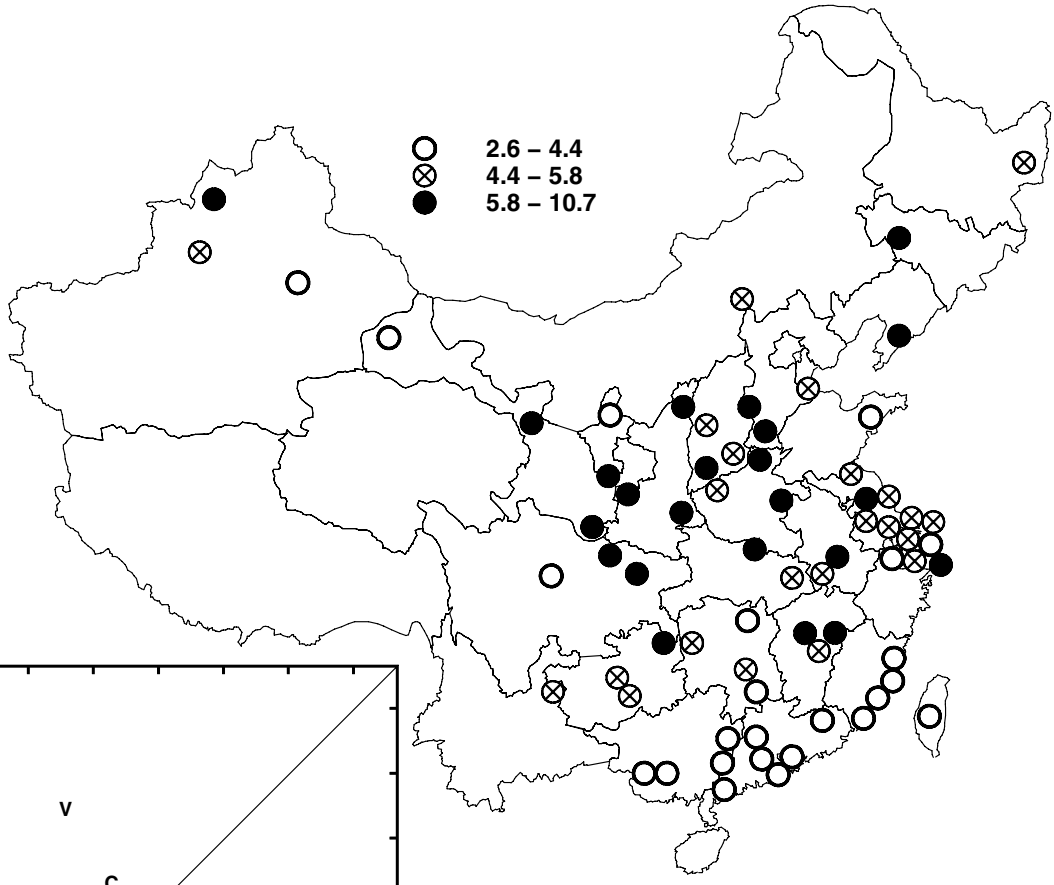
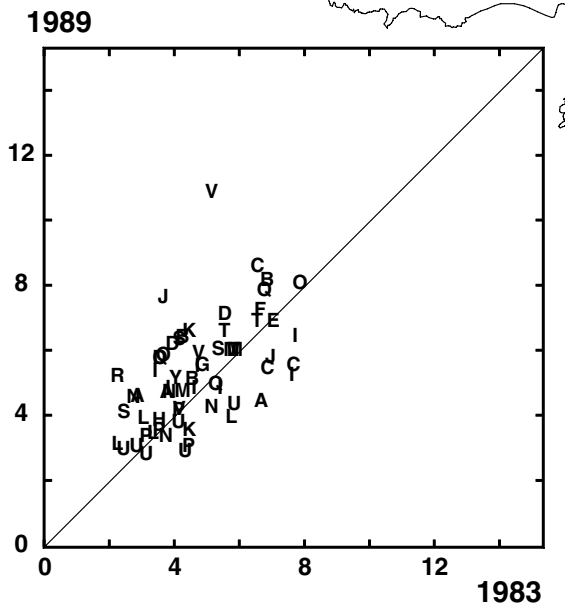
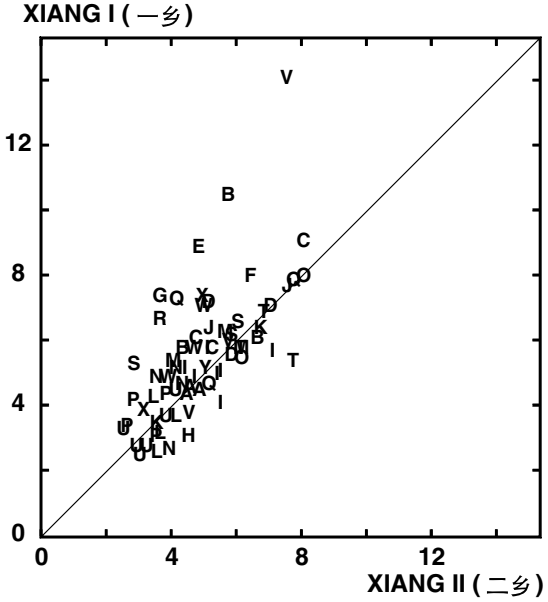
U003 Na/cre – urine SODIUM (mg/mg creatinine)





- 通过测定电解质中Na选择电极和参照电极的电势差来进行定量分析。仪器：IL Monarch Chemistry System。
- 仅收集男性受试者的尿样。
- 两乡之间（73%†）以及1989年与1983年测定值之间（57%†）具有很好的相关性。
- 尿液中氯的摩尔浓度大约与钠相等，尿液中氯浓度（U001: Cl/cre）与钠（U003: Na/cre）浓度的相关性达98%。
- 北方水平较高，台湾最低，测定值的范围较大。因此，通常与北方膳食特征（如，小麦消费高于大米，植物性食物高于动物性食物，等。）有关。
- 与膳食调查的Na摄入无相关性，与添加盐呈弱相关性。
- 与中年血管性疾病死亡率（M058: ALLVASCb）呈一定的相关性（31%），与两个年龄组脑卒中的死亡率也具有相似的相关性。



U003 Na/cre – 尿：钠 (毫克/毫克肌酐)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	8.5	QA	5.6	AA	4.3	KC	3.4	ZA	2.8
CC	5.3	QB	7.7	AB	4.5	LA	3.3	ZB	2.5
CD	5.4	QC	4.8	AC	4.5	LB	3.8	ZC	2.8
DA	6.0	RA	5.0	BA	8.0	LC	3.8	ZD	2.5
DB	7.0	SA	3.9	BB	6.3	LD	3.0	ZE	3.9
DC	5.6	SB	5.9	BC	5.0	PA	3.2	ZF	2.4
FA	7.1	SC	6.2	EA	6.8	PC	3.4	ZG	3.3
GA	5.4	TA	6.8	HA	3.7	PD	2.9	ZH	2.9
JA	7.5	TC	6.5	IA	4.7	PE	4.0	ZI	2.1
JB	5.7	TD	5.8	IB	6.3	UA	2.6	ZJ	2.9
MB	4.6	VA	5.8	IC	4.7	UB	2.9	ZK	2.7
MC	5.8	VB	4.0	ID	5.2	UC	2.8	ZL	2.5
MD	5.8	VC	10.7	IE	5.3	UD	3.6	ZM	2.1
NA	3.2	WA	5.9	IF	4.7	UE	2.8	ZN	2.5
NB	4.4	WB	5.1	IG	5.1	UF	4.2	ZO	3.0
NC	4.5	WC	4.3	KB	6.5			ZP	2.6
ND	4.1	XA	3.4						
OA	7.9	XB	6.1						
OB	5.7	YA	5.0						

Mean 平均值	Male (男)	Male (男)	Male (男)
	5.7†	4.4†	2.7

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs	Xiang (乡) II	69	5.3	2.0	4.9	1.4	66	7.2	†
M1983	vs	M1989	64	4.7	1.5	5.1	1.6	55	5.1	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

25 M003 ALL15-34	-37 * P009 B-CAROT	-50 † D002 TOTFAT	-25 D048 EGGS	32 * Q017 aPRIMARY
30 M005 ALL35-69	28 P015 G-TOCOPH	29 D003 TOTPROT	-61 † D049 MEAT	-44 † Q019 dCANREAD
29 M008 MEDICALc	37 * P017 LUTEIN	43 † D004 SOLCARB	-57 † D050 REDMEAT	-48 † Q031 aINCOME
32 * M015 PULMTBb	39 † P019 A-CRYPT	-60 † D005 %FATKCAL	-43 † D051 POULTRY	26 Q057 dCOALKID
39 * M017 OTHERTBb	-29 P030 Se	-55 † D007 %ANPRKCAL	-48 † D052 FISH	24 Q091 dWEIGHT
31 M018 OTHERTBc	-56 † P041 TESTOSTm	53 † D008 %PLPRKCAL	27 D057 ADDEDSALT	-29 Q093 dPEPULCER
-26 M022 ALLCAb	24 R002 RIBOFDEF	58 † D009 %CARBKCAL	68 † D059 TOTNDF	-30 Q094 dHEPATIT
-55 † M025 NASOPCAc	26 R004 MUFA	-39 † D010 RETINOL	30 D067 GLUTAMINE	34 * Q112 dFVCadj
28 M027 OESOPHCAc	-32 * R005 TOTn6	50 † D015 THIAMINE	-39 † D072 LYSINE	-37 * Q157 dRICE
29 M028 STOMCAc	-27 R006 TOTn3	35 * D019 Fe	-56 † D082 MUFA	34 * Q158 dWHEAT
-29 M030 LIVERCAb	-37 * R007 PUFA	54 † D020 Cu	-49 † D084 SATFA	43 † Q159 dMAIZE
-32 * M031 LIVERCAc	-37 * R008 P/S	54 † D021 K	-56 † D085 CHOL	39 * Q161 dMILLET
44 † M038 CERVIXCAc	42 † R009 14:0	44 † D022 Mg	-39 † D087 %MUFA	-32 * Q165 dSMOKFOOD
-33 * M042 LEUKEMIAc	41 † R010 16:0	26 D023 Mn	34 * D088 %PUFA	-44 † Q166 dSALTFISH
26 M053 NERVOUSc	-50 † R014 24:0	32 * D027 Zn	28 D090 P/S	-44 † Q167 dSALTFKID
31 M058 ALLVASCb	31 * R015 16:1n7	45 † D028 PLNTFOOD	-32 * D091 M/P	32 * Q171 dSALTVEG
30 M064 STROKEb	27 R019 24:1n9	-49 † D029 ANIMFOOD	-56 † D094 TOTn9	-45 † Q172 dGRNVEG
25 M065 STROKEc	-32 * R021 20:5n3	54 † D031 %PLNTFOOD	27 D095 %TOTn3	-44 † Q173 dFRUIT
26 M066 VASC-STRb	-35 * R026 20:4n6	-54 † D032 %ANIMFOOD	35 * D096 %TOTn6	-50 † Q174 dFISH
49 † M077 INTESTOBc	98 † U001 Cl/cre	57 † D033 PLNTPROT	-37 * D097 %TOTn9	-47 † Q175 dMEAT
-26 M080 TOTLIVRb	64 † U002 K/cre	-53 † D034 ANIMPROT	-24 D104 14:0	-24 Q196 eM/F
29 M087 PREGBRTHb	46 † U006 UREA/cre	60 † D035 %PLNTPROT	-52 † D141 %16:1	-37 * Q201 eDOCVIS
-27 M114 LOWBTHWTa	52 † U007 URIC/cre	-60 † D036 %ANIMPROT	-27 D145 %18:0	36 * Q247 fBMIadj
-46 † P001 TOTCHOL	-39 † U009 TAUR/cre	-38 * D037 RICE	-36 * D146 %18:1	47 † G001 LATITUDE
-29 P002 HDLCHOL	28 U011 COT/cre	29 D038 WHTFLOUR	35 * D147 %18:2	34 * G003 ELEVATION
-39 † P003 NONHDL	43 † U012 VOLURINE	53 † D039 OTHCEREAL	30 D148 %18:3	29 G004 ARIDITY
-51 † P005 APOB	43 † U014 VOLURmn	34 * D040 STCHTUBER	-31 Q007 cHHSIZE	-51 † G005 HEAT
29 P006 ALBUMIN	-26 U023 NO3mn	26 D044 SALTVEG	-29 Q016 aCANREADm	

- Analysis of electrolyte is by measurement of potential difference between Na-selective electrode and reference electrode. Analyser: IL Monarch Chemistry System.
- Urine was collected only from males.
- Good correlations between xiangs (73%†) and between 1983 and 1989 (57%†).
- Chloride is present in about the same molar concentration as sodium in the urine, and there is a 98% correlation between U001: Cl/cre and U003: Na/cre.
- Higher values in north, lowest in Taiwan, with wide range. Hence, general correlation with Northern dietary characteristics (e.g., wheat rather than rice, plant rather than animal foods, etc.).
- No correlation with diet survey Na and weak with added salt.
- Some correlation (31%) with vascular disease mortality in middle age (M058: ALLVASCb) and similar with stroke mortality (both age groups).

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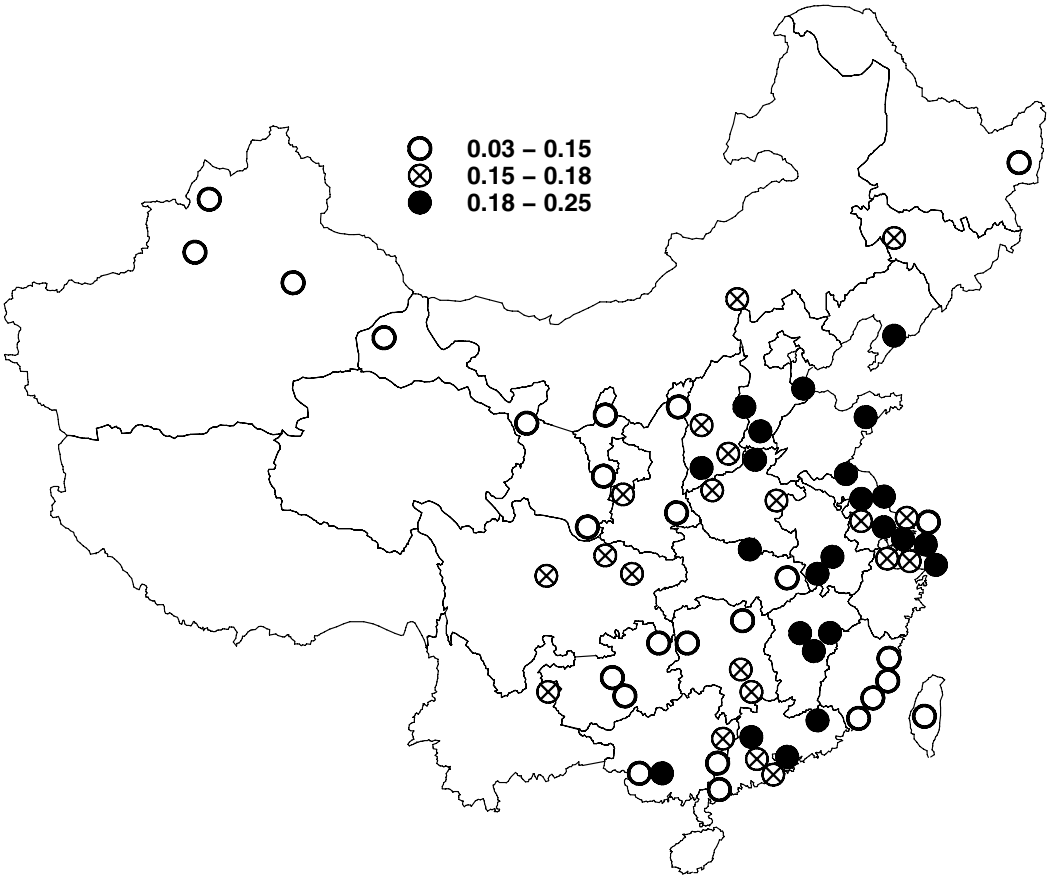
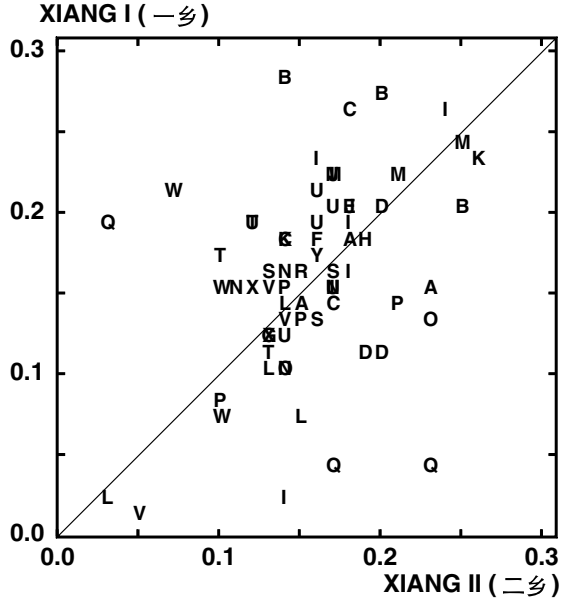
U004 Ca/cre – urine CALCIUM (mg/mg creatinine)





