

CHAPTER 59

Urinary-System Cancers, Males, 1940-1980

● Box 1, below, shows the familiar pattern revealed in the previous Boxes 1. Therefore, Box 2 evaluates an adjustment factor, in order to match the Census Divisions for the unmatched co-actor.

● Table 59-A deviates from the model of Chapter 49. We have added a second set of entries (Tables 59-BB through 59-EE) because the regressions in Tables 59-B through 59-E produce negative constants, whose magnitude is not trivial relative to the male National MortRate for Urinary-System Cancers. We regard this as a signal that something is not REALISTIC about the adjustment factor used in those tables for the MidTrio and LowTrio MortRates. This happened once before. Please refer to the text in Chapter 51, preceding Table 51-AA. Here, in Chapter 59, the factor which abolishes the negative sign on Constants is 1.35, and it is used in the same way the factor of 1.4 was used to produce Table 51-BB through 51-FF.

Year	Col.A Natl MR	Col.B Frac.C	Col.C R-Sq	Col.D X-Coef	Col.E StdErr	Col.F Coef/SE	Col.G Source
1940	7.4	~100	0.9208	0.0750	0.0083	9.0208	Chap.11
1950	8.1	93%	0.9329	0.0832	0.0084	9.8635	Tab 59-B
1960	8.5	86%	0.9170	0.0833	0.0095	8.7960	Tab 59-C
1970	8.35	84%	0.9220	0.0761	0.0084	9.0993	Tab 59-D
1980	8.2	79%	0.9275	0.0676	0.0071	9.4602	Tab 59-E
1950	8.1	99%	0.5967	0.0601	0.0187	3.2180	Tab 59-BB
1960	8.5	91%	0.5901	0.0585	0.0184	3.1746	Tab 59-CC
1970	8.35	86%	0.6018	0.0524	0.0161	3.2526	Tab 59-DD
1980	8.2	83%	0.6089	0.0458	0.0139	3.3016	Tab 59-EE

Box 1, Chap. 59

Urinary-System Cancers, Males: Post-1940 Change in MortRates by Census Trios

1960 vs. 1940, by Trios: Col.D expresses change by ratios. Col.F expresses change by subtraction.
 1980 vs. 1940, by Trios: Col.I expresses change by ratios. Col.K expresses change by subtraction.
 MRs change inversely with PP. High-PP Trio has lowest growth-factor. Low-PP Trio has highest growth-factor.

	Col.A 1940 MortRate Tab 11-A	Col.B 1960 MortRate Tab 11-A	Col.C Ratio Col.B /Col.A	Col.D Input from Col.C	Col.E Diff: Col.B minus A	Col.F Input from Col.E	Col.G 1980 MortRate Tab 11-A	Col.H Ratio Col.G /Col.A	Col.I Input from Col.H	Col.J Diff: Col.G minus A	Col.K Input from Col.J
Pacif	8.1	8.2	1.012	Avg Chg	0.1	Avg Chg	7.7	0.951	Avg Chg	-0.4	Avg Chg
NewE	9.1	10.7	1.176	TopTrio	1.6	TopTrio	9.5	1.044	TopTrio	0.4	TopTrio
MidAtl	10.2	10.2	1.000	1.063	0.0	0.6	9.2	0.902	0.966	-1.0	-0.3
WNoCen	6.7	8.3	1.239	Avg Chg	1.6	Avg Chg	7.9	1.179	Avg Chg	1.2	Avg Chg
ENoCen	8.1	9.4	1.160	MidTrio	1.3	MidTrio	8.7	1.074	MidTrio	0.6	MidTrio
Mtn	6.5	7.8	1.200	1.200	1.3	1.4	7.0	1.077	1.110	0.5	0.8
WSoCen	4.3	6.6	1.535	Avg Chg	2.3	Avg Chg	7.0	1.628	Avg Chg	2.7	Avg Chg
ESoCen	3.0	5.2	1.733	LowTrio	2.2	LowTrio	7.3	2.433	LowTrio	4.3	LowTrio
SoAtl	5.3	6.9	1.302	1.523	1.6	2.0	7.8	1.472	1.844	2.5	3.2

Box 2, Chap. 59

Urinary-System Cancers, Males: Calculation of Adjustment Factor

This adjustment is discussed fully in Chapter 49.