U004 Ca/cre – 尿：钙 (毫克/毫克肌酐)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	0.22	QA	0.11	AA	0.19	KC	0.16	ZA	0.11
CC	0.16	QB	0.14	AB	0.18	LA	0.12	ZB	0.12
CD	0.16	QC	0.11	AC	0.15	LB	0.11	ZC	0.13
DA	0.15	RA	0.15	BA	0.24	LC	0.14	ZD	0.14
DB	0.20	SA	0.15	BB	0.23	LD	0.03	ZE	0.09
DC	0.15	SB	0.17	BC	0.21	PA	0.15	ZF	0.13
FA	0.17	SC	0.15	EA	0.19	PC	0.09	ZG	0.09
GA	0.13	TA	0.14	HA	0.18	PD	0.18	ZH	0.11
JA	0.19	TC	0.12	IA	0.25	PE	0.14	ZI	0.11
JB	0.20	TD	0.15	IB	0.20	UA	0.19	ZJ	0.10
MB	0.20	VA	0.14	IC	0.16	UB	0.18	ZK	0.11
MC	0.24	VB	0.14	ID	0.20	UC	0.15	ZL	0.12
MD	0.21	VC	0.03	IE	0.08	UD	0.13	ZM	0.12
NA	0.15	WA	0.13	IF	0.17	UE	0.16	ZN	0.10
NB	0.12	WB	0.14	IG	0.18	UF	0.18	ZO	0.11
NC	0.16	WC	0.09	KB	0.25			ZP	0.11
ND	0.13	XA	0.13						
OA	0.18	XB	0.14						
OB	0.12	YA	0.17						

Mean 平均值	Male (男)	Male (男)	Male (男)
	0.15	0.17	0.11

(a)	(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs Xiang (乡) II	69	0.16	0.06	0.16	0.05	38	3.3	*

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-29	M001 ALL0-4	-25	M054 MENINGITb	-37 *	M086 RENALc	-27	P028 K	32 *	D074 METH+CYS
-41 †	M003 ALL15-34	-25	M055 MENINGITc	-37 *	M087 PREGBRTHb	-27	R001 Hb	27	D078 THREONINE
-38 *	M004 ALL0-34	-25	M060 RHEUMHDb	-33	M094 ACCIDENTc	35 *	R002 RIBOFDEF	29	D079 TRYPTOPH
-37 *	M007 MEDICALb	-25	M061 RHEUMHDc	-26	M101 HOMICIDEb	25	R010 16:0	-32 *	Q007 cHHSIZE
-32 *	M011 INFECTb	-28	M068 ALLRESPb	-26	M103 INFANT	-30	U002 K/cre	32 *	Q096 dMALARIA
-35 *	M012 INFECTc	-28	M070 PNEUMONb	-29	M105 ALLCUMa	25	U005 P/cre	-27	Q133 dSMOKAGEf
-31	M013 INTESTINb	-33 *	M071 PNEUMONc	-32 *	M106 MEDICALa	26	U006 UREA/cre	-30	Q184 dBLACKTEA
-31	M014 INTESTINc	-32 *	M073 DIGESTIVb	-27	M108 RESPINFa	36 *	U007 URIC/cre	28	Q209 eBIRTHWT
-32 *	M016 PULMTBc	-35 *	M074 DIGESTIVc	-32 *	M109 ALLGIa	31	U024 INHIBPRO	33 *	G002 LONGITUDE
-26	M017 OTHERTBb	-33 *	M075 PEPULCERc	-31	M116 RDSa	24	D001 KCAL	-25	G003 ELEVATION
-29	M018 OTHERTBc	-37 *	M076 ENTCOLc	-32 *	M118 MALNUTRIa	24	D004 SOLCARB		
-29	M043 ENDOCRINb	-25	M078 CIRRHOSb	-32 *	P007 TOTPROT	26	D022 Mg		
-31	M046 MALNUTRIb	-27	M084 GENITURmc	-29	P013 RBP	24	D027 Zn		
-30	M053 NERVOUSc	-42 †	M085 GENITURfc	-27	P026 CERULO	-24	D051 POULTRY		

- Analysis of electrolyte is by a colorimetric method, based on the formation of a purple complex between calcium and o-cresolphthalein in alkaline solution. Analyser: IL Monarch Chemistry System.
- Urine was collected only from males.
- No consistent geographic pattern.
- Modest correlation between xiangs (38%*); not measured in 1983.
- No significant correlation with the questionnaire-based measurements of dietary calcium intake.
- No remarkably strong correlations.

- 通过比色法测定尿液电解质中的Ca含量。原理是钙在碱性条件下可与邻-甲酚肽反应生成紫色复合物。仪器：IL Monarch Chemistry System。
- 仅收集男性受试者的尿样。
- 无明确的地理分布模式。
- 两乡之间呈中度相关（38%*），1983年未测定尿钙浓度。
- 与根据膳食调查表计算的膳食钙摄入量无显著相关性。
- 与其它指标无明显的强相关性。

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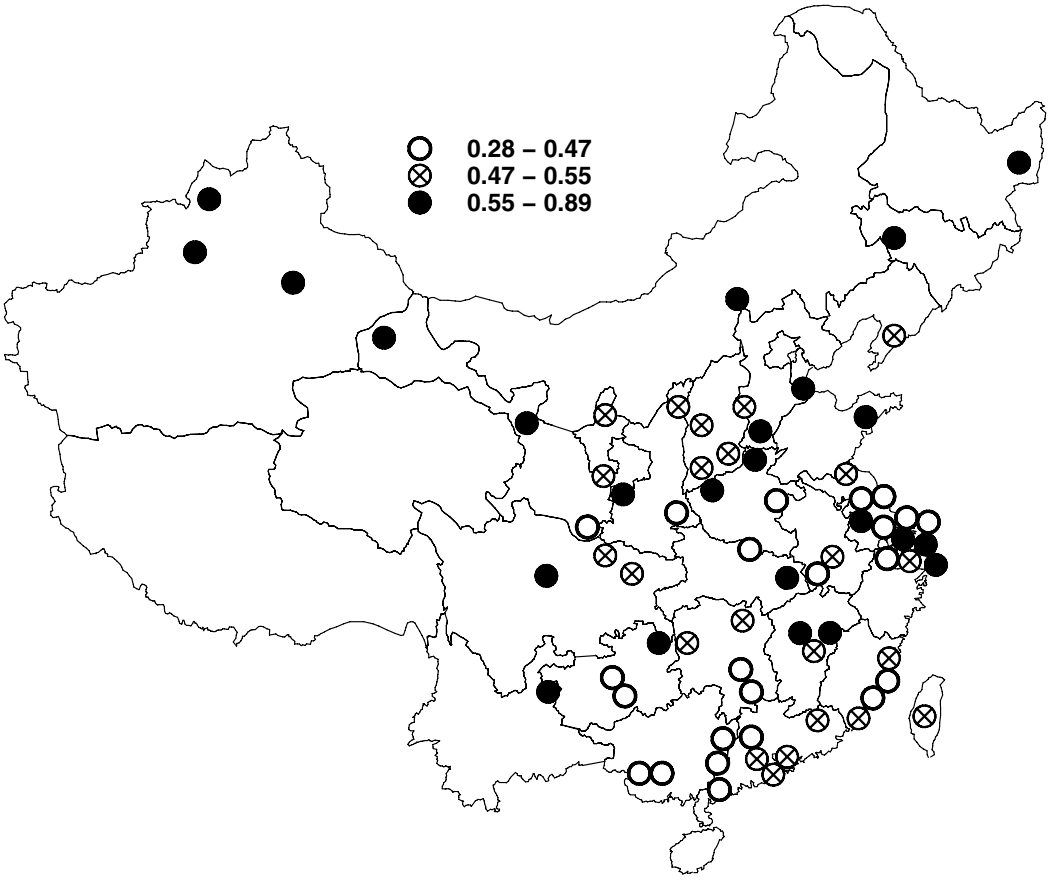
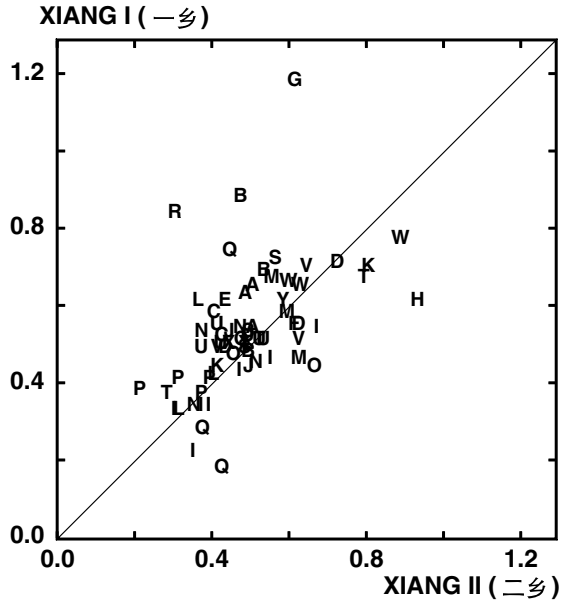
U005 P/cre – urine PHOSPHORUS (mg/mg creatinine)





U005 P/cre – 尿：磷 (毫克/毫克肌酐)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	0.48	QA	0.29	AA	0.55	KC	0.42	ZA	0.53
CC	0.48	QB	0.58	AB	0.57	LA	0.48	ZB	0.43
CD	0.47	QC	0.32	AC	0.52	LB	0.41	ZC	0.46
DA	0.46	RA	0.56	BA	0.67	LC	0.49	ZD	0.52
DB	0.58	SA	0.64	BB	0.48	LD	0.32	ZE	0.95
DC	0.71	SB	0.48	BC	0.61	PA	0.29	ZF	0.50
FA	0.58	SC	0.51	EA	0.52	PC	0.36	ZG	0.62
GA	0.89	TA	0.32	HA	0.77	PD	0.36	ZH	0.56
JA	0.48	TC	0.51	IA	0.50	PE	0.40	ZI	0.44
JB	0.46	TD	0.73	IB	0.36	UA	0.42	ZJ	0.53
MB	0.54	VA	0.67	IC	0.60	UB	0.51	ZK	0.43
MC	0.61	VB	0.56	ID	0.31	UC	0.50	ZL	0.48
MD	0.58	VC	0.45	IE	0.28	UD	0.46	ZM	0.53
NA	0.34	WA	0.82	IF	0.45	UE	0.52	ZN	0.48
NB	0.50	WB	0.63	IG	0.35	UF	0.48	ZO	0.42
NC	0.45	WC	0.62	KB	0.74			ZP	0.56
ND	0.48	XA	0.47						
OA	0.46	XB	0.48						
OB	0.55	YA	0.59						

Mean 平均值	Male (男)	Male (男)	Male (男)
	0.53	0.47	0.53

(a)	(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs Xiang (乡) II	69	0.52	0.16	0.49	0.14	49	4.6	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-30	M012 INFECTc	-37 *	M080 TOTLIVRb	-34 *	P040 B2-MGLOB	-25	D043 GREENVEG	35 *	Q112 dFVCadj
-30	M016 PULMTBc	36 *	M095 ROADACCb	27	R009 14:0	-31 *	D051 POULTRY	-27	Q133 dSMOKAGEf
30	M017 OTHERTBb	-42 *	M097 DROWNb	26	R011 18:0	47 †	D067 GLUTAMINE	-26	Q138 dCIGCONSm
-32 *	M025 NASOPCAc	-28	M098 DROWNc	25	U004 Ca/cre	43 †	D074 METH+CYS	-39 †	Q157 dRICE
-29	M030 LIVERCAb	28	M102 HOMICIDEc	41 †	U006 UREA/cre	42 †	D078 THREONINE	42 †	Q158 dWHEAT
-29	M048 BLOODb	25	M104 MATERNAL	43 †	U007 URIC/cre	26	D086 LYS/ARG	-30	Q162 dLEGUME
31	M050 MENTALb	29	M110 CONGENITa	-33 *	U023 NO3mn	-28	D087 %MUFA	-34 *	Q170 dLEGUMyr
31	M052 NERVOUSb	44 †	M111 NTDa	-29	U026 SUMNITa	-31	D097 %TOTn9	-31	Q172 dGRNVEG
35 *	M059 ALLVASCc	-27	M117 NEOTETANa	38 *	D003 TOTPROT	-31 *	D146 %18:1	26	Q176 dEGGS
36 *	M063 IHDc	-38 *	M119 DROWNa	24	D006 %PROTKCAL	-25	Q067 dCOOKm	31 *	Q177 dMILK
32 *	M065 STROKEc	28	P006 ALBUMIN	25	D019 Fe	31 *	Q090 dHEIGHT	24	Q184 dBLACKTEA
33 *	M067 VASC-STRc	33 *	P011 Z-CAROT	27	D020 Cu	40 †	Q091 dWEIGHT	-28	Q205 eHRSWORK
-30	M073 DIGESTIVb	44 †	P016 LYCOPENE	29	D021 K	40 †	Q092 dBMI	37 *	Q243 fWTadj
-26	M074 DIGESTIVc	-32 *	P024 FOLATE	53 †	D026 SeCARRY	34 *	Q099 dBRTHFAST	39 †	Q247 fBMIadj
-30	M075 PEPULCERc	26	P032 Fe	25	D033 PLNTPROT	38 *	Q108 dSBP	53 †	G001 LATITUDE
-29	M076 ENTCOLc	32 *	P033 FERRITIN	-40 †	D037 RICE	46 †	Q109 dDBP	26	G004 ARIDITY
-39 *	M078 CIRRHOSb	34 *	P037 BUN	45 †	D038 WHTFLOUR	45 †	Q110 dMIDBP	-46 †	G005 HEAT

- Phosphate was measured by the addition of ammonium molybdate (in the presence of sulfuric acid) to form a coloured phosphomolybdate complex. Analyser: IL Monarch Chemistry System.
- Urine was collected only from males.
- No consistent geographic pattern, although generally higher in the north.
- Good correlation between xiangs (49%†); not measured in 1983.

- 在硫酸存在的条件下，通过加入钼酸铵形成有色的磷钼酸盐复合物来测定磷酸盐的含量。仪器：IL Monarch Chemistry System。
- 仅收集男性受试者的尿样。
- 尽管北方水平较高，但无明确的地理分布模式。
- 两乡之间具有很好的相关性（49%†），1983年未测定尿磷浓度。

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methods: pages 10-11

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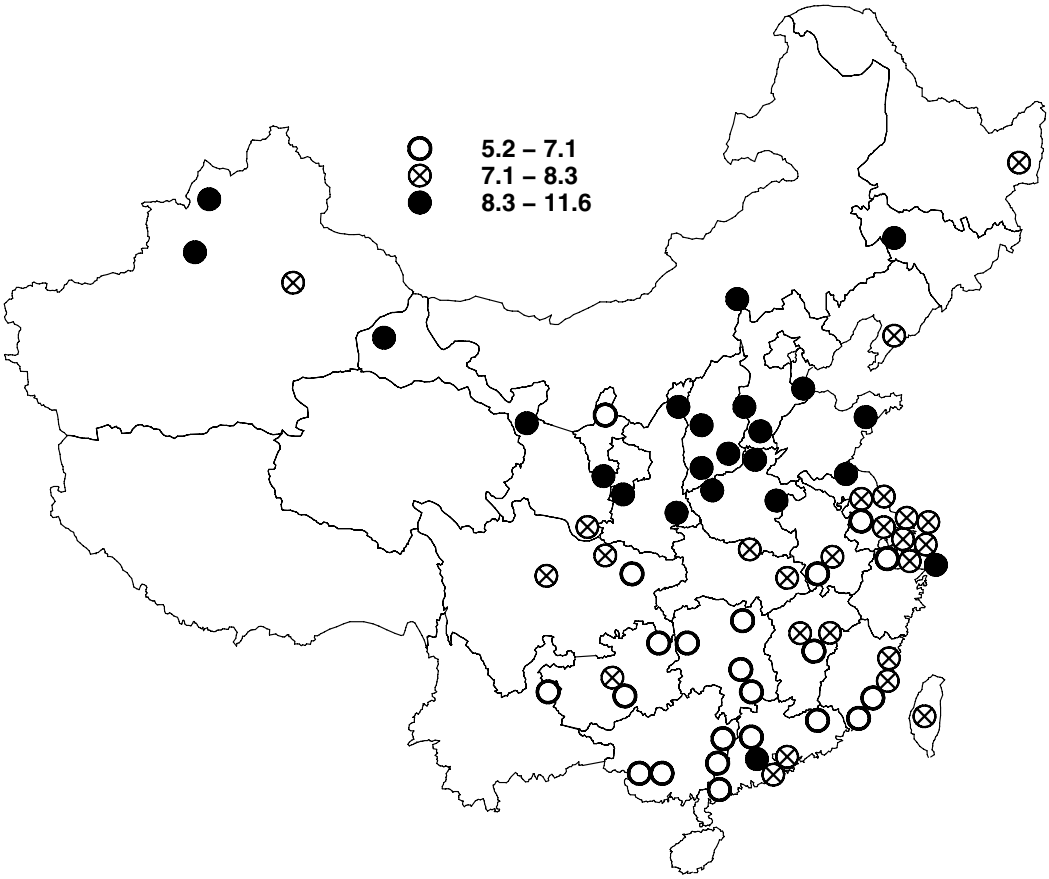
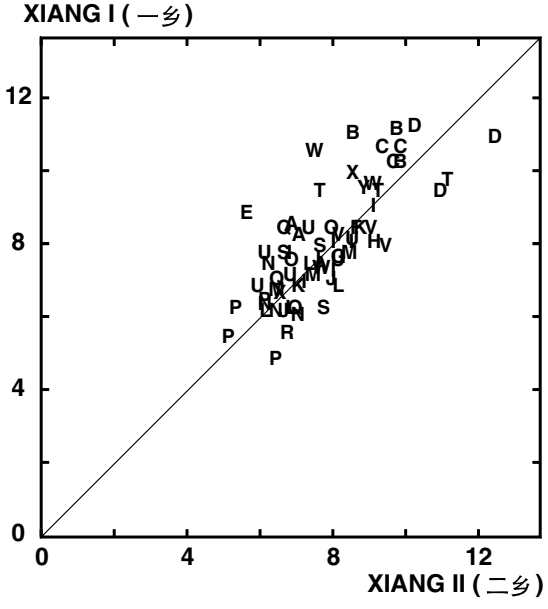
U006 UREA/cre – urine UREA NITROGEN (mg/mg creatinine)



- 采用酶反应速度方法测定。尿素可以被尿素酶水解成氨，用α-酮戊二酸盐进行浓缩（通过谷氨酸脱氢酶逆向催化进行浓缩反应），同时NADH被氧化成NAD。仪器：Beckman Synchron CX4/5CE。
- 仅收集男性受试者的尿样。
- 北方水平较高，台湾最低，测定值的范围较大。因此，通常与北方膳食特征（如，小麦消费高于大米，植物性食物高于动物性食物，等。）相关。
- 两乡之间具有很强的相关性（74%†），1983年未测定尿液中的尿素氮浓度。



U006 UREA/cre – 尿：尿素氮 (毫克/毫克肌酐)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	9.8	QA	7.5	AA	7.5	KC	6.9	ZA	7.6
CC	9.9	QB	6.5	AB	7.6	LA	6.5	ZB	7.2
CD	10.2	QC	6.7	AC	7.5	LB	6.0	ZC	7.5
DA	10.7	RA	6.1	BA	10.3	LC	7.3	ZD	7.4
DB	10.1	SA	7.1	BB	10.0	LD	7.4	ZE	7.0
DC	11.6	SB	7.7	BC	9.7	PA	5.6	ZF	7.5
FA	8.5	SC	6.9	EA	7.1	PC	5.7	ZG	8.1
GA	7.8	TA	8.5	HA	8.5	PD	6.2	ZH	8.2
JA	7.4	TC	9.3	IA	9.0	PE	5.2	ZI	6.7
JB	6.3	TD	10.3	IB	8.2	UA	6.3	ZJ	7.4
MB	6.5	VA	8.6	IC	7.0	UB	7.8	ZK	7.2
MC	7.2	VB	8.7	ID	7.2	UC	7.8	ZL	7.2
MD	8.0	VC	8.1	IE	8.0	UD	6.9	ZM	6.2
NA	6.5	WA	8.9	IF	7.5	UE	8.3	ZN	6.3
NB	6.2	WB	9.3	IG	7.5	UF	6.8	ZO	6.7
NC	6.8	WC	7.4	KB	8.5			ZP	6.5
ND	6.2	XA	6.5						
OA	8.1	XB	9.2						
OB	7.1	YA	9.1						

Mean 平均值	Male (男)	Male (男)	Male (男)
	8.1	7.5	7.2

(a)	(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs Xiang (乡) II	69	7.8	1.5	7.8	1.4	74	9.1	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-32 * M001 ALL0-4	-34 * M100 SUICIDEc	31 * R013 22:0	-42 † D049 MEAT	46 † Q092 dBMI
-32 * M002 ALL5-14	-27 M102 HOMICIDEc	-28 R014 24:0	-37 * D050 REDMEAT	-33 * Q093 dPEPULCER
-29 M004 ALL0-34	-29 M103 INFANT	-31 * R016 18:1n9	-44 † D051 POULTRY	40 † Q108 dSBP
-31 M009 NONMEDb	-32 * M105 ALLCUMa	-29 R026 20:4n6	-40 † D053 ANIMFAT	42 † Q109 dDBP
-50 † M012 INFECTc	-37 * M107 NONMEDa	45 † U001 Cl/cre	-35 * D055 ADDEDFAT	44 † Q110 dMIDBP
-51 † M016 PULMTBc	35 * M111 NTDa	46 † U003 Na/cre	58 † D059 TOTNDF	48 † Q111 dFEV1adj
-33 * M022 ALLCAb	-27 M114 LOWBTHWTa	26 U004 Ca/cre	74 † D067 GLUTAMINE	49 † Q112 dFVCadj
-50 † M025 NASOPCAc	-33 * M117 NEOTETANa	41 † U005 P/cre	42 † D074 METH+CYS	33 * Q113 dMMEFadj
37 * M027 OESOPHCAc	-37 * M118 MALNUTRIa	48 † U012 VOLURINE	30 D078 THREONINE	-41 † Q117 dDIARRH
26 M028 STOMCAc	-50 † M119 DROWNa	47 † U014 VOLURmn	-57 † D082 MUFA	-26 Q149 dALCEVER
-29 M030 LIVERCAb	-27 P004 APOA1	-38 * U023 NO3mn	-44 † D084 SATFA	-26 Q156 dALCOday
38 * M038 CERVIXCAc	38 * P006 ALBUMIN	-43 † D002 TOTFAT	-32 * D085 CHOL	-75 † Q157 dRICE
-34 * M043 ENDOCRINb	-32 * P007 TOTPROT	55 † D003 TOTPROT	-72 † D087 %MUFA	76 † Q158 dWHEAT
34 * M045 DIABETESc	30 P011 Z-CAROT	-43 † D005 %FATKCAL	55 † D088 %PUFA	31 Q159 dMAIZE
-37 * M046 MALNUTRIb	26 P014 A-TOCOPH	54 † D006 %PROTKCAL	-25 D089 %SATFA	37 * Q161 dMILLET
-37 * M048 BLOODb	37 * P015 G-TOCOPH	65 † D008 %PLPRKCAL	43 † D090 P/S	-43 † Q164 dOILFAT
42 † M059 ALLVASCc	39 † P019 A-CRYPT	33 * D009 %CARBKCAL	-56 † D091 M/P	-47 † Q165 dSMOKFOOD
38 * M063 IHDc	32 * P022 PHYTOFLU	-33 * D014 VITC	-58 † D094 TOTn9	-28 Q166 dSALTFISH
40 † M065 STROKEc	25 P023 PHYTOENE	67 † D015 THIAMINE	46 † D095 %TOTn3	-25 Q167 dSALTFKID
35 * M067 VASC-STRc	-47 † P024 FOLATE	55 † D020 Cu	55 † D096 %TOTn6	-41 † Q168 dANIMFAT
-31 M073 DIGESTIVb	-24 P025 VITC	37 * D021 K	-73 † D097 %TOTn9	-64 † Q172 dGRNVEG
-29 M076 ENTCOLc	27 P035 TRANSFE	28 D022 Mg	-28 D141 %16:1	-27 Q205 eHRSWORK
-31 M078 CIRRHOSb	26 P037 BUN	36 * D023 Mn	-48 † D145 %18:0	-28 Q210 eTBIMM
-35 * M080 TOTLIVRb	-31 * P040 B2-MGLOB	39 * D026 SeCARRY	-74 † D146 %18:1	40 † Q243 fWTadj
-27 M081 TOTLIVRc	-36 * P041 TESTOSTm	58 † D033 PLNTPROT	55 † D147 %18:2	46 † Q247 fBMIadj
-29 M085 GENITURfc	-46 † P042 HBsAg	29 D035 %PLNTPROT	47 † D148 %18:3	60 † G001 LATITUDE
-25 M086 RENALc	26 R002 RIBOFDEF	-29 D036 %ANIMPROT	25 Q017 aPRIMARY	32 * G003 ELEVATION
-29 M089 ALLSKINc	43 † R003 SATFA	-76 † D037 RICE	37 * Q051 c%FLUSHWC	60 † G004 ARIDITY
-35 * M093 ACCIDENTb	-27 R008 P/S	73 † D038 WHTFLOUR	29 Q057 dCOALKID	-63 † G005 HEAT
-61 † M097 DROWNb	38 * R009 14:0	43 † D039 OTHCEREAL	29 Q064 dCOALNOW	
-39 * M098 DROWNc	43 † R010 16:0	-34 * D041 LEGUME	50 † Q090 dHEIGHT	
-31 M099 SUICIDEb	29 R011 18:0	-26 D043 GREENVEG	52 † Q091 dWEIGHT	

- Analysis by enzymatic rate method. Urea is hydrolysed by urease to ammonia, which condenses with α-ketoglutarate (in a condensing reaction catalysed by the reverse action of glutamate dehydrogenase), with concomitant oxidation of NADH to NAD. Analyser: Beckman Synchron CX4/5CE.
- Urine was collected only from males.
- Higher values in north, lowest in Taiwan, with wide range. Hence, general correlation with Northern dietary characteristics (e.g., wheat rather than rice, plant rather than animal foods, etc.).
- Strong correlation between xiangs (74%†); not measured in 1983.

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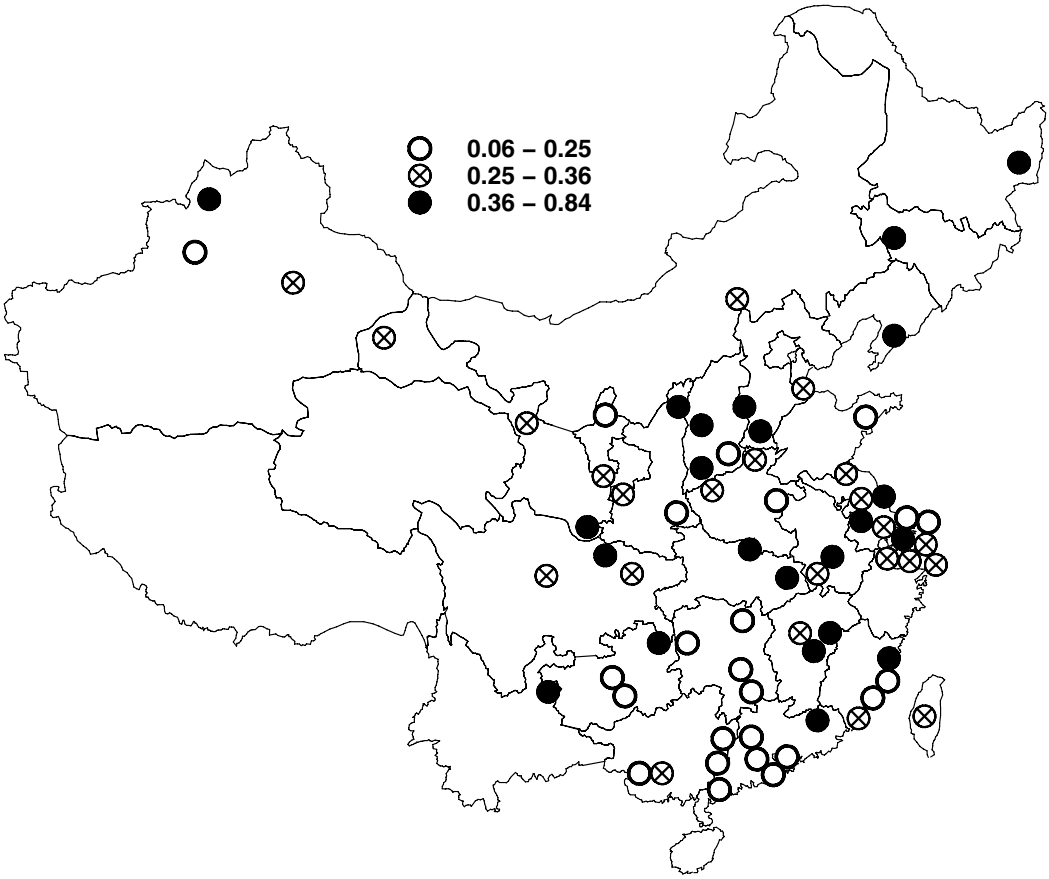
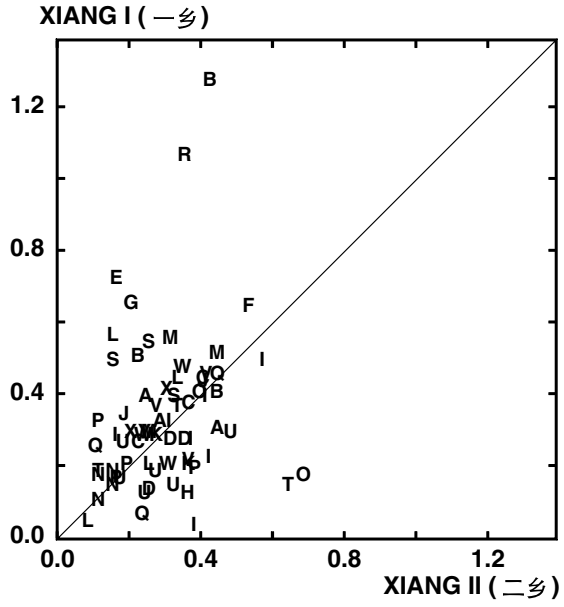
U007 URIC/cre – urine URIC ACID (mg/mg creatinine)





U007 URIC/cre – 尿：尿酸 (毫克/毫克肌酐)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	0.42	QA	0.14	AA	0.31	KC	0.28	ZA	0.38
CC	0.24	QB	0.44	AB	0.36	LA	0.35	ZB	0.24
CD	0.36	QC	0.17	AC	0.30	LB	0.22	ZC	0.30
DA	0.18	RA	0.70	BA	0.84	LC	0.38	ZD	0.27
DB	0.30	SA	0.32	BB	0.42	LD	0.06	ZE	0.74
DC	0.29	SB	0.39	BC	0.35	PA	0.15	ZF	0.23
FA	0.58	SC	0.35	EA	0.43	PC	0.21	ZG	0.42
GA	0.42	TA	0.14	HA	0.23	PD	0.28	ZH	0.53
JA	0.41	TC	0.39	IA	0.32	PE	0.19	ZI	0.27
JB	0.26	TD	0.34	IB	0.31	UA	0.22	ZJ	0.14
MB	0.43	VA	0.31	IC	0.53	UB	0.23	ZK	0.26
MC	0.47	VB	0.28	ID	0.40	UC	0.21	ZL	0.20
MD	0.27	VC	0.42	IE	0.20	UD	0.16	ZM	0.40
NA	0.10	WA	0.40	IF	0.22	UE	0.17	ZN	0.20
NB	0.14	WB	0.24	IG	0.32	UF	0.38	ZO	0.39
NC	0.14	WC	0.25	KB	0.27			ZP	0.45
ND	0.16	XA	0.24						
OA	0.39	XB	0.35						
OB	0.42	YA	0.26						

Mean 平均值	Male (男)	Male (男)	Male (男)
	0.32	0.30	0.34

(a)	(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs Xiang (乡) II	69	0.32	0.21	0.30	0.13	20	1.6	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

32 *	M005 ALL35-69	-28	P029 INORG-P	28	U014 VOLURmn	38 *	D033 PLNTPROT	-28	Q019 dCANREAD
34 *	M008 MEDICALc	25	P032 Fe	-31	D002 TOTFAT	-39 †	D034 ANIMPROT	31 *	Q057 dCOALKID
-29	M016 PULMTBc	-38 *	P041 TESTOSTm	29	D004 SOLCARB	43 †	D035 %PLNTPROT	-27	Q117 dDIARRH
34 *	M023 ALLCAc	27	R009 14:0	-38 *	D005 %FATKCAL	-43 †	D036 %ANIMPROT	-26	Q155 dLIQRday
-36 *	M025 NASOPCAc	27	R011 18:0	-40 †	D007 %ANPRKCAL	41 †	D039 OTHCEREAL	-26	Q156 dALCOday
26	M027 OESOPHCAc	-30	R014 24:0	35 *	D008 %PLPRKCAL	-38 *	D049 MEAT	-25	Q157 dRICE
30	M028 STOMCAc	-27	R021 20:5n3	38 *	D009 %CARBKCAL	-35 *	D050 REDMEAT	43 †	Q159 dMAIZE
-25	M046 MALNUTRIb	47 †	U001 Cl/cre	-27	D010 RETINOL	-31	D051 POULTRY	-27	Q166 dSALTFISH
27	M064 STROKEb	33 *	U002 K/cre	29	D015 THIAMINE	-31	D052 FISH	-28	Q167 dSALTFKID
-30	M073 DIGESTIVb	52 †	U003 Na/cre	24	D020 Cu	37 *	D059 TOTNDF	-30	Q174 dFISH
-29	M078 CIRRHOSb	36 *	U004 Ca/cre	38 *	D021 K	-24	D072 LYSINE	-27	Q175 dMEAT
-25	M118 MALNUTRIa	43 †	U005 P/cre	33 *	D022 Mg	-33 *	D082 MUFA	35 *	G001 LATITUDE
24	P006 ALBUMIN	-37 *	U008 CREAT	29	D028 PLNTFOOD	-30	D084 SATFA	-28	G005 HEAT
-32 *	P007 TOTPROT	-27	U009 TAUR/cre	-33 *	D029 ANIMFOOD	-36 *	D085 CHOL		
24	P011 Z-CAROT	30	U011 COT/cre	35 *	D031 %PLNTFOOD	-32 *	D094 TOTn9		
34 *	P017 LUTEIN	25	U012 VOLURINE	-35 *	D032 %ANIMFOOD	-36 *	D141 %16:1		

- Analysis of uric acid is by bichromatic analysis, using uricase and peroxidase to produce an absorbance increase proportional to the uric acid content of the sample. Analyser: IL Monarch Chemistry System.
- Urine was collected only from males.
- No consistent geographic pattern.
- Weak correlation between xiangs.