● Part 1: Calculate average population-weighted MortRate for the combined TopTrio Census Divs.

Census Div.	Col.A 1940 MR Tab 11-A	Col.B 1940 Pop'n Tab 3-B	Col.C 1940 Popn /45,710,039	Col.D Col.A * Col.C	Census Div.	Col.A 1950 MR Tab 11-A	Col.B 1950 Pop'n Tab 3-B	Col.C 1950 Popn /53,964,513	Col.D Col.A * Col.C
Pacific	8.1	9,733,262	0.2129	1.72	Pacific	8.4	14,486,527	0.2684	2.25
NewEng	9.1	8,437,290	0.1846	1.68	NewEng	10.5	9,314,453	0.1726	1.81
Mid-Atl	10.2	27,539,487	0.6025	6.15	Mid-Atl	10.5	30,163,533	0.5590	5.87
1940		Sum TopTrio 45,710,039	Sum 1.0000	TopTrio 9.550	1950		Sum TopTrio 53,964,513	Sum 1.0000	TopTrio 9.936

Census Div.	Col.A 1960 MR Tab 11-A	Col.B 1960 Pop'n Tab 3-B	Col.C 1960 Popn /65,875,863	Col.D Col.A * Col.C	Census Div.	Col.A 1970 MR Tab 11-A	Col.B 1970 Pop'n Tab 3-B	Col.C 1970 Popn /75,017,000	Col.D Col.A * Col.C
Pacific	8.2	21,198,044	0.3218	2.64	Pacific	8.0	26,087,000	0.3477	2.78
NewEng	10.7	10,509,367	0.1595	1.71	NewEng	10.1	11,781,000	0.1570	1.59
Mid-Atl	10.2	34,168,452	0.5187	5.29	Mid-Atl	9.7	37,149,000	0.4952	4.80
1960		Sum TopTrio 65,875,863	Sum 1.0000	TopTrio 9.636	1970		Sum TopTrio 75,017,000	Sum 1.0000	TopTrio 9.172

Census Div.	Col.A 1980 MR Tab 11-A	Col.B 1980 Pop'n Tab 3-B	Col.C 1980 Popn /80,615,000	Col.D Col.A * 4	Census Div.	Col.A 1988 MR Tab 11-A	Col.B 1990 Pop'n Tab 3-B	Col.C 1990 Popn /88,495,000	Col.D Col.A * Col.C
Pacific	7.7	31,523,000	0.3910	3.01	Pacific	--	37,837,000	0.4276	--
NewEng	9.5	12,322,000	0.1528	1.45	NewEng	--	12,998,000	0.1469	--
Mid-Atl	9.2	36,770,000	0.4561	4.20	Mid-Atl	--	37,660,000	0.4256	--
1980		Sum TopTrio 80,615,000	Sum 1.0000	TopTrio 8.659	1988		Sum TopTrio 88,495,000	Sum 1.0000	TopTrio --

● Part 2: Take ratios of these TopTrio MortRates, with 1940 as the denominator of each ratio. Col.D modifies Col.C by separate PhysPop adjustments for MidTrio and LowTrio Census Divisions.

	Col.A TopTrio Mean MR	Col.B 1940 TopTrio Mean MR	Col.C = Col.A / Col.B	Col.D ppAdju Tab 47-B MidTrio	Col.E = Col.C * Col.D	URINARY-SYSTEM CANCERS. Males.
1950	9.936	9.550	1.040	0.99	1.03	= MidTrio Adjustment Factor, 1950
1960	9.636	9.550	1.009	0.97	0.98	= MidTrio Adjustment Factor, 1960
1970	9.172	9.550	0.960	0.95	0.91	= MidTrio Adjustment Factor, 1970
1980	8.659	9.550	0.907	0.94	0.85	= MidTrio Adjustment Factor, 1980
1988	--	9.550	--	0.94	0.00	= MidTrio Adjustment Factor, 1988
				LowTrio		
1950	9.936	9.550	1.040	1.00	1.04	= LowTrio Adjustment Factor, 1950
1960	9.636	9.550	1.009	1.01	1.02	= LowTrio Adjustment Factor, 1960
1970	9.172	9.550	0.960	1.02	0.98	= LowTrio Adjustment Factor, 1970
1980	8.659	9.550	0.907	1.04	0.94	= LowTrio Adjustment Factor, 1980
1988	--	9.550	--	1.07	0.00	= LowTrio Adjustment Factor, 1988