- 采用双色方法测定，尿素酶和过氧化酶可以使样品的吸光度增加，增加量与样品中的尿酸含量成比例。仪器：IL Monarch Chemistry System。
- 仅收集男性受试者的尿样。
- 无明确的地理分布模式。
- 两乡之间仅有弱相关性。

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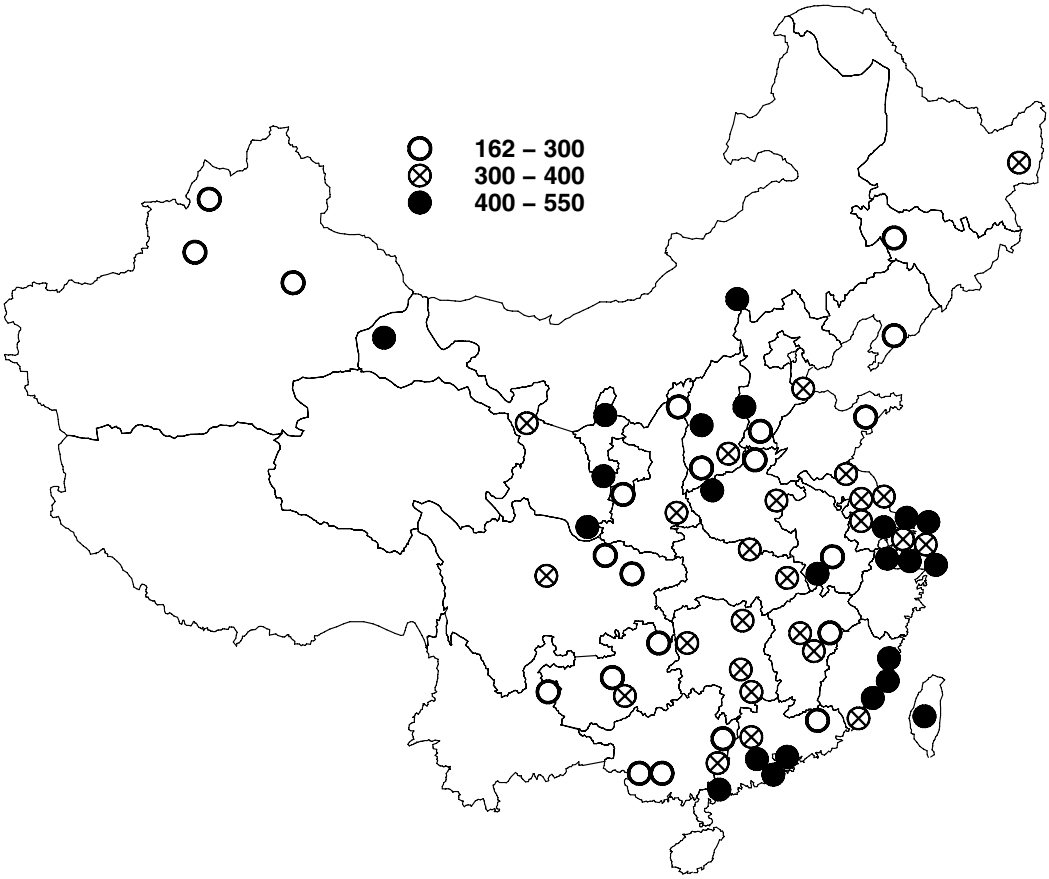
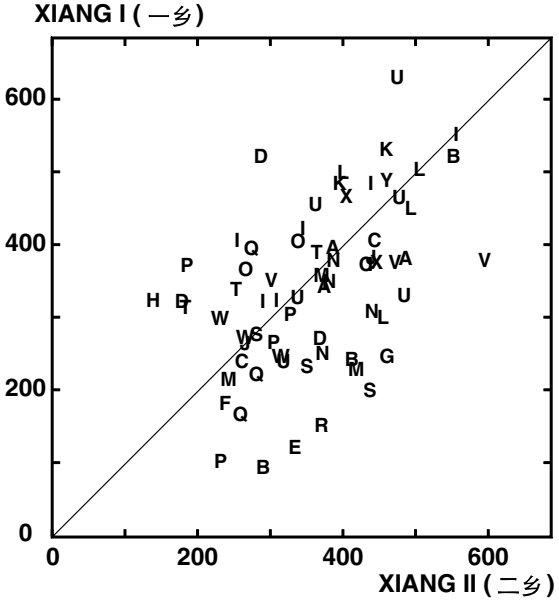
methods: pages 10-11

实验室测定表述格式: 第 332-333 页

方法: 第 10-11 页

U008 CREAT – urine CREATININE (mg excreted in 12 hours)





U008 CREAT – 尿：肌酐 (毫克 12小时排出量)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	245	QA	246	AA	353	KC	435	ZA	463
CC	397	QB	207	AB	386	LA	373	ZB	675
CD	420	QC	329	AC	428	LB	467	ZC	585
DA	315	RA	256	BA	187	LC	500	ZD	600
DB	245	SA	313	BB	532	LD	445	ZE	269
DC	400	SB	287	BC	322	PA	281	ZF	575
FA	205	SC	274	EA	223	PC	162	ZG	555
GA	349	TA	372	HA	227	PD	274	ZH	416
JA	260	TC	244	IA	326	PE	311	ZI	550
JB	406	TD	291	IB	380	UA	328	ZJ	570
MB	318	VA	321	IC	302	UB	404	ZK	559
MC	224	VB	418	ID	312	UC	403	ZL	531
MD	359	VC	482	IE	401	UD	467	ZM	327
NA	378	WA	263	IF	550	UE	548	ZN	635
NB	360	WB	258	IG	457	UF	275	ZO	456
NC	307	WC	274	KB	490			ZP	299
ND	369	XA	431						
OA	366	XB	406						
OB	311	YA	470						

Mean 平均值	Male (男)	Male (男)	Male (男)
	325	372	504

(a)	(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs Xiang (乡) II	69	334	113	359	99	48	4.4	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-32 *	M003 ALL15-34	-35 *	M054 MENINGITb	-24	P022 PHYTOFLU	-26	D009 %CARBKCAL	31 *	D141 %16:1
-25	M004 ALL0-34	-45 †	M058 ALLVASCb	28	P037 BUN	25	D013 VITE	-26	Q017 aPRIMARY
-31	M007 MEDICALb	-41 †	M060 RHEUMHDb	30	R014 24:0	28	D029 ANIMFOOD	44 †	Q031 aINCOME
-35 *	M011 INFECTb	-45 †	M064 STROKEb	52 †	R021 20:5n3	-30	D031 %PLNTFOOD	24	Q052 c%TOILET
-42 †	M015 PULMTBb	-37 *	M066 VASC-STRb	-31	R023 18:2n6	30	D032 %ANIMFOOD	33 *	Q111 dFEV1adj
-27	M017 OTHERTBb	-31	M068 ALLRESPb	-31 *	R025 20:3n6	41 †	D034 ANIMPROT	29	Q113 dMMEFadj
27	M019 VIRALHEPb	-29	M070 PNEUMONb	-24	U001 Cl/cre	-42 †	D035 %PLNTPROT	33 *	Q138 dCIGCONSm
24	M023 ALLCAc	-29	M073 DIGESTIVb	-37 *	U007 URIC/cre	42 †	D036 %ANIMPROT	-35 *	Q142 dTOBCONSm
32 *	M031 LIVERCAc	-25	M076 ENTCOLc	42 †	U009 TAUR/cre	-25	D039 OTHCEREAL	36 *	Q151 dBEERday
31	M032 PANCRSCAc	-27	M078 CIRRHOSb	25	U010 AFM1/cre	24	D051 POULTRY	-29	Q159 dMAIZE
35 *	M035 LUNGCAmc	29	M082 GALLBILc	-28	U011 COT/cre	47 †	D052 FISH	34 *	Q166 dSALTFISH
31	M036 LUNGCAfc	-27	M087 PREGBRTHb	56 †	U012 VOLURINE	-24	D053 ANIMFAT	36 *	Q167 dSALTFKID
34 *	M039 BRAINCAc	-28	M104 MATERNAL	56 †	U014 VOLURmn	24	D054 VEGOIL	-32 *	Q168 dANIMFAT
29	M040 LYMPHOMAc	-27	M108 RESPINFa	46 †	U023 NO3mn	29	D072 LYSINE	29	Q169 dVEGFAT
34 *	M045 DIABETESc	31	P001 TOTCHOL	35 *	U026 SUMNITa	30	D085 CHOL	40 †	Q174 dFISH
-26	M047 MALNUTRIc	25	P002 HDLCHOL	43 †	D007 %ANPRKCAL	26	D086 LYS/ARG	30	Q201 eDOCVIS
-34 *	M048 BLOODb	-28	P019 A-CRYPT	-25	D008 %PLPRKCAL	25	D092 TOTn3	24	Q217 eMEASLES

- Analysis by colourimetry, based on the reaction of creatinine with picric acid under alkaline conditions. Analyser: IL Monarch Chemistry System.
- Urine was collected only from males.
- No consistent geographic pattern.
- Moderately strong correlations with some measures of animal protein intake (e.g., 41%† D034: ANIMPROT).
- Correlation with 12-hour urinary volume (56%† U012: VOLURINE) may be, at least in part, a statistical artefact.

- 用比色法测定，原理是肌酐在碱性条件下可与苦味酸反应。仪器：IL Monarch Chemistry System。
- 仅收集男性受试者的尿样。
- 无明确的地理分布模式。
- 与某些动物蛋白摄入量指标呈中等强度相关（e.g., 41%† D034: ANIMPROT）。
- 与12小时尿量具有显著相关（56%† U012: VOLURINE），可能（至少部分）是一种统计学上的假性相关。

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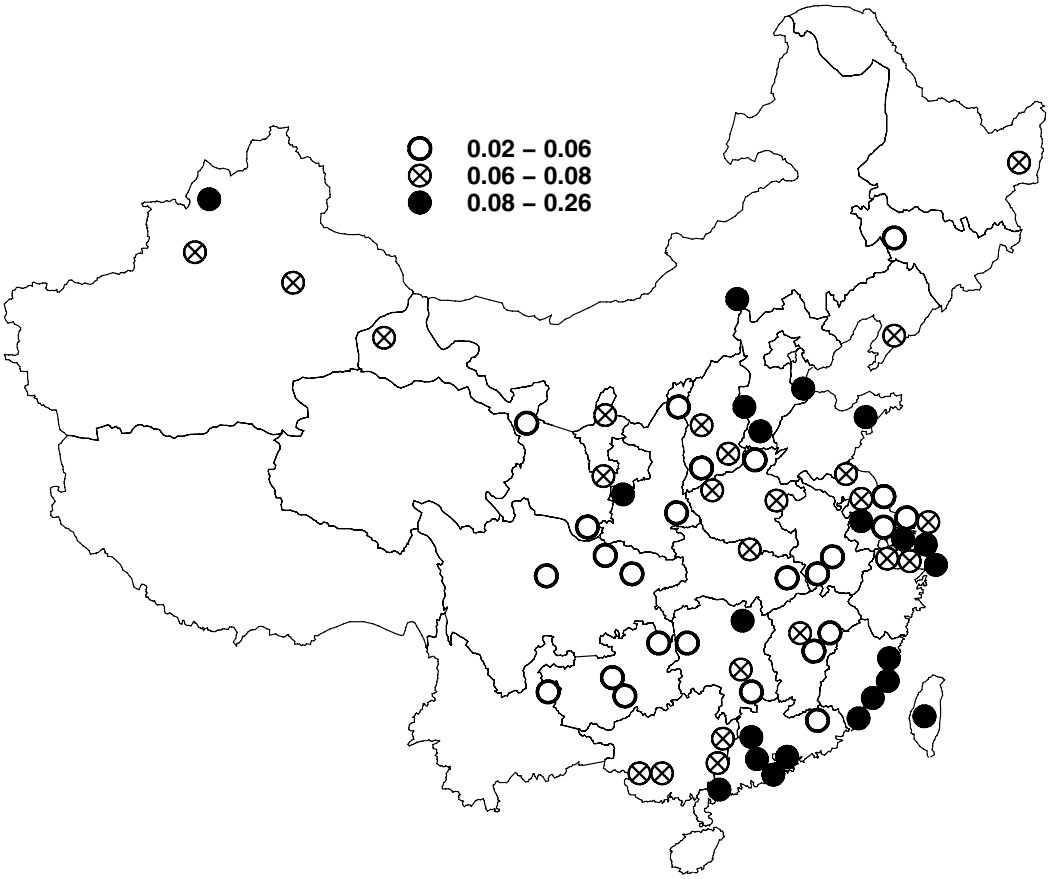
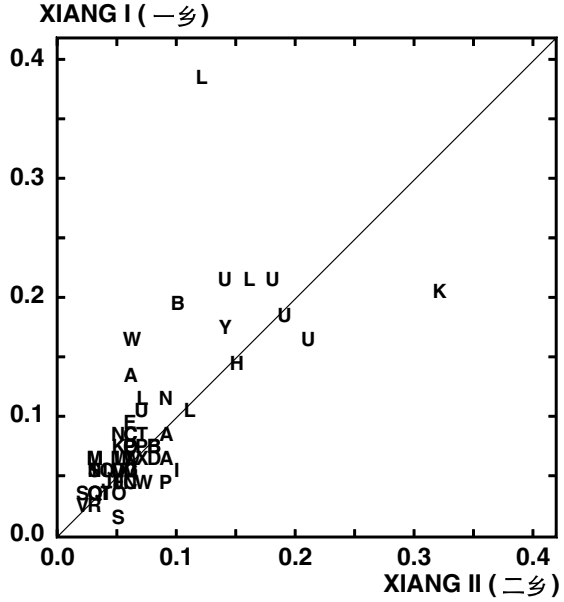
U009 TAUR/cre – urine TAURINE (mg/mg creatinine)





U009 TAUR/cre – 尿：牛磺酸 (毫克/毫克肌酐)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	0.05	QA	0.03	AA	0.09	KC	0.06	ZA	0.13
CC	0.07	QB	0.05	AB	0.10	LA	0.11	ZB	0.20
CD	0.07	QC	0.03	AC	0.07	LB	0.09	ZC	0.15
DA	0.07	RA	0.03	BA	0.08	LC	0.18	ZD	0.17
DB	0.05	SA	0.04	BB	0.08	LD	0.25	ZE	0.11
DC	0.06	SB	0.03	BC	0.15	PA	0.07	ZF	0.22
FA	0.05	SC	0.03	EA	0.07	PC	0.07	ZG	0.40
GA	0.06	TA	0.04	HA	0.15	PD	0.07	ZH	0.29
JA	0.05	TC	0.04	IA	0.06	PE	0.07	ZI	0.17
JB	0.04	TD	0.08	IB	0.06	UA	0.09	ZJ	0.23
MB	0.04	VA	0.05	IC	0.08	UB	0.18	ZK	0.15
MC	0.04	VB	0.06	ID	0.05	UC	0.18	ZL	0.18
MD	0.06	VC	0.02	IE	0.06	UD	0.18	ZM	0.18
NA	0.05	WA	0.11	IF	0.05	UE	0.20	ZN	0.15
NB	0.04	WB	0.06	IG	0.04	UF	0.05	ZO	0.12
NC	0.07	WC	0.06	KB	0.26			ZP	0.15
ND	0.10	XA	0.07						
OA	0.07	XB	0.06						
OB	0.04	YA	0.16						

Mean 平均值	Male (男) 0.05†	Male (男) 0.10†	Male (男) 0.19

(a)	(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs Xiang (乡) II	69	0.08	0.06	0.07	0.05	71	8.2	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-31	M003 ALL15-34	-41 †	M078 CIRRHOSb	70 †	R021 20:5n3	64 †	D032 %ANIMFOOD	24	Q019 dCANREAD
-27	M011 INFECTb	32 *	M081 TOTLIVRc	24	R022 22:6n3	-50 †	D033 PLNTPROT	46 †	Q031 aINCOME
-30	M014 INTESTINc	33 *	M082 GALLBILc	-35 *	R025 20:3n6	76 †	D034 ANIMPROT	31 *	Q050 c%H2OPIPE
-29	M015 PULMTBb	67 †	P001 TOTCHOL	-41 †	U001 Cl/cre	-78 †	D035 %PLNTPROT	29	Q051 c%FLUSHWC
29	M025 NASOPCAc	50 †	P002 HDLCHOL	-29	U002 K/cre	78 †	D036 %ANIMPROT	-32 *	Q068 dCOOKf
45 †	M031 LIVERCAc	54 †	P003 NONHDL	-39 †	U003 Na/cre	-24	D039 OTHCEREAL	27	Q093 dPEPULCER
48 †	M035 LUNGCAmc	32 *	P004 APOA1	-27	U007 URIC/cre	44 †	D049 MEAT	30	Q111 dFEV1adj
52 †	M036 LUNGCAfc	67 †	P005 APOB	42 †	U008 CREAT	42 †	D050 REDMEAT	47 †	Q113 dMMEFadj
26	M037 BREASTCAc	32 *	P013 RBP	-42 †	D001 KCAL	24	D051 POULTRY	24	Q117 dDIARRH
36 *	M039 BRAINCAc	-32 *	P015 G-TOCOPH	-56 †	D004 SOLCARB	74 †	D052 FISH	-24	Q130 dSMOKNOWm
29	M045 DIABETESc	-36 *	P017 LUTEIN	42 †	D005 %FATKCAL	-36 *	D057 ADDEDSALT	-29	Q133 dSMOKAGEf
-30	M053 NERVOUSc	-27	P023 PHYTOENE	43 †	D006 %PROTKCAL	-34 *	D059 TOTNDF	59 †	Q151 dBEERday
-26	M056 EPILEPSYb	53 †	P030 Se	82 †	D007 %ANPRKCAL	46 †	D072 LYSINE	-25	Q159 dMAIZE
-37 *	M058 ALLVASCb	27	P033 FERRITIN	-30	D008 %PLPRKCAL	26	D082 MUFA	25	Q163 dSWEETPOT
-33 *	M060 RHEUMHDb	40 †	P037 BUN	-53 †	D009 %CARBKCAL	26	D084 SATFA	66 †	Q166 dSALTFISH
-29	M061 RHEUMHDc	-31 *	P040 B2-MGLOB	44 †	D010 RETINOL	63 †	D085 CHOL	70 †	Q167 dSALTFKID
-27	M064 STROKEb	40 †	P041 TESTOSTm	-34 *	D019 Fe	62 †	D086 LYS/ARG	-26	Q171 dSALTVEG
-33 *	M066 VASC-STRb	26	R003 SATFA	-25	D020 Cu	-25	D088 %PUFA	39 †	Q173 dFRUIT
-35 *	M069 ALLRESPc	-33 *	R004 MUFA	-26	D021 K	-25	D090 P/S	82 †	Q174 dFISH
-28	M071 PNEUMONc	34 *	R006 TOTn3	-35 *	D022 Mg	25	D094 TOTn9	48 †	Q175 dMEAT
-32 *	M072 COPDc	-28	R009 14:0	-26	D023 Mn	-27	D096 %TOTn6	24	Q184 dBLACKTEA
-31	M073 DIGESTIVb	75 †	R014 24:0	32 *	D026 SeCARRY	27	D104 14:0	37 *	Q201 eDOCVIS
-25	M074 DIGESTIVc	-28	R016 18:1n9	-27	D027 Zn	27	D136 %14:0	-29	Q247 fBMIadj
-31	M075 PEPULCERc	-26	R017 20:1n9	-45 †	D028 PLNTFOOD	57 †	D141 %16:1	-31	G003 ELEVATION
-31 *	M076 ENTCOLc	-26	R018 22:1n9	59 †	D029 ANIMFOOD	-27	D147 %18:2	25	G005 HEAT
-28	M077 INTESTOBc	-28	R019 24:1n9	-64 †	D031 %PLNTFOOD	-28	Q017 aPRIMARY		

- Analysis of taurine by Beckman System 6300 High Performance Amino Acid Analyzer.
- Urine was collected only from males.
- Highest values along coast.
- Strong correlations with animal food consumption, particularly fish, in the 3-day dietary survey (78%† D036: %ANIMPROT, 74%† D052:FISH) and in the questionnaire about usual diet (48%† Q175: dMEAT, 82%† Q174: dFISH).
- Strong correlations with plasma lipids (67%† P001: TOTCHOL, 50%† P002: HDLCHOL, 54%† P003: NONHDL) and certain red blood cell fatty acids (eicosapentaenoic, 70%† R021: 20:5n3; lignoceric, 75%† R014: 24:0).
- No significant correlations with vascular mortality in middle age.

- 采用Beckman System 6300 高效氨基酸分析仪进行测定。
- 仅收集男性受试者的尿样。
- 沿海各省水平最高。
- 与3天膳食调查和询问调查关于通常膳食的问题中的动物性食物消费量，尤其是鱼消费量，具有很强的相关性（78%† D036: %ANIMPROT, 74%† D052:FISH；48%† Q175: dMEAT, 82%† Q174: dFISH）。
- 与血脂（67%† P001: TOTCHOL, 50%† P002: HDLCHOL, 54%† P003: NONHDL）和某些红细胞脂肪酸（二十碳五烯酸, 70%† R021: 20:5n3；二十烷酸, 75%† R014: 24:0）呈强相关。
- 与中年血管性疾病死亡率无显著相关性。

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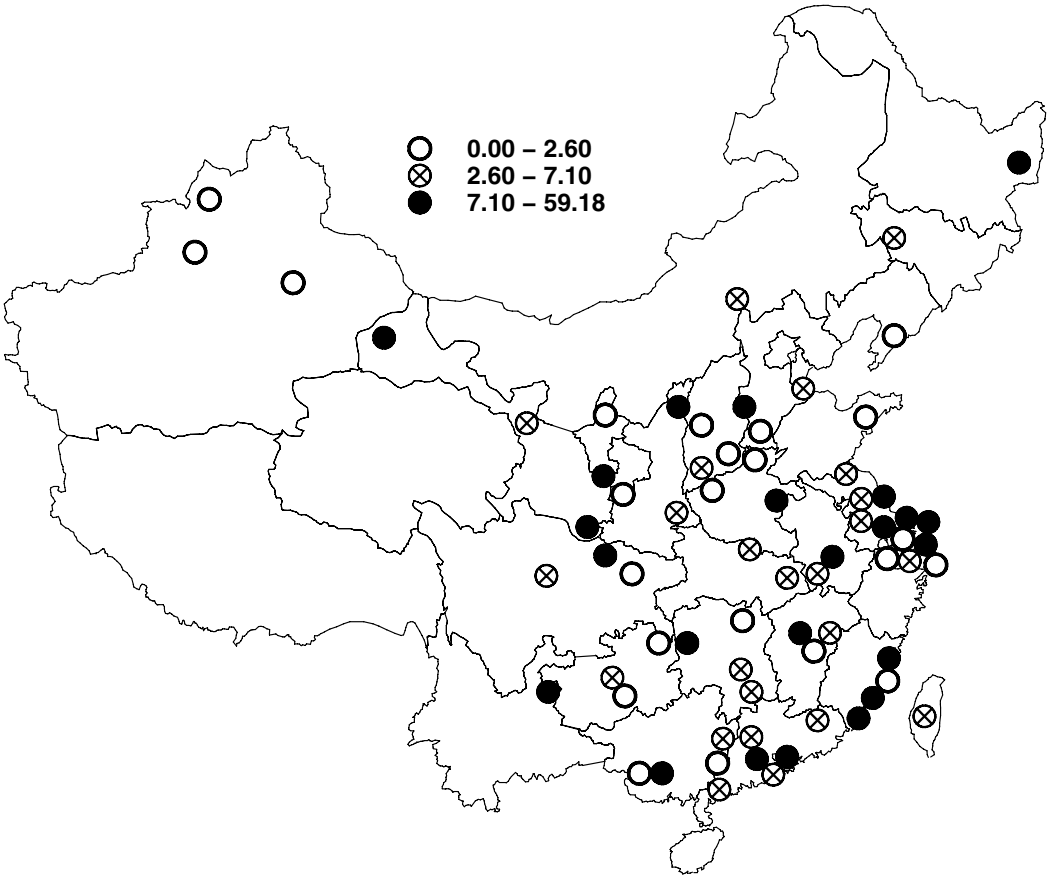
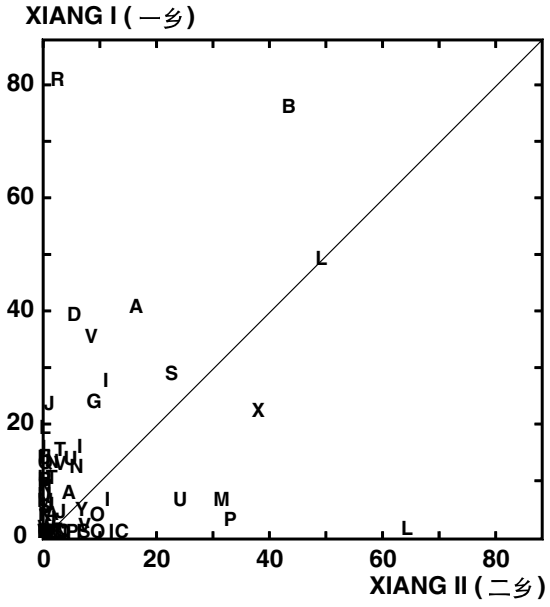
U010 AFM1/cre – urine AFLATOXIN M1 (pg/mg creatinine)





U010 AFM1/cre – 尿：黄曲霉毒素 M1 (微微克/毫克肌酐)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	6.78	QA	6.10	AA	27.92	KC	1.49	ZA	2.84
CC	1.19	QB	1.54	AB	2.15	LA	48.63	ZB	7.30
CD	0.00	QC	0.00	AC	5.50	LB	9.20	ZC	4.24
DA	21.78	RA	41.08	BA	0.97	LC	32.32	ZD	9.00
DB	0.00	SA	3.44	BB	59.18	LD	2.25	ZE	8.20
DC	0.00	SB	25.21	BC	4.60	PA	4.16	ZF	2.37
FA	6.67	SC	2.23	EA	0.00	PC	0.00	ZG	0.71
GA	15.84	TA	5.39	HA	0.00	PD	17.54	ZH	18.23
JA	11.71	TC	8.60	IA	6.00	PE	2.46	ZI	4.68
JB	3.16	TD	0.00	IB	6.85	UA	4.79	ZJ	6.83
MB	0.00	VA	4.04	IC	3.13	UB	14.88	ZK	0.00
MC	2.75	VB	7.35	ID	18.88	UC	6.53	ZL	11.35
MD	18.41	VC	21.31	IE	10.74	UD	3.29	ZM	0.00
NA	3.96	WA	0.00	IF	8.47	UE	8.78	ZN	3.07
NB	8.57	WB	0.00	IG	7.45	UF	2.72	ZO	2.85
NC	6.83	WC	0.38	KB	0.00			ZP	1.61
ND	1.43	XA	0.00						
OA	4.63	XB	29.56						
OB	6.13	YA	5.26						

Mean 平均值	Male (男)	Male (男)	Male (男)
	7.40	10.35	5.20

(a)	(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs Xiang (乡) II	68	10.33	16.03	7.19	12.78	34	3.0	*

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

31 *	M090 MUSCSKELc	38 *	U012 VOLURINE	-29	D024 TOTNa	-26	Q102 dPHLEGMw	27	Q220 eFULLIMM		
32	M099 SUICIDEb	36 *	U014 VOLURmn	-24	D025 Na	25	Q210 eTBIMM				
48 †	P008 A-CAROT	-25	D012 VITA	-26	D057 ADDEDSALT	27	Q213 eDPT3rd				
25	U008 CREAT	-27	D018 Ca	-28	Q021 eCANREAD	28	Q216 ePOLIO3				

- Analysis by affinity chromatography and HPLC with fluorescent detection (Cheng, Z, et al. Cancer Epidemiol Biomarkers Prev 6:523, 1997).
- Urine was collected only from males.
- Present in a few areas, but absent or extremely low in most.
- Aflatoxin M1 is a metabolite of aflatoxin, which can be produced by fungal contamination of stored carbohydrate foodstuffs, such as maize. It may well be one of the key determinants of primary liver cancer in China and a number of other countries. In areas where aflatoxin contamination is significant, however, it occurs only sporadically, so a single urinary measurement is unlikely to represent exposure accurately.
- No significant association with liver cancer mortality, possibly because the survey does not provide an accurate picture of the geographic variation in long-term aflatoxin exposure.

- 通过亲和色谱法和HPLC方法测定（荧光检测）（Cheng, Z, et al. Cancer Epidemiol Biomarkers Prev 6:523, 1997）。
- 仅收集男性受试者的尿样。
- 仅有几个地区的数据，但是大部分地区的数据缺乏或者极低。
- 黄曲霉毒素M1是一种黄曲霉毒素代谢物，而黄曲霉毒素是储存的碳水化合物性食物（如玉米）被真菌污染而产生的。它很可能是中国以及其它许多国家原发性肝癌的主要影响因素之一。但是在黄曲霉毒素污染明显的地区，黄曲霉毒素M1仅为散发，因此仅仅测定一次尿液中的黄曲霉毒素M1含量不可能确切反应暴露水平。
- 与肝癌死亡率无明显关系，可能是因为本次调查并未提供黄曲霉毒素长期暴露的地理性差异的确切情况。

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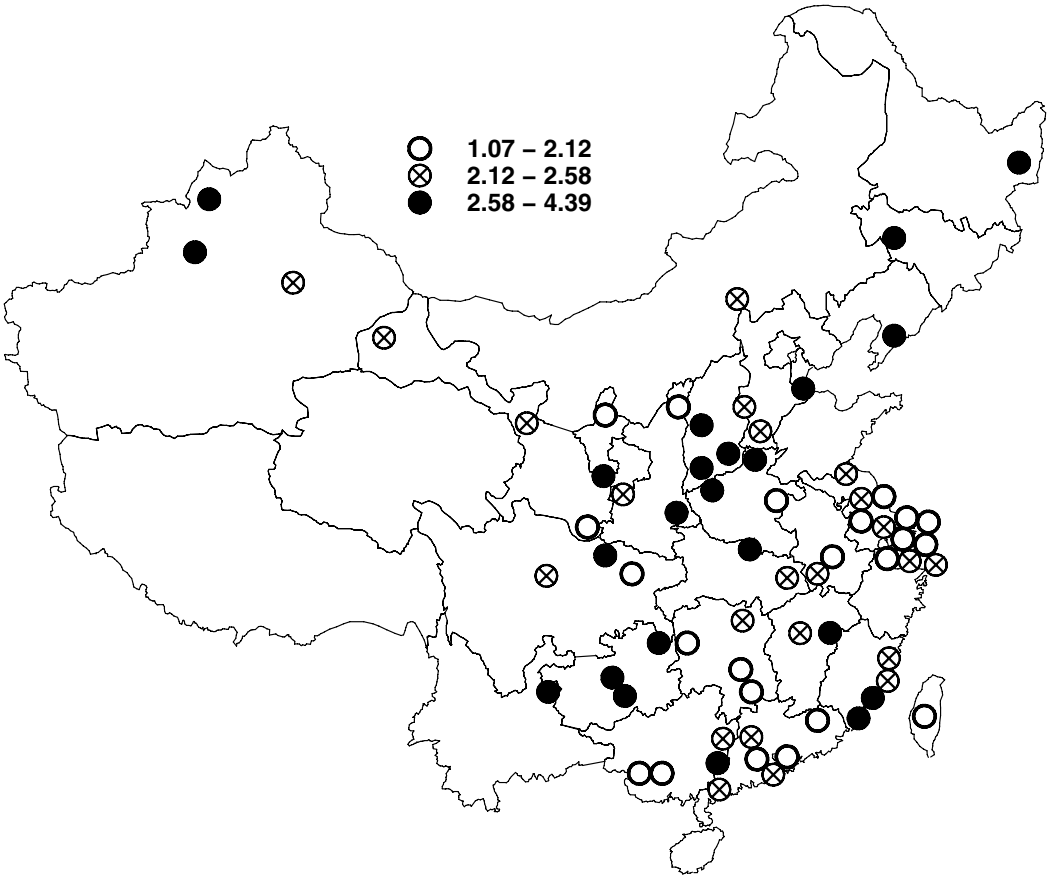
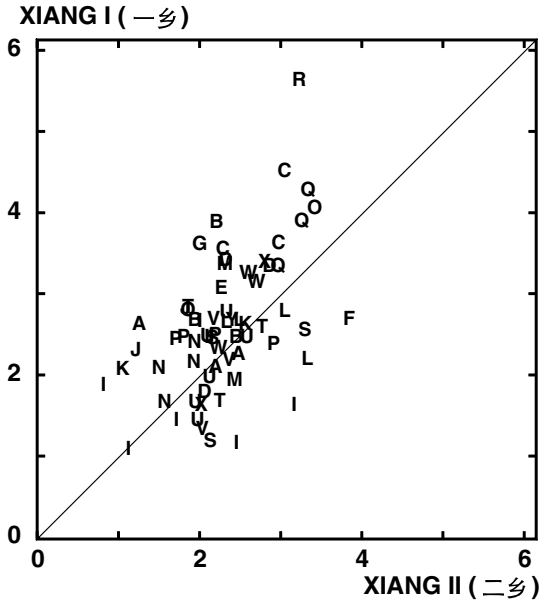
U011 COT/cre – urine COTININE (μg/mg creatinine)