Table 59-B
Urinary-System Cancers, Males: Fractional Causation in 1950

Part 1.

Calculation of the 6 Adjusted MortRates (Col.F) and the National Adjusted MortRate (Col.G).
The last six entries in Part 1, Col.F, are the products of (Col.D * Col.E), as discussed in Chap. 49.

Trio-Sequence	Col.A 1950 PopFrac Tab 3-B	Col.B 1950 Obs MR Tab 11-A	Col.C A * B	Col.D 1940 MR Mid,Low Tab 11-A	Col.E AdjuFact Bx2,Pt2 Col.E	Col.F 1950 Adju MortRates	Col.G A * F
Pacific	0.0961	8.4	0.807			8.4	0.807
New England	0.0618	10.5	0.649			10.5	0.649
Mid-Atlantic	0.2002	10.5	2.102			10.5	2.102
WestNoCentral	0.0933	7.2	0.672	6.7	1.03	6.90	0.644
EastNoCentral	0.2017	8.6	1.735	8.1	1.03	8.34	1.683
Mountain	0.0337	6.1	0.206	6.5	1.03	6.70	0.226
WestSoCentral	0.0965	5.8	0.560	4.3	1.04	4.47	0.432
EastSoCentral	0.0762	5.0	0.381	3.0	1.04	3.12	0.238
SouthAtlantic	0.1406	6.1	0.858	5.3	1.04	5.51	0.775
		Sum =	8.0			Sum =	
1950 Observed MR from Table 11-B			8.1	1950 Natl Adjusted MR =		7.5548	

Part 2.

Trio-Seq.	Col.A Mean1940 thru1950 PPs from Tab 47-A	Col.B 1950 Adju MRs Part 1	Col.C Urinary Syst. Ca. Males: 1950 Adjusted MortRates regressed on Mean 1940 thru 1950 PPs Regression Output:	Col.D 1940 PPs from Table 3-A (TrioSeq) x''	Col.E Urinary Syst. Ca. Males: 1950 Adjusted MortRates regressed on 1940 PhysPops Regression Output:
Pac	x' 154.16	y 8.4	Constant -3.4038	159.72	Constant -3.4043
NewEng	162.03	10.5	Std Err of Y Est 0.7047	161.55	Std Err of Y Est 0.7548
MidAtl	169.24	10.5	R Squared 0.9329	169.76	R Squared 0.9230
WNoCen	121.60	6.90	No. of Observation 9	123.14	No. of Observation 9
ENoCen	128.53	8.34	Degrees of Freedom 7	133.36	Degrees of Freedom 7
Mtn	119.64	6.70		119.89	
WSoCen	102.64	4.47	X Coefficient(s) 0.0832	103.94	X Coefficient(s) 0.0821
ESoCen	84.44	3.12	Std Err of Coef. 0.0084	85.83	Std Err of Coef. 0.0090
SoAtl	99.91	5.51	XCoef / S.E. = 9.8635	100.74	XCoef / S.E. = 9.1609

Part 3-A.

Calculation of Fractional Causation from Averaged PhysPops

1. Nonradiation rate is Adjusted Constant (Part 2, Col.C) = NEGATIVE 0.0
2. Radiation rate is Natl Adjusted MortRate (Part 1, Col.G = 7.5548) minus Nonradiation rate (0.0) = 7.5548
3. 1950 Fractional Causation is radiation rate (7.5548) divided by OBSERVED Natl MR Part 1, Col.C = 8.1 = 0.93

Part 3-B.

Calculation of Fractional Causation from 1940 PhysPops

1. Nonradiation rate is Adjusted Constant (Part 2, Col.E) = NEGATIVE 0.0
2. Radiation rate is Natl Adjusted MortRate (Part 1, Col.G = 7.5548) minus Nonradiation rate (0.0) = 7.5548
3. 1950 Fractional Causation is radiation rate (7.5548) divided by OBSERVED Natl MR Part 1, Col.C = 8.1 = 0.93

Table 59-C

Urinary-System Cancers, Males: Fractional Causation in 1960

Part 1.

Calculation of the 6 Adjusted MortRates (Col.F) and the National Adjusted MortRate (Col.G).
The last six entries in Part 1, Col.F, are the products of (Col.D * Col.E), as discussed in Chap. 49.

	Col.A 1960 PopFrac Tab 3-B	Col.B 1960 Obs MR Tab 11-A	Col.C A * B	Col.D 1940 MR Mid,Low Tab 11-A	Col.E AdjuFact Bx2,Pt2 Col.E	Col.F 1960 Adju MortRates	Col.G A * F
Trio-Sequence							
Pacific	0.1182	8.2	0.969			8.2	0.969
New England	0.0586	10.7	0.627			10.7	0.627
Mid-Atlantic	0.1905	10.2	1.943			10.2	1.943
WestNoCentral	0.0858	8.3	0.712	6.7	0.98	6.57	0.563
EastNoCentral	0.2020	9.4	1.899	8.1	0.98	7.94	1.603
Mountain	0.0382	7.8	0.298	6.5	0.98	6.37	0.243
WestSoCentral	0.0945	6.6	0.624	4.3	1.02	4.39	0.414
EastSoCentral	0.0672	5.2	0.349	3.0	1.02	3.06	0.206
SouthAtlantic	0.1448	6.9	0.999	5.3	1.02	5.41	0.783
		Sum =	8.4				Sum =
1960	Observed MR from Table 11-B		8.5	1960 Natl Adjusted MR =		7.3524	

Part 2.

Trio-Seq.	Col.A Mean1940 thru1960 PPs from Tab 47-A	Col.B 1960 Adju MRs Part 1 x'	Col.C Urinary Syst. Ca. Males: 1960 Adjusted MortRates regressed on Mean 1940 thru 1960 PPs Regression Output: Constant Std Err of Y Est R Squared No. of Observation Degrees of Freedom X Coefficient(s) Std Err of Coef. XCoef / S.E. =	Col.D 1940 PPs from Table 3-A (TrioSeq) x''	Col.E Urinary Syst. Ca. Males: 1960 Adjusted MortRates regressed on 1940 PhysPops Regression Output: Constant Std Err of Y Est R Squared No. of Observation Degrees of Freedom X Coefficient(s) Std Err of Coef. XCoef / S.E. =
Pac	155.69	8.2	-3.5171	159.72	-3.5565
NewEng	162.81	10.7	0.7830	161.55	0.7719
MidAtl	167.04	10.2	0.9170	169.76	0.9194
WNoCen	118.15	6.57	9	123.14	9
ENoCen	123.87	7.94	7	133.36	7
Mtn	117.40	6.37		119.89	
WSoCen	102.31	4.39	0.0833	103.94	0.0819
ESoCen	85.63	3.06	0.0095	85.83	0.0092
SoAtl	101.72	5.41	8.7960	100.74	8.9342

Part 3-A.

Calculation of Fractional Causation
from Averaged PhysPops

1. Nonradiation rate is Adjusted
Constant (Part 2, Col.C) = NEGATIVE 0.0
2. Radiation rate is Natl Adjusted
MortRate (Part 1, Col.G = 7.3524)
minus Nonradiation rate (0.0) = 7.3524
3. 1960 Fractional Causation is radiation
rate (7.3524) divided by OBSERVED
Natl MR Part 1, Col.C= 8.5 = 0.86

Part 3-B.