U011 COT/cre – 尿：可的宁 (微克/毫克肌酐)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	3.74	QA	3.11	AA	2.10	KC	1.52	ZA	1.46
CC	2.88	QB	3.77	AB	1.90	LA	2.72	ZB	1.28
CD	3.26	QC	3.53	AC	2.33	LB	2.88	ZC	1.35
DA	1.89	RA	4.39	BA	2.42	LC	2.45	ZD	1.93
DB	3.06	SA	2.27	BB	2.27	LD	2.54	ZE	2.14
DC	2.83	SB	2.89	BC	3.00	PA	2.31	ZF	1.44
FA	3.23	SC	1.62	EA	2.63	PC	2.04	ZG	1.72
GA	2.77	TA	2.64	HA		PD	2.10	ZH	1.78
JA	1.72	TC	1.93	IA	2.37	PE	2.61	ZI	1.32
JB	2.28	TD	2.31	IB	2.30	UA	2.48	ZJ	1.01
MB		VA	2.23	IC	1.78	UB	2.01	ZK	1.94
MC	2.79	VB	2.39	ID	1.54	UC	2.25	ZL	1.76
MD	2.14	VC	1.64	IE	1.31	UD	2.52	ZM	1.40
NA	1.58	WA	2.87	IF	1.07	UE	1.77	ZN	0.96
NB	2.00	WB	2.88	IG	2.25	UF	1.67	ZO	2.20
NC	1.75	WC	2.23	KB	2.56			ZP	1.48
ND	2.13	XA	1.79						
OA	3.69	XB	3.06						
OB	2.29	YA	2.50						

Mean 平均值	Male (男)	Male (男)	Male (男)
	2.59*	2.19*	1.57

(a)	(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs Xiang (乡) II	67	2.54	0.85	2.29	0.61	50	4.6	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

27	M002 ALL5-14	29	M061 RHEUMHDc	-29	P044 HPYLORI	27	D033 PLNTPROT	37 *	Q064 dCOALNOW
37 *	M003 ALL15-34	44 †	M066 VASC-STRb	45 †	P045 COTININEm	-35 *	D037 RICE	-25	Q067 dCOOKm
25	M004 ALL0-34	34 *	M068 ALLRESPb	26	P047 COTIN>20m	35 *	D039 OTHCEREAL	24	Q068 dCOOKf
25	M007 MEDICALb	32 *	M070 PNEUMONb	28	R011 18:0	26	D040 STCHTUBER	32 *	Q130 dSMOKNOWm
31	M011 INFECTb	32 *	M071 PNEUMONc	28	R015 16:1n7	-36 *	D043 GREENVEG	44 †	Q134 dSMOK<25m
26	M013 INTESTINb	31	M076 ENTCOLc	-32 *	R018 22:1n9	-27	D046 NUTS	49 †	Q142 dTOBCONSm
30	M014 INTESTINc	27	M077 INTESTOBc	26	R022 22:6n3	-24	D048 EGGS	-36 *	Q157 dRICE
28	M015 PULMTBb	33	M094 ACCIDENTc	30	U001 Cl/cre	-26	D051 POULTRY	40 †	Q159 dMAIZE
28	M017 OTHERTBb	-27	M097 DROWNb	28	U003 Na/cre	-26	D052 FISH	-28	Q164 dOILFAT
28	M018 OTHERTBc	37 *	M101 HOMICIDEb	30	U007 URIC/cre	-27	D054 VEGOIL	-33 *	Q169 dVEGFAT
-27	M021 SCHISTOc	-30	M107 NONMEDa	-28	U008 CREAT	-26	D055 ADDEDFAT	-29	Q172 dGRNVEG
-25	M029 COLRECCAc	30	M108 RESPINFa	-30	D002 TOTFAT	33 *	D059 TOTNDF	-25	Q176 dEGGS
-32 *	M031 LIVERCAc	25	M109 ALLGIa	-30	D005 %FATKCAL	-27	D082 MUFA	36 *	Q192 dLIVEBRTH
-34 *	M032 PANCRSCAc	-50 †	M119 DROWNa	31	D008 %PLPRKCAL	-26	D083 PUFA	-30	Q201 eDOCVIS
28	M034 LARYNXCAc	-32 *	P002 HDLCHOL	27	D009 %CARBKCAL	-25	D085 CHOL	-26	Q213 eDPT3rd
-31	M040 LYMPHOMAc	-30	P004 APOA1	27	D015 THIAMINE	-27	D092 TOTn3	-26	Q216 ePOLIO3
-31	M042 LEUKEMIAc	25	P019 A-CRYPT	-28	D017 NIACIN	-26	D093 TOTn6	-25	Q220 eFULLIMM
28	M047 MALNUTRIc	29	P022 PHYTOFLU	24	D020 Cu	-27	D094 TOTn9	27	Q247 fBMIadj
46 †	M058 ALLVASCb	-26	P024 FOLATE	39 *	D021 K	-29	Q031 aINCOME	34 *	G003 ELEVATION
39 *	M060 RHEUMHDb	-28	P031 Zn	25	D022 Mg	48 †	Q057 dCOALKID		

- Analysis of cotinine by Dr. Judith Fitzpatrick, using Serex, Inc., Cot-Traq Quantitative Cotinine ELISA kit.
- Urine was collected only from males.
- No consistent geographic pattern.
- Cotinine is a breakdown product of nicotine that is found in the plasma and urine of smokers.
- Correlated, among males, with smoking variables (44%† Q134:dSMOK<25m, 49%† Q142:dTOBCONSm) and with plasma cotinine (45%† P045: COTININEm).

- 可的宁由Judith Fitzpatrick博士采用Serex公司Cot-Traq定量可的宁ELISA试剂盒进行测定。
- 仅收集男性受试者的尿样。
- 无明确的地理分布模式。
- 可的宁是吸烟者血浆和尿液中尼古丁的分解产物。
- 与男性吸烟指标以及血浆可的宁含量具有相关性（44%† Q134:dSMOK<25m，49%† Q142:dTOBCONSm，45%† P045: COTININEm）。

LABORATORY MEASUREMENTS display format: pages 332-333

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实验室测定表述格式: 第 332-333 页

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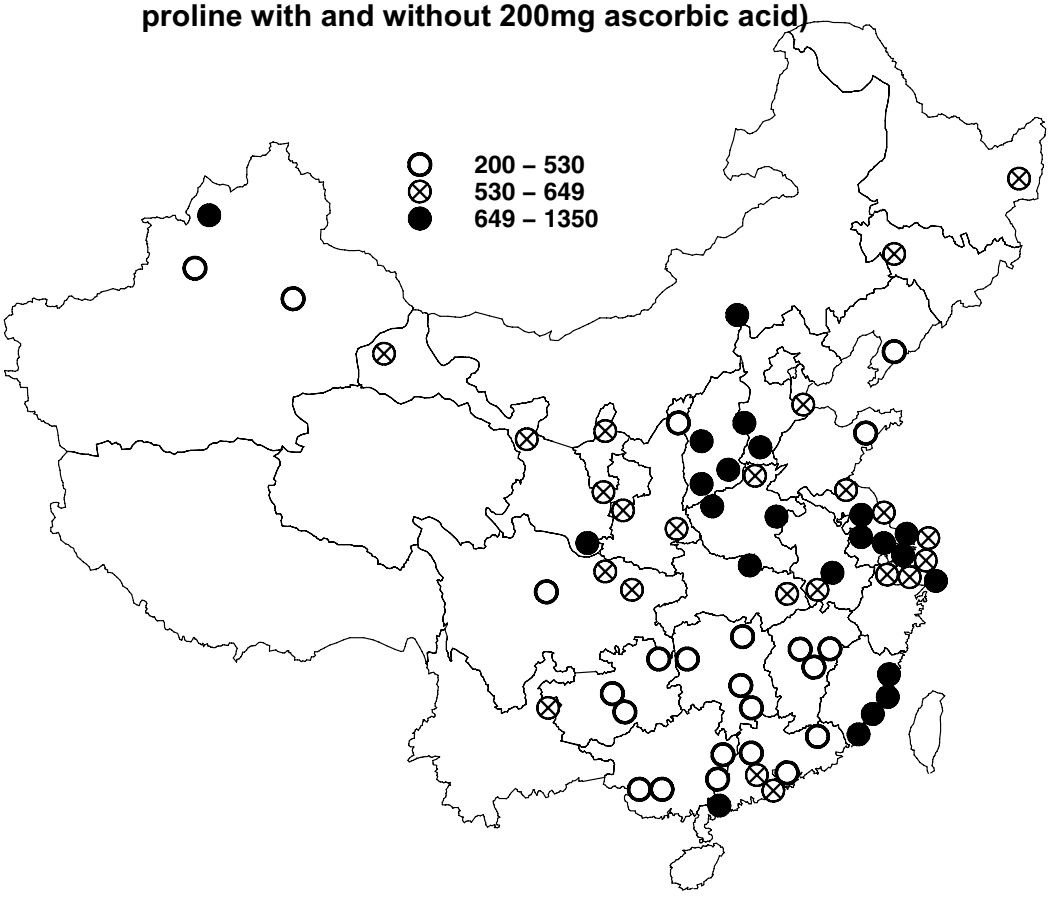
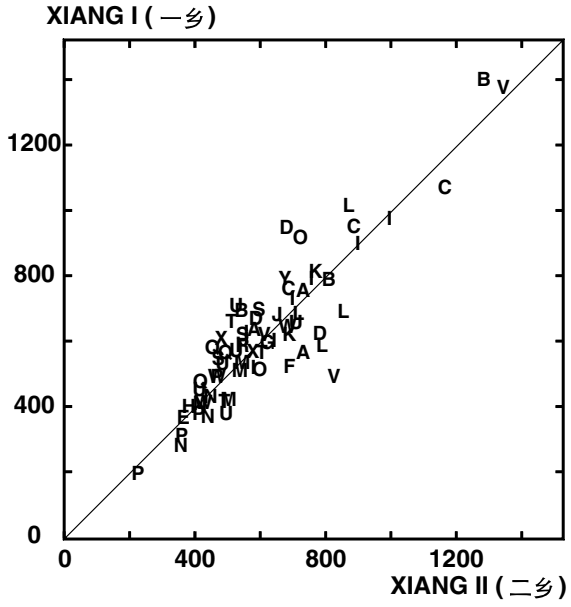
U014 VOLURmn – nitrosamine study MEAN URINE VOLUME (ml excreted in 12 hours) (Mean of amounts excreted after ingesting 500mg L-proline with and without 200mg ascorbic acid)





U014 VOLURmn – 亚硝胺研究：平均尿量 (毫升, 12小时排出量) (口服500毫克脯氨酸和加与不加200毫克维生素C后排出的平均值)

Inland Provinces (内地)						Coastal Provinces (沿海)			
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	713	ND	394	WA	650	AA	597	KC	644
CC	907	OA	808	WB	467	AB	731	LA	690
CD	1106	OB	544	WC	405	AC	637	LB	762
DA	692	QA	435	XA	533	BA	788	LC	931
DB	617	QB	517	XB	562	BB	1331	LD	676
DC	804	QC	505	YA	724	BC	607	PA	325
FA	595	RA	554			EA	355	PC	200
GA	598	SA	498			HA	381	PD	470
JA	656	SB	635			IA	583	PE	385
JB	566	SC	572			IB	890	UA	422
MB	451	TA	574			IC	705	UB	499
MC	528	TC	442			ID	539	UC	539
MD	513	TD	576			IE	613	UD	673
NA	307	VA	605			IF	765	UE	607
NB	429	VB	648			IG	976	UF	426
NC	401	VC	1350			KB	781		

Mean 平均值	Male (男)	Male (男)
	602	630

(a)	(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs Xiang (乡) II	69	611	221	617	206	89	16.3	†

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001
Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-46 † M001 ALL0-4	-32 * M068 ALLRESPb	25 P035 TRANSFE	27 D009 %CARBKCAL	-33 * D145 %18:0
-39 * M002 ALL5-14	-31 M070 PNEUMONb	-27 P040 B2-MGLOB	33 * D015 THIAMINE	-40 † D146 %18:1
-26 M003 ALL15-34	-43 † M073 DIGESTIVb	25 R003 SATFA	36 * D020 Cu	33 * D147 %18:2
-42 † M004 ALL0-34	-26 M074 DIGESTIVc	-30 R005 TOTn6	-30 D037 RICE	28 D148 %18:3
-42 † M007 MEDICALb	-28 M076 ENTCOLc	-25 R007 PUFA	26 D038 WHTFLOUR	-34 * Q007 dHHSIZE
-36 * M011 INFECTb	-41 † M078 CIRRHOSb	-30 R008 P/S	-31 * D049 MEAT	-24 Q019 dCANREAD
-35 * M012 INFECTc	-25 M079 CIRRHOSc	25 R010 16:0	-32 * D050 REDMEAT	-28 Q067 dCOOKm
-38 * M016 PULMTBc	-25 M080 TOTLIVRb	-26 R025 20:3n6	-27 D053 ANIMFAT	41 † Q090 dHEIGHT
46 † M023 ALLCAc	-44 † M103 INFANT	-27 R026 20:4n6	36 * D059 TOTNDF	33 * Q091 dWEIGHT
-32 * M025 NASOPCAc	-46 † M105 ALLCUMa	43 † U001 Cl/cre	26 D067 GLUTAMINE	38 * Q111 dFEV1adj
40 † M027 OESOPHCAc	-44 † M106 MEDICALa	37 * U002 K/cre	-38 * D082 MUFA	26 Q112 dFVCadj
39 * M028 STOMCAc	-32 * M108 RESPINFa	43 † U003 Na/cre	-37 * D084 SATFA	29 Q113 dMMEFadj
41 † M038 CERVIXCAc	-36 * M109 ALLGIa	47 † U006 UREA/cre	-38 * D087 %MUFA	-31 * Q157 dRICE
-36 * M043 ENDOCRINb	-33 * M113 PERINATa	28 U007 URIC/cre	34 * D088 %PUFA	32 * Q158 dWHEAT
36 * M045 DIABETESc	-28 M114 LOWBTHWTa	56 † U008 CREAT	31 * D090 P/S	-49 † Q165 dSMOKFOOD
-35 * M046 MALNUTRIb	-25 M116 RDSa	36 * U010 AFM1/cre	-33 * D091 M/P	-27 Q168 dANIMFAT
-43 † M048 BLOODb	-27 M117 NEOTETANa	99 † U012 VOLURINE	-39 * D094 TOTn9	-33 * Q172 dGRNVEG
-29 M054 MENINGITb	-35 * M118 MALNUTRIa	-31 * D002 TOTFAT	30 D095 %TOTn3	-28 Q192 dLIVEBRTH
-27 M060 RHEUMHDb	39 * P006 ALBUMIN	-31 * D005 %FATKCAL	34 * D096 %TOTn6	25 G001 LATITUDE
-26 M061 RHEUMHDc	-27 P024 FOLATE	27 D008 %PLPRKCAL	-38 * D097 %TOTn9	-30 G005 HEAT

- Urine was collected only from males.
- Higher values on the coast and in the north.
- Men were asked to provide a 12-hour collection of urine; these are the volumes produced. A large volume of urine is negatively correlated with the creatinine concentration, but is positively correlated with the 12-hour outputs of creatinine (calculated as volume X concentration). It is also positively correlated with various urinary measurements, expressed as ratios to the creatinine concentration.