Calculation of Fractional Causation
from 1940 PhysPops

1. Nonradiation rate is Adjusted
Constant (Part 2, Col.E) = NEGATIVE 0.0
2. Radiation rate is Natl Adjusted
MortRate (Part 1, Col.G = 7.3524)
minus Nonradiation rate (0.0) = 7.3524
3. 1960 Fractional Causation is radiation
rate (7.3524) divided by OBSERVED
Natl MR Part 1, Col.C= 8.5 = 0.86

Table 59-E

Urinary-System Cancers, Males: Fractional Causation in 1980

Part 1.

Calculation of the 6 Adjusted MortRates (Col.F) and the National Adjusted MortRate (Col.G).
The last six entries in Part 1, Col.F, are the products of (Col.D * Col.E), as discussed in Chap. 49.

Trio-Sequence	Col.A 1980 PopFrac Tab 3-B	Col.B 1980 Obs MR Tab 11-A	Col.C A * B	Col.D 1940 MR Mid,Low Tab 11-A	Col.E AdjuFact Bx2,Pt2 Col.E	Col.F 1980 Adju MortRates	Col.G A * F
Pacific	0.1398	7.7	1.076			7.7	1.076
New England	0.0546	9.5	0.519			9.5	0.519
Mid-Atlantic	0.1630	9.2	1.500			9.2	1.500
WestNoCentral	0.0759	7.9	0.600	6.7	0.85	5.70	0.432
EastNoCentral	0.1846	8.7	1.606	8.1	0.85	6.89	1.271
Mountain	0.0502	7.0	0.351	6.5	0.85	5.52	0.277
WestSoCentral	0.1049	7.0	0.734	4.3	0.94	4.04	0.424
EastSoCentral	0.0646	7.3	0.472	3.0	0.94	2.82	0.182
SouthAtlantic	0.1624	7.8	1.267	5.3	0.94	4.98	0.809
		Sum =	8.1			Sum =	
1980 Observed MR from Table 11-B			8.2	1980 Natl Adjusted MR =		6.4906	

Part 2.

Trio-Seq.	Col.A Mean1940 thru1980 PPs from Tab 47-A	Col.B 1980 Adju MRs Part 1	Col.C Urinary Syst. Ca. Males: 1980 Adjusted MortRates regressed on Mean 1940 thru 1980 PPs	Col.D 1940 PPs from Table 3-A (TrioSeq)	Col.E Urinary Syst. Ca. Males: 1980 Adjusted MortRates regressed on 1940 PhysPops
	x'	y	Regression Output:	x''	Regression Output:
Pac	177.35	7.7	Constant -3.3843	159.72	Constant -3.2198
NewEng	185.86	9.5	Std Err of Y Est 0.6507	161.55	Std Err of Y Est 0.5795
MidAtl	186.11	9.2	R Squared 0.9275	169.76	R Squared 0.9425
WNoCen	128.82	5.70	No. of Observation 9	123.14	No. of Observation 9
ENoCen	133.71	6.89	Degrees of Freedom 7	133.36	Degrees of Freedom 7
Mtn	133.45	5.52		119.89	
WSoCen	114.66	4.04	X Coefficient(s) 0.0676	103.94	X Coefficient(s) 0.0737
ESoCen	99.46	2.82	Std Err of Coef. 0.0071	85.83	Std Err of Coef. 0.0069
SoAtl	124.62	4.98	XCoef / S.E. = 9.4602	100.74	XCoef / S.E. = 10.7079

Part 3-A.

Calculation of Fractional Causation from Averaged PhysPops

1. Nonradiation rate is Adjusted Constant (Part 2, Col.C) = NEGATIVE 0.0
2. Radiation rate is Natl Adjusted MortRate (Part 1, Col.G = 6.4906) minus Nonradiation rate (0.0) = 6.4906
3. 1980 Fractional Causation is radiation rate (6.4906) divided by OBSERVED Natl MR Part 1, Col.C= 8.2 = 0.79

Part 3-B.