- 仅收集男性受试者的尿样。
- 沿海和北方各省的水平较高。
- 要求男性受试者收集12小时尿样，这些是他们排出的尿量。大量的尿样体积与肌酐浓度呈负相关，但与12小时肌酐总量（尿样体积×肌酐浓度）呈正相关。还与许多以肌酐浓度比值表示的尿液指标呈正相关。

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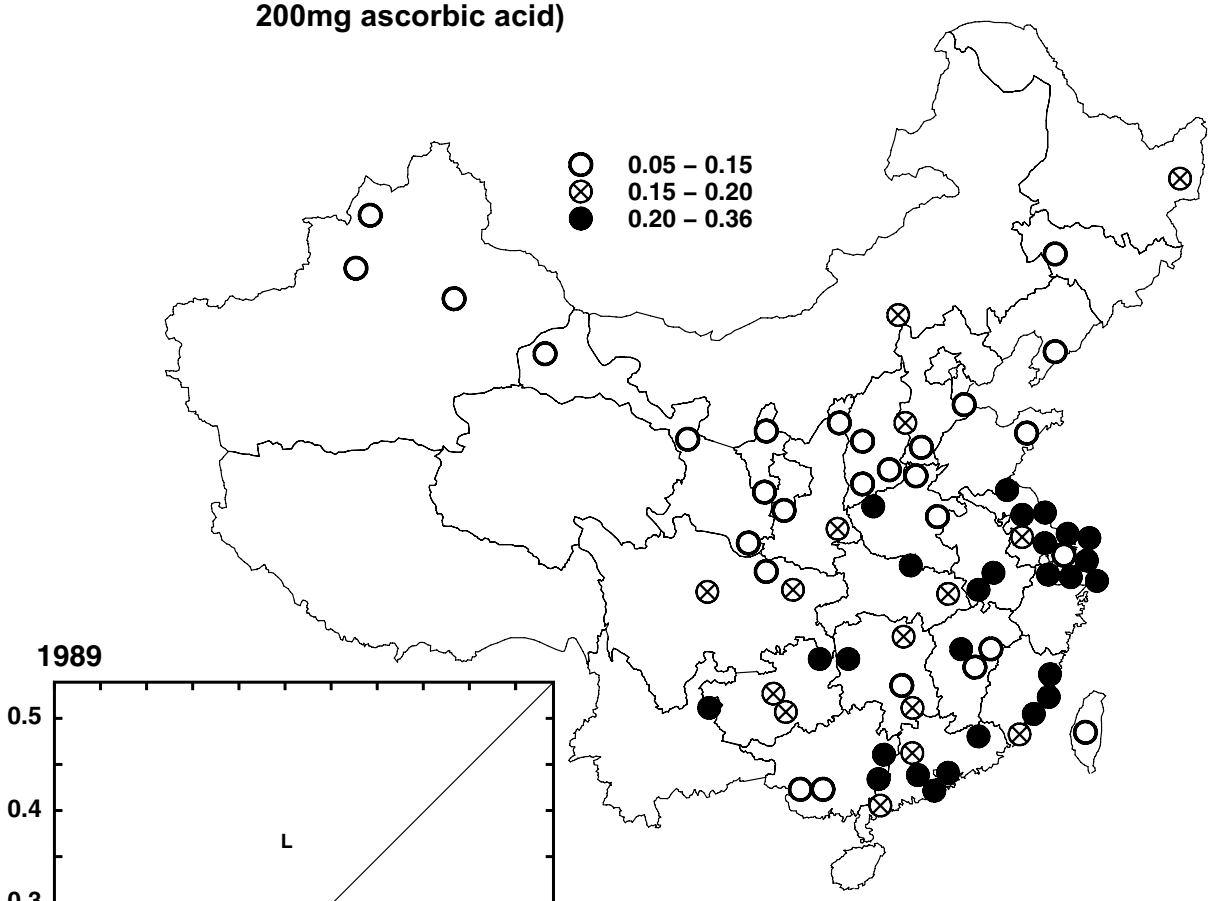
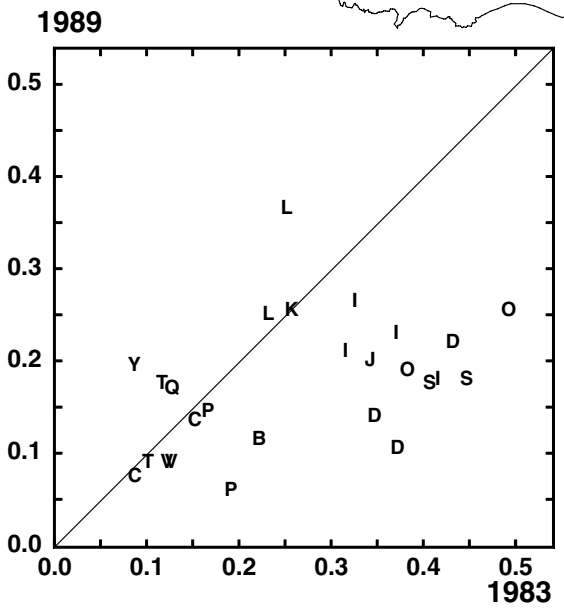
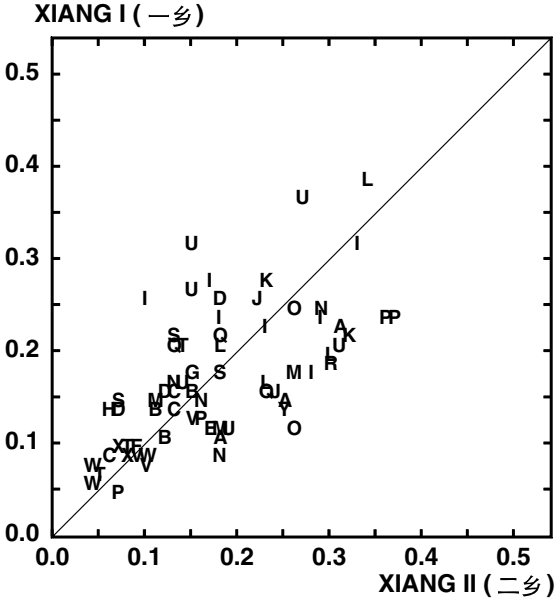
U023 NO3mn – nitrosamine study NITRATE (g excreted in 12 hours) (Mean of amounts excreted after ingesting 500mg L-proline with and without 200mg ascorbic acid)





- 由Helmut Bartsch博士利用气相色谱偶联热能分析仪（GC-TEA）测定N-亚硝基脯氨酸及三种其它N亚硝基氨基酸（NNAs）。在7.5 ml尿样（用NaOH使之稳定）中加入N-亚硝基哌可酸作为内标，用1.5 ml 20%的硫酸铵溶液（溶于1.8 mol/l的硫酸中）进行酸化，并用20 mL的10％甲醇（溶于二氯甲烷中，2.5g 氯化钠）提取3次。合并提取液并用无水硫酸钠吸去水分，在旋转蒸发仪上（30℃）挥去溶剂，在2 ml乙醚和过量重氨甲烷中衍生，形成甲基乙醚形式的NAAs。将该溶液浓缩至0.1 ml，吸取10µl 用GC-TEA测定（Wu et al. International Journal of Cancer 54: 713-719, 1993）。
- 仅收集男性受试者的尿样。
- 南方和沿海各省的水平较高。
- 摄入脯氨酸应该与硝酸盐的排出无关。



U023 NO3mn – 亚硝胺研究：硝酸盐 (克, 12小时排出量) (口服500毫克脯氨酸和加与不加200毫克维生素C后排出的平均值)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	0.07	QA	0.17	AA	0.20	KC	0.27	ZA	0.10
CC	0.13	QB	0.20	AB	0.14	LA	0.19	ZB	0.10
CD	0.14	QC	0.19	AC	0.27	LB	0.24	ZC	0.07
DA	0.14	RA	0.24	BA	0.11	LC	0.36	ZD	0.09
DB	0.10	SA	0.18	BB	0.15	LD	0.20	ZE	0.07
DC	0.21	SB	0.11	BC	0.12	PA	0.29	ZF	0.07
FA	0.09	SC	0.17	EA	0.14	PC	0.06	ZG	0.06
GA	0.16	TA	0.17	HA	0.10	PD	0.14	ZH	0.10
JA	0.20	TC	0.09	IA	0.21	PE	0.30	ZI	0.07
JB	0.24	TD	0.06	IB	0.23	UA	0.15	ZJ	0.04
MB	0.14	VA	0.09	IC	0.18	UB	0.32	ZK	0.07
MC	0.13	VB	0.09	ID	0.26	UC	0.21	ZL	0.07
MD	0.22	VC	0.14	IE	0.23	UD	0.15	ZM	0.05
NA	0.15	WA	0.05	IF	0.32	UE	0.23	ZN	0.09
NB	0.27	WB	0.06	IG	0.22	UF	0.26	ZO	0.09
NC	0.13	WC	0.09	KB	0.25			ZP	0.04
ND	0.15	XA	0.08						
OA	0.25	XB	0.08						
OB	0.18	YA	0.19						
Mean 平均值	**Male (男)** 0.14†			**Male (男)** 0.21†				**Male (男)** 0.07	

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs	Xiang (乡) II	69	0.17	0.07	0.18	0.09	62	6.4	†
M1983	vs	M1989	26	0.26	0.13	0.17	0.07	43	2.4	

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-30 M003 ALL15-34	-49 † M095 ROADACCb	-25 R022 22:6n3	54 † D037 RICE	-28 Q109 dDBP
-25 M004 ALL0-34	-35 * M096 ROADACCc	-28 R023 18:2n6	-58 † D038 WHTFLOUR	-27 Q110 dMIDBP
-25 M005 ALL35-69	54 † M097 DROWNb	-25 U001 Cl/cre	-28 D039 OTHCEREAL	27 Q138 dCIGCONSm
-34 * M006 ALL70-79	31 M098 DROWNc	-26 U003 Na/cre	39 † D043 GREENVEG	-24 Q142 dTOBCONSm
-29 M007 MEDICALb	-42 † M104 MATERNAL	-33 * U005 P/cre	25 D048 EGGS	38 * Q151 dBEERday
-25 M008 MEDICALc	29 M107 NONMEDa	-38 * U006 UREA/cre	36 * D052 FISH	56 † Q157 dRICE
-34 * M013 INTESTINb	-25 M111 NTDa	46 † U008 CREAT	-31 * D059 TOTNDF	-57 † Q158 dWHEAT
-27 M015 PULMTBb	50 † M119 DROWNa	38 * U024 INHIBPRO	-56 † D067 GLUTAMINE	43 † Q166 dSALTFISH
-35 * M017 OTHERTBb	26 P002 HDLCHOL	55 † U026 SUMNITa	-37 * D074 METH+CYS	42 † Q167 dSALTFKID
-47 † M018 OTHERTBc	33 * P004 APOA1	24 D002 TOTFAT	-24 D078 THREONINE	49 † Q172 dGRNVEG
35 * M019 VIRALHEPb	36 * P009 B-CAROT	-35 * D003 TOTPROT	29 D082 MUFA	32 * Q174 dFISH
33 * M025 NASOPCAc	-48 † P011 Z-CAROT	29 D005 %FATKCAL	26 D085 CHOL	-26 Q177 dMILK
-34 * M038 CERVIXCAc	-36 * P015 G-TOCOPH	-27 D006 %PROTKCAL	33 * D087 %MUFA	29 Q186 dMENCYCLE
-41 † M052 NERVOUSb	-48 † P016 LYCOPENE	28 D007 %ANPRKCAL	30 D094 TOTn9	28 Q201 eDOCVIS
-36 * M054 MENINGITb	-30 P019 A-CRYPT	-47 † D008 %PLPRKCAL	34 * D097 %TOTn9	29 Q234 eWORMS
-38 * M058 ALLVASCb	41 † P021 NEURSPOR	30 D011 TOTCAROT	34 * D146 %18:1	-33 * Q243 fWTadj
-48 † M059 ALLVASCc	-51 † P022 PHYTOFLU	32 * D012 VITA	24 Q016 aCANREADm	-41 † Q247 fBMIadj
-33 * M060 RHEUMHDb	-44 † P023 PHYTOENE	-31 * D015 THIAMINE	-48 † Q017 aPRIMARY	-52 † G001 LATITUDE
-34 * M061 RHEUMHDc	41 † P024 FOLATE	27 D018 Ca	30 Q052 c%TOILET	45 † G002 LONGITUDE
-34 * M062 HYPTENSc	-24 P035 TRANSFE	-31 * D020 Cu	-25 Q057 dCOALKID	-47 † G003 ELEVATION
-42 † M063 IHDc	33 * P041 TESTOSTm	-24 D021 K	-41 † Q064 dCOALNOW	-56 † G004 ARIDITY
-38 * M065 STROKEc	-26 R001 Hb	-40 † D026 SeCARRY	-25 Q090 dHEIGHT	47 † G005 HEAT
-35 * M066 VASC-STRb	-37 * R009 14:0	-44 † D033 PLNTPROT	-38 * Q091 dWEIGHT	
-53 † M067 VASC-STRc	-37 * R011 18:0	25 D034 ANIMPROT	-42 † Q092 dBMI	
28 M082 GALLBILc	34 * R014 24:0	-30 D035 %PLNTPROT	24 Q094 dHEPATIT	
-44 † M087 PREGBRTHb	30 R018 22:1n9	30 D036 %ANIMPROT	32 * Q096 dMALARIA	

- Analysis by Dr. Helmut Bartsch of N-nitrosoproline and three other N-nitrosoamino acids (NNAs) by gas chromatography coupled with a thermal energy analyser (GC-TEA). A 7.5 ml aliquot of urine sample (stabilized by NaOH) was spiked with N-nitrosopipecolic acid as internal standard, acidified with 1.5 ml of 20% ammonium sulfamate solution in 1.8 mol/l sulfuric acid and extracted 3 times into 20 ml 10% methanol in dichloromethane in the presence of 2.5 g sodium chloride. The three extracts were combined, dried over anhydrous sodium sulphate, had the solvent removed on a rotary evaporator at 30℃, and were then derivatized in 2 ml ether with excess diazomethane, yielding methyl esters of NAAs. This ethereal solution was concentrated to 0.1 ml, of which a 10-ul aliquot was analysed by GC-TEA (Wu et al. International Journal of Cancer 54: 713-719, 1993).
- Urine was collected only from males.
- Higher values in the south and east.
- Proline ingestion should be irrelevant to nitrate excretion.

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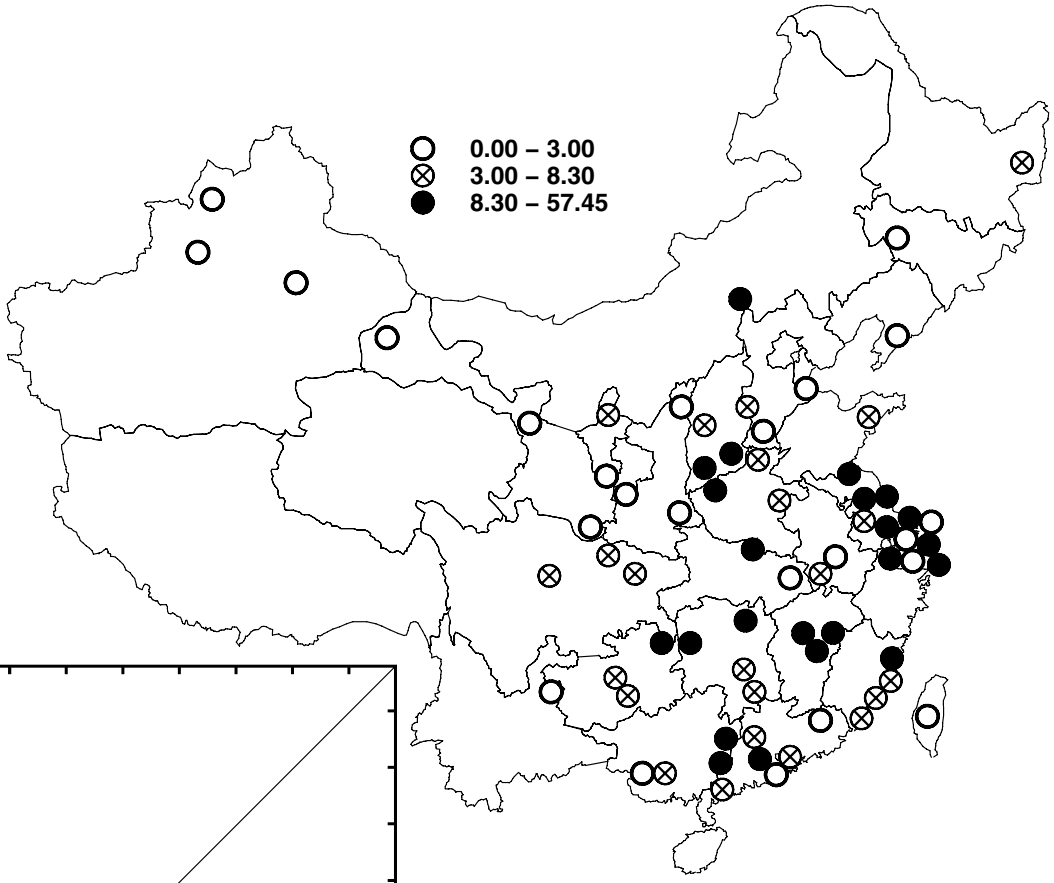
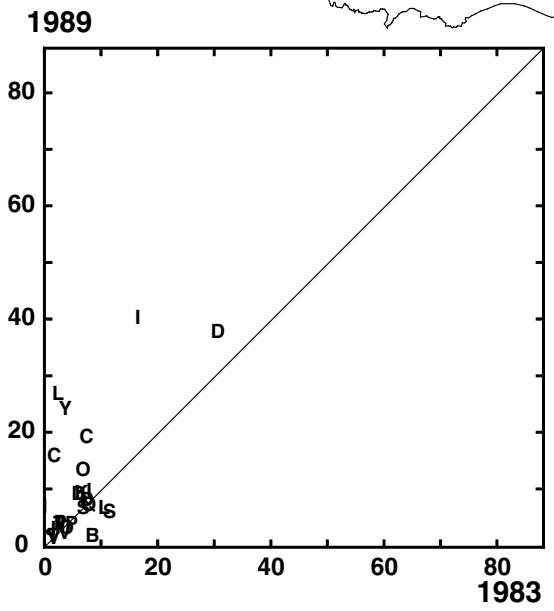
methods: pages 10-11