Calculation of Fractional Causation from 1940 PhysPops

1. Nonradiation rate is Adjusted Constant (Part 2, Col.E) = NEGATIVE 0.0
2. Radiation rate is Natl Adjusted MortRate (Part 1, Col.G = 6.4906) minus Nonradiation rate (0.0) = 6.4906
3. 1980 Fractional Causation is radiation rate (6.4906) divided by OBSERVED Natl MR Part 1, Col.C= 8.2 = 0.79

Table 59-BB

Urinary-System Cancers, Males: Fractional Causation in 1950

Part 1.

Calculation of the 6 Adjusted MortRates (Col.F) and the National Adjusted MortRate (Col.G).

The last six entries in Part 1, Col.F, are the products of (Col.D * Col.E), as discussed in Chap. 49.

Trio-Sequence	Col.A 1950 PopFrac Tab 3-B	Col.B 1950 Obs MR Tab 11-A	Col.C A * B	Col.D 1940 MR Mid,Low Tab 11-A	Col.E AdjuFact Bx2,Pt2 Col.E	Col.F 1950 Adju MortRates	Col.G A * F
Pacific	0.0961	8.4	0.807			8.4	0.807
New England	0.0618	10.5	0.649			10.5	0.649
Mid-Atlantic	0.2002	10.5	2.102			10.5	2.102
WestNoCentral	0.0933	7.2	0.672	6.7	1.39	9.32	0.869
EastNoCentral	0.2017	8.6	1.735	8.1	1.39	11.26	2.272
Mountain	0.0337	6.1	0.206	6.5	1.39	9.04	0.305
WestSoCentral	0.0965	5.8	0.560	4.3	1.40	6.04	0.583
EastSoCentral	0.0762	5.0	0.381	3.0	1.40	4.21	0.321
SouthAtlantic	0.1406	6.1	0.858	5.3	1.40	7.44	1.046
		Sum =	8.0			Sum =	
1950	Observed MR from Table 11-B		8.1	1950 Natl Adjusted MR =		8.9536	

Part 2.

Trio-Seq.	Col.A Mean1940 thru1950 PPs from Tab 47-A	Col.B 1950 Adju MRs Part 1	Col.C Urinary Syst. Ca. Males: 1950 Adjusted MortRates regressed on Mean 1940 thru 1950 PPs Regression Output:	Col.D 1940 PPs from Table 3-A (TrioSeq) x''	Col.E Urinary Syst. Ca. Males: 1950 Adjusted MortRates regressed on 1940 PhysPops Regression Output:
Pac	x' 154.16	y 8.4	Constant 0.8998	159.72	Constant 0.8522
NewEng	162.03	10.5	Std Err of Y Est 1.5587	161.55	Std Err of Y Est 1.5568
MidAtl	169.24	10.5	R Squared 0.5967	169.76	R Squared 0.5977
WNoCen	121.60	9.32	No. of Observation 9	123.14	No. of Observation 9
ENoCen	128.53	11.26	Degrees of Freedom 7	133.36	Degrees of Freedom 7
Mtn	119.64	9.04		119.89	
WSoCen	102.64	6.04	X Coefficient(s) 0.0601	103.94	X Coefficient(s) 0.0596
ESoCen	84.44	4.21	Std Err of Coef. 0.0187	85.83	Std Err of Coef. 0.0185
SoAtl	99.91	7.44	XCoef / S.E. = 3.2180	100.74	XCoef / S.E. = 3.2248

Part 3-A.

Calculation of Fractional Causation from Averaged PhysPops

1. Nonradiation rate is Adjusted Constant (Part 2, Col.C) = 0.8998
2. Radiation rate is Natl Adjusted MortRate (Part 1, Col.G = 8.9536) minus Nonradiation rate (0.8998) = 8.0538
3. 1950 Fractional Causation is radiation rate (8.0538) divided by OBSERVED Natl MR Part 1, Col.C = 8.1 = 0.99

Part 3-B.

Calculation of Fractional Causation from 1940 PhysPops

1. Nonradiation rate is Adjusted Constant (Part 2, Col.E) = 0.8522
2. Radiation rate is Natl Adjusted MortRate (Part 1, Col.G = 8.9536) minus Nonradiation rate (0.8522) = 8.1014
3. 1950 Fractional Causation is radiation rate (8.1014) divided by OBSERVED Natl MR Part 1, Col.C = 8.1 = 1.00

Table 59-CC
Urinary-System Cancers, Males: Fractional Causation in 1960

Part 1.

Calculation of the 6 Adjusted MortRates (Col.F) and the National Adjusted MortRate (Col.G).
The last six entries in Part 1, Col.F, are the products of (Col.D * Col.E), as discussed in Chap. 49.

Trio-Sequence	Col.A 1960 PopFrac Tab 3-B	Col.B 1960 Obs MR Tab 11-A	Col.C A * B	Col.D 1940 MR Mid,Low Tab 11-A	Col.E AdjuFact Bx2,Pt2 Col.E	Col.F 1960 Adju MortRates	Col.G A * F
Pacific	0.1182	8.2	0.969			8.2	0.969
New England	0.0586	10.7	0.627			10.7	0.627
Mid-Atlantic	0.1905	10.2	1.943			10.2	1.943
WestNoCentral	0.0858	8.3	0.712	6.7	1.32	8.86	0.761
EastNoCentral	0.2020	9.4	1.899	8.1	1.32	10.72	2.165
Mountain	0.0382	7.8	0.298	6.5	1.32	8.60	0.329
WestSoCentral	0.0945	6.6	0.624	4.3	1.38	5.92	0.560
EastSoCentral	0.0672	5.2	0.349	3.0	1.38	4.13	0.278
SouthAtlantic	0.1448	6.9	0.999	5.3	1.38	7.30	1.057
		Sum =	8.4			Sum =	
1960	Observed MR from Table 11-B		8.5	1960 Natl Adjusted MR =		8.6870	

Part 2.

Trio-Seq.	Col.A Mean1940 thru1960 PPs from Tab 47-A	Col.B 1960 Adju MRs from Col.F Part 1	Col.C Urinary Syst. Ca. Males: 1960 Adjusted MortRates regressed on Mean 1940 thru 1960 PPs Regression Output: Constant Std Err of Y Est R Squared No. of Observation Degrees of Freedom X Coefficient(s) Std Err of Coef. XCoef / S.E. =	Col.D 1940 PPs from Table 3-A (TrioSeq) x''	Col.E Urinary Syst. Ca. Males: 1960 Adjusted MortRates regressed on 1940 PhysPops Regression Output: Constant Std Err of Y Est R Squared No. of Observation Degrees of Freedom X Coefficient(s) Std Err of Coef. XCoef / S.E. =
Pac	x' 155.69	y 8.2	0.9177	159.72	0.5824
NewEng	162.81	10.7	1.5241	161.55	1.4247
MidAtl	167.04	10.2	0.5901	169.76	0.6418
WNoCen	118.15	8.86	9	123.14	9
ENoCen	123.87	10.72	7	133.36	7
Mtn	117.40	8.60		119.89	
WSoCen	102.31	5.92	0.0585	103.94	0.0599
ESoCen	85.63	4.13	0.0184	85.83	0.0169
SoAtl	101.72	7.30	3.1746	100.74	3.5416

Part 3-A.

Calculation of Fractional Causation from Averaged PhysPops

1. Nonradiation rate is Adjusted Constant (Part 2, Col.C) = 0.9177
2. Radiation rate is Natl Adjusted MortRate (Part 1, Col.G = 8.6870) minus Nonradiation rate (0.9177) = 7.7693
3. 1960 Fractional Causation is radiation rate (7.7693) divided by OBSERVED Natl MR Part 1, Col.C = 8.5 = 0.91

Part 3-B.

Calculation of Fractional Causation from 1940 PhysPops

1. Nonradiation rate is Adjusted Constant (Part 2, Col.E) = 0.5824
2. Radiation rate is Natl Adjusted MortRate (Part 1, Col.G = 8.6870) minus Nonradiation rate (0.5824) = 8.1046
3. 1960 Fractional Causation is radiation rate (8.1046) divided by OBSERVED Natl MR Part 1, Col.C = 8.5 = 0.95

Table 59-EE
Urinary-System Cancers, Males: Fractional Causation in 1980

Part 1.