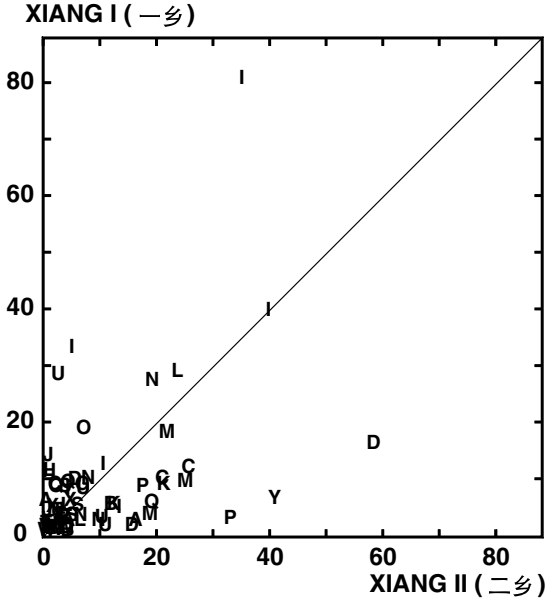
实验室测定表述格式: 第 332-333 页

方法: 第 10-11 页

U024 INHIBPRO – nitrosamine study ASCORBATE-INHIBITABLE PROLINE NITROSATION (μg/12 hours) (Calculated from NNPRO-NNPROa)







U024 INHIBPRO – 亚硝胺研究：可被抗坏血酸盐抑制的脯氨酸亚硝基化 (微克/12小时) (由计算NNPRO-NNPROa而得)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	14.92	QA	6.23	AA	8.90	KC	14.53	ZA	2.29
CC	18.25	QB	11.85	AB	2.70	LA	4.13	ZB	3.15
CD	4.91	QC	4.80	AC	2.85	LB	5.71	ZC	1.98
DA	8.13	RA	0.72	BA	0.84	LC	25.80	ZD	3.57
DB	7.14	SA	5.11	BB	8.14	LD	4.03	ZE	2.75
DC	36.77	SB	3.69	BC	1.99	PA	17.55	ZF	0.72
FA	1.10	SC	5.71	EA	2.81	PC	2.95	ZG	2.01
GA	7.33	TA	2.90	HA	5.63	PD	3.00	ZH	0.95
JA	1.94	TC	0.78	IA	39.30	PE	12.57	ZI	0.54
JB	6.92	TD	1.87	IB	57.45	UA	7.14	ZJ	1.11
MB	16.74	VA	0.45	IC	5.88	UB	5.78	ZK	1.41
MC	19.43	VB	1.23	ID	8.67	UC	2.96	ZL	0.03
MD	10.69	VC	1.32	IE	2.73	UD	6.26	ZM	0.10
NA	5.68	WA	1.81	IF	11.12	UE	15.00	ZN	1.86
NB	22.74	WB	0.56	IG	18.68	UF	1.41	ZO	2.45
NC	4.54	WC	0.00	KB	8.36			ZP	1.04
ND	8.47	XA	4.92						
OA	12.40	XB	2.81						
OB	2.12	YA	23.19						
Mean 平均值	**Male (男)** 7.63			**Male (男)** 10.16				**Male (男)** 1.62	

(a)		(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs	Xiang (乡) II	69	7.92	11.90	9.62	11.52	46	4.2	†
M1983	vs	M1989	26	6.17	6.19	9.63	10.71	63	4.0	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-27	M001 ALL0-4	-28	M085 GENITURfc	-33 *	M114 LOWBTHWTa	-30	R023 18:2n6	-27	Q064 dCOALNOW
-28	M004 ALL0-34	-30	M103 INFANT	-33 *	P032 Fe	31	U004 Ca/cre	37 *	Q096 dMALARIA
-29	M007 MEDICALb	-27	M105 ALLCUMa	-34 *	P034 TIBC	24	U012 VOLURINE	25	Q139 dCIGCONSf
25	M023 ALLCAc	-31	M106 MEDICALa	24	P041 TESTOSTm	38 *	U023 NO3mn	28	Q161 dMILLET
29	M027 OESOPHCAc	-25	M110 CONGENITa	-27	R001 Hb	37 *	U026 SUMNITa	27	Q209 eBIRTHWT
-25	M054 MENINGITb	-30	M113 PERINATa	-24	R005 TOTn6	32 *	U033 INHIBNOC	26	G002 LONGITUDE

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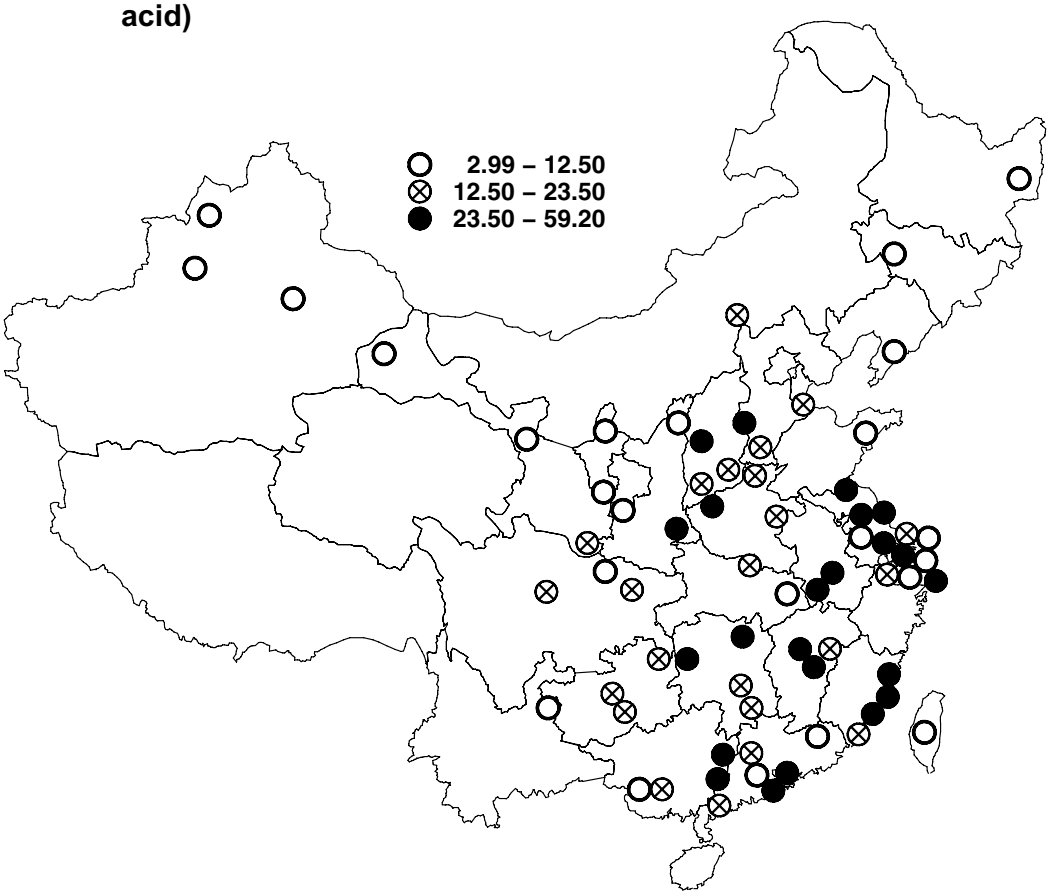
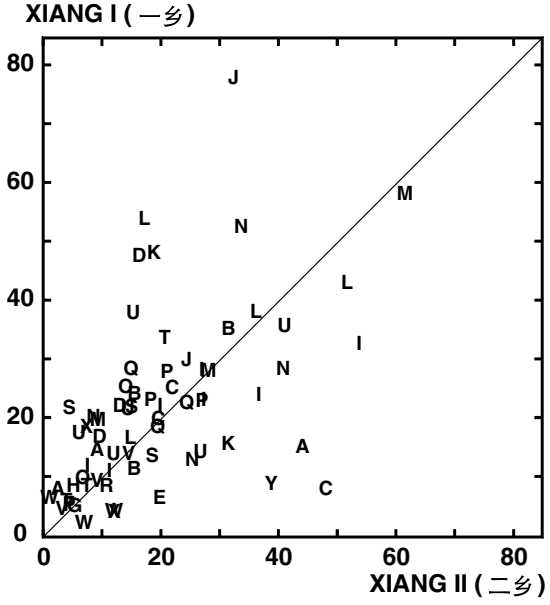
方法: 第 10-11 页

- Analysis by Dr. Helmut Bartsch of N-nitrosoproline and three other N-nitrosoamino acids (NNAs) by gas chromatography coupled with a thermal energy analyser (GC-TEA). A 7.5 ml aliquot of urine sample (stabilized by NaOH) was spiked with N-nitrosopipecolic acid as internal standard, acidified with 1.5 ml of 20% ammonium sulfamate solution in 1.8 mol/l sulfuric acid and extracted 3 times into 20 ml 10% methanol in dichloromethane in the presence of 2.5 g sodium chloride. The three extracts were combined, dried over anhydrous sodium sulphate, had the solvent removed on a rotary evaporator at 30℃, and were then derivatized in 2 ml ether with excess diazomethane, yielding methyl esters of NAAs. This ethereal solution was concentrated to 0.1 ml, of which a 10-ul aliquot was analysed by GC-TEA (Wu et al. International Journal of Cancer 54: 713-719, 1993).
- Urine was collected only from males.
- To assess the extent to which endogenous nitrosation in the stomach could be producing nitrosamines, 500 mg of proline (which, when nitrosated, yields N-nitroso-proline, NPRO) was given on two occasions: once with 200 mg ascorbic acid, which should prevent gastric nitrosation of proline; and the next time, without any ascorbic acid. The difference between the amounts of urinary NPRO on these two occasions was intended to be a measure of the intensity of gastric nitrosation in general.
- No significant correlation with gastric cancer, but high values were observed in two counties in Jiangsu (province I) and in one county in Henan (Songxian, county DC), all of which have fairly high, though not the highest, rates of stomach cancer (M028: STOMCAc).
- See Wu et al.(Wu et al. International Journal of Cancer 54: 713-719, 1993) for a report on this aspect of the survey).

- 由Helmut Bartsch博士利用气相色谱偶联热能分析仪（GC-TEA）测定N-亚硝基脯氨酸及三种其它N亚硝基氨基酸（NNAs）。在7.5 ml尿样（用NaOH使之稳定）中加入N-亚硝基哌可酸作为内标，用1.5 ml 20%的硫酸铵溶液（溶于1.8 mol/l的硫酸中）进行酸化，并用20 mL的10%甲醇（溶于二氯甲烷中，2.5g 氯化钠）提取3次。合并提取液并用无水硫酸钠吸去水分，在旋转蒸发仪上（30℃）挥去溶剂，在2 ml乙醚和过量重氮甲烷中衍生，形成甲基乙醚形式的NAAs。将该溶液浓缩至0.1 ml，吸取10μl 用GC-TEA测定（Wu et al. International Journal of Cancer 54: 713-719, 1993）。
- 仅收集男性受试者的尿样。
- 为了评估胃中内源性硝基化产生亚硝胺的程度，分两次给予500 mg脯氨酸（硝基化时可形成N亚硝基脯氨酸，NPRO）：一次与200 mg抗坏血酸同时给予，该物质应该可以防止脯氨酸在胃内被硝基化；第二次不加抗坏血酸。用两次尿液中NPRO的含量之差来表示胃的硝基化强度。
- 与胃癌无显著相关，但是江苏省（I）两个县和河南省嵩县（DC）的水平很高， 这3个县的胃癌死亡率很高（尽管不是最高）（M028: STOMCAc）。
- 见Wu等关于本次调查这方面的报道（Wu et al. International Journal of Cancer 54: 713-719, 1993）。

U026 SUMNITa – nitrosamine study SUM OF N-NITROSAMINO ACIDS (μg excreted in 12 hours after ingesting 500mg L-proline and 200mg ascorbic acid)





U026 SUMNITa – 亚硝胺研究：N-亚硝基氨基酸的总和 (微克, 口服500毫克脯氨酸和200毫克维生素C后12小时排出量)

Inland Provinces (内地)				Coastal Provinces (沿海)				Taiwan (台湾)	
Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男	Area 地区	Male 男
CB	19.05	QA	20.96	AA	11.22	KC	22.93	ZA	17.78
CC	22.85	QB	18.32	AB	28.93	LA	15.11	ZB	7.46
CD	27.38	QC	22.85	AC	4.58	LB	36.53	ZC	9.04
DA	12.55	RA	8.97	BA	12.77	LC	46.72	ZD	14.96
DB	16.88	SA	15.43	BB	32.71	LD	34.95	ZE	5.31
DC	31.34	SB	12.40	BC	19.18	PA	23.89	ZF	6.10
FA	4.23	SC	17.82	EA	12.46	PC	4.21	ZG	7.63
GA	4.54	TA	26.54	HA	6.17	PD	20.07	ZH	11.41
JA	54.44	TC	7.33	IA	29.76	PE	24.41	ZI	8.55
JB	26.50	TD	4.36	IB	24.67	UA	17.37	ZJ	5.67
MB	27.39	VA	3.23	IC	9.19	UB	37.75	ZK	12.81
MC	13.83	VB	8.63	ID	42.68	UC	26.00	ZL	6.87
MD	59.20	VC	13.58	IE	10.58	UD	19.89	ZM	20.42
NA	18.46	WA	7.39	IF	20.44	UE	12.32	ZN	15.99
NB	42.46	WB	2.99	IG	27.02	UF	11.15	ZO	5.04
NC	13.79	WC	3.76	KB	32.82			ZP	3.33
ND	33.97	XA	7.43						
OA	18.98	XB	12.35						
OB	7.62	YA	23.16						

Mean 平均值	Male (男)	Male (男)	Male (男)
	18.24	21.89	9.90

(a)	(b)	N	Mean (a)	SD (a)	Mean (b)	SD (b)	r%	t-test	P
Xiang (乡) I	vs Xiang (乡) II	69	20.46	14.77	19.29	13.61	53	5.1	†

Mainland only (仅限中国大陆)

All 2P < 0.05 correlations (r%) with other items (所有与其它变量的相关系数): * 2P < 0.01, † 2P < 0.001

Full variable names are in Summary Statistics, pp19-103 (变量全名在第 19-103 页的统计总结中列出)

-31 M017 OTHERTBb	-30 M087 PREGBRTHb	-35 * P023 PHYTOENE	34 * D037 RICE	-33 * Q158 dWHEAT
-34 * M018 OTHERTBc	-36 * M095 ROADACCb	-26 P032 Fe	-33 * D038 WHTFLOUR	35 * Q163 dSWEETPOT
25 M019 VIRALHEPb	-28 M096 ROADACCc	-30 R001 Hb	-32 * D067 GLUTAMINE	-24 Q164 dOILFAT
-29 M052 NERVOUSb	35 * M097 DROWNb	-24 R011 18:0	-32 * Q021 eCANREAD	-24 Q184 dBLACKTEA
-38 * M058 ALLVASCb	27 M098 DROWNc	-40 † R023 18:2n6	-29 Q064 dCOALNOW	26 Q185 dAGEMENS
-31 M059 ALLVASCc	-26 M102 HOMICIDEc	-29 U005 P/cre	-29 Q090 dHEIGHT	25 Q186 dMENCYCLE
-27 M060 RHEUMHDb	-29 M104 MATERNAL	35 * U008 CREAT	-37 * Q091 dWEIGHT	-25 Q243 fWTadj
-27 M061 RHEUMHDc	28 M107 NONMEDa	55 † U023 NO3mn	-37 * Q092 dBMI	-27 Q247 fBMIadj
-27 M062 HYPTENSc	-27 M108 RESPINFa	37 * U024 INHIBPRO	25 Q096 dMALARIA	-36 * G001 LATITUDE
-31 M063 IHDc	-28 M111 NTDa	-27 D003 TOTPROT	-25 Q108 dSBP	29 G002 LONGITUDE
-35 * M064 STROKEb	-25 M114 LOWBTHWTa	-33 * D008 %PLPRKCAL	-24 Q110 dMIDBP	-33 * G003 ELEVATION
-32 * M066 VASC-STRb	30 M119 DROWNa	29 D011 TOTCAROT	26 Q138 dCIGCONSm	-32 * G004 ARIDITY
-40 † M067 VASC-STRc	-35 * P011 Z-CAROT	31 D012 VITA	-32 * Q142 dTOBCONSm	28 G005 HEAT
-28 M068 ALLRESPb	-44 † P016 LYCOPENE	-24 D021 K	34 * Q153 dWINEday	
-26 M070 PNEUMONIb	31 * P021 NEURSPOR	-27 D026 SeCARRY	30 Q156 dALCOday	
-26 M085 GENITURfc	-36 * P022 PHYTOFLU	-30 D033 PLNTPROT	42 † Q157 dRICE	

- Urine was collected only from males.
- If ascorbate inhibits the formation of N-nitrosamino acids in the stomach, then the amounts excreted should reflect the amounts of preformed N-nitrosamino acids in the diet.
- No significant geographic correlations with cancer rates.

- 仅收集男性受试者的尿样。
- 如果抗坏血酸盐在胃中抑制N亚硝基氨基酸的形成，那么排出的量应该可以反应膳食中已经形成的N亚硝基氨基酸水平。
- 与癌症死亡率无明显的地理相关性。

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methods: pages 10-11

实验室测定表述格式: 第 332-333 页

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