Calculation of the 6 Adjusted MortRates (Col.F) and the National Adjusted MortRate (Col.G).

The last six entries in Part 1, Col.F, are the products of (Col.D * Col.E), as discussed in Chap. 49.

Trio-Sequence	Col.A 1980 PopFrac Tab 3-B	Col.B 1980 Obs MR Tab 11-A	Col.C A * B	Col.D 1940 MR Mid,Low Tab 11-A	Col.E AdjuFact Bx2,Pt2 Col.E	Col.F 1980 Adju MortRates	Col.G A * F
Pacific	0.1398	7.7	1.076			7.7	1.076
New England	0.0546	9.5	0.519			9.5	0.519
Mid-Atlantic	0.1630	9.2	1.500			9.2	1.500
WestNoCentral	0.0759	7.9	0.600	6.7	1.15	7.69	0.584
EastNoCentral	0.1846	8.7	1.606	8.1	1.15	9.29	1.716
Mountain	0.0502	7.0	0.351	6.5	1.15	7.46	0.374
WestSoCentral	0.1049	7.0	0.734	4.3	1.27	5.46	0.572
EastSoCentral	0.0646	7.3	0.472	3.0	1.27	3.81	0.246
SouthAtlantic	0.1624	7.8	1.267	5.3	1.27	6.73	1.092
		Sum =	8.1			Sum =	
1980 Observed MR from Table 11-B			8.2	1980 Natl Adjusted MR =		7.6791	

Part 2.

Trio-Seq.	Col.A Mean1940 thru1980 PPs from Tab 47-A	Col.B 1980 Adju MRs from Col.F Part 1	Col.C Urinary Syst. Ca. Males: 1980 Adjusted MortRates regressed on Mean 1940 thru 1980 PPs Regression Output:	Col.D 1940 PPs from Table 3-A (TrioSeq) x''	Col.E Urinary Syst. Ca. Males: 1980 Adjusted MortRates regressed on 1940 PhysPops Regression Output:
Pac	x' 177.35	y 7.7	Constant 0.8918	159.72	Constant 0.5316
NewEng	185.86	9.5	Std Err of Y Est 1.2629	161.55	Std Err of Y Est 1.0819
MidAtl	186.11	9.2	R Squared 0.6089	169.76	R Squared 0.7130
WNoCen	128.82	7.69	No. of Observation 9	123.14	No. of Observation 9
ENoCen	133.71	9.29	Degrees of Freedom 7	133.36	Degrees of Freedom 7
Mtn	133.45	7.46		119.89	
WSoCen	114.66	5.46	X Coefficient(s) 0.0458	103.94	X Coefficient(s) 0.0536
ESoCen	99.46	3.81	Std Err of Coef. 0.0139	85.83	Std Err of Coef. 0.0128
SoAtl	124.62	6.73	XCoef / S.E. = 3.3016	100.74	XCoef / S.E. = 4.1703

Part 3-A.

Calculation of Fractional Causation from Averaged PhysPops

1. Nonradiation rate is Adjusted Constant (Part 2, Col.C) = 0.8918
2. Radiation rate is Natl Adjusted MortRate (Part 1, Col.G = 7.6791) minus Nonradiation rate (0.8918) = 6.7873
3. 1980 Fractional Causation is radiation rate (6.7873) divided by OBSERVED Natl MR Part 1, Col.C= 8.2 = 0.83

Part 3-B.

Calculation of Fractional Causation from 1940 PhysPops

1. Nonradiation rate is Adjusted Constant (Part 2, Col.E) = 0.5316
2. Radiation rate is Natl Adjusted MortRate (Part 1, Col.G = 7.6791) minus Nonradiation rate (0.5316) = 7.1475
3. 1980 Fractional Causation is radiation rate (7.1475) divided by OBSERVED Natl MR Part 1, Col.C= 8.2 = 0.87