

Table 2-1.

| Women | 40-74years | | 40-64years | | 65-74years | |
|----------------|------------|-------------|------------|------------|------------|------------|
| | MetS(+) | MetS(-) | MetS(+) | MetS(-) | MetS(+) | MetS(-) |
| Proteinuria(+) | 3(5.5%) | 12(1.1%) | 1(3.9%) | 5(0.7%) | 2(6.9%) | 7(2.0%) |
| Proteinuria(-) | 52(94.6%) | 1038(98.9%) | 25(96.2%) | 693(99.3%) | 27(93.1%) | 345(98.0%) |
| Total | 55 | 1050 | 26 | 698 | 29 | 352 |

Table 2-2.

| Women | 40-74years | | 40-64years | | 65-74years | |
|---------|----------------|----------------|----------------|----------------|----------------|----------------|
| | Proteinuria(+) | Proteinuria(-) | Proteinuria(+) | Proteinuria(-) | Proteinuria(+) | Proteinuria(-) |
| MetS(+) | 3(20.0%) | 52(4.8%) | 1(16.7%) | 25(3.5%) | 2(22.2%) | 27(7.3%) |
| MetS(-) | 12(80.0%) | 1038(95.2%) | 5(83.3%) | 693(96.5%) | 7(77.8%) | 345(92.7%) |
| Total | 15 | 1090 | 6 | 718 | 9 | 372 |

Table 2-3-1.

| Women | 40-74years | | 40-64years | | 65-74years | |
|---------|------------|-------------|------------|------------|------------|------------|
| | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| MetS(+) | 0(0%) | 55(5.0%) | 0(0%) | 26(3.6%) | 0(0%) | 29(7.7%) |
| MetS(-) | 7(100.0%) | 1043(95.0%) | 1(100.0%) | 697(96.4%) | 6(100.0%) | 346(92.3%) |
| Total | 7 | 1098 | 1 | 723 | 6 | 375 |

Table 2-3-2.

| Women | 40-74years | | 40-64years | | 65-74years | |
|--------------------------------|------------|------------|------------|------------|------------|------------|
| | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| MetS / Hypercholesterolemia(+) | 1(14.3%) | 231(21.0%) | 0(0%) | 149(20.6%) | 1(16.7%) | 82(21.9%) |
| MetS / Hypercholesterolemia(-) | 6(85.7%) | 867(79.0%) | 1(100.0%) | 574(79.4%) | 5(83.3%) | 293(78.1%) |
| Total | 7 | 1098 | 1 | 723 | 6 | 375 |

Table 2-3-3.

| Women | 40-74years | | 40-64years | | 65-74years | |
|---------|------------|------------|------------|------------|------------|------------|
| | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| MetS(+) | 6(6.1%) | 49(4.9%) | 1(3.0%) | 25(3.6%) | 5(7.6%) | 24(7.6%) |
| MetS(-) | 93(93.9%) | 957(95.1%) | 32(97.0%) | 666(96.4%) | 61(92.4%) | 291(92.4%) |
| Total | 99 | 1006 | 33 | 691 | 66 | 315 |

Table 2-3-4.

| Women | 40-74years | | 40-64years | | 65-74years | |
|--------------------------------|------------|------------|------------|------------|------------|------------|
| | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| MetS / Hypercholesterolemia(+) | 24(24.2%) | 208(20.7%) | 5(15.2%) | 144(20.8%) | 19(28.8%) | 64(20.3%) |
| MetS / Hypercholesterolemia(-) | 75(75.8%) | 798(79.3%) | 28(84.9%) | 547(79.2%) | 47(71.2%) | 251(79.7%) |
| Total | 99 | 1006 | 33 | 691 | 66 | 315 |

Table 2-4-1.

| Women | 40-74years | | 40-64years | | 65-74years | |
|----------|------------|------------|------------|------------|------------|------------|
| | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| MetS(+)* | 0(0%) | 134(12.2%) | 0(0%) | 72(10.0%) | 0(0%) | 62(16.5%) |
| MetS(-)* | 7(100.0%) | 964(87.8%) | 1(100.0%) | 651(90.0%) | 6(100.0%) | 313(83.5%) |
| Total | 7 | 1098 | 1 | 723 | 6 | 375 |

*MetS excluded waist criteria

Table2-4-2.

| Women | 40-74years | | 40-64years | | 65-74years | |
|----------|------------|------------|------------|------------|------------|------------|
| | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| MetS(+)* | 13(13.1%) | 121(12.0%) | 3(9.1%) | 69(10.0%) | 10(15.2%) | 52(16.5%) |
| MetS(-)* | 86(86.9%) | 885(88.0%) | 30(90.9%) | 622(90.0%) | 56(84.9%) | 263(83.5%) |
| Total | 99 | 1006 | 33 | 691 | 66 | 315 |

*MetS excluded waist criteria

Table 2-5-1.

| Women | 40-74years | | 40-64years | | 65-74years | |
|---------------------------------|------------|------------|------------|------------|------------|------------|
| | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| MetS* / Hypercholesterolemia(+) | 1(14.3%) | 289(26.3%) | 0(0%) | 179(24.8%) | 1(16.7%) | 110(29.3%) |
| MetS* / Hypercholesterolemia(-) | 6(85.7%) | 809(73.7%) | 1(100.0%) | 544(75.2%) | 5(83.3%) | 265(70.7%) |
| Total | 7 | 1098 | 1 | 723 | 6 | 375 |

*MetS excluded waist criteria

Table 2-5-2.

| Women | 40-74years | | 40-64years | | 65-74years | |
|---------------------------------|------------|------------|------------|------------|------------|------------|
| | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| MetS* / Hypercholesterolemia(+) | 30(30.3%) | 260(25.8%) | 7(21.2%) | 172(24.9%) | 23(34.9%) | 88(27.9%) |
| MetS* / Hypercholesterolemia(-) | 69(69.7%) | 746(74.2%) | 26(78.8%) | 519(75.1%) | 43(65.2%) | 227(72.1%) |
| Total | 99 | 1006 | 33 | 691 | 66 | 315 |

*MetS excluded waist criteria

Table 2-6-1. Women, All(40-74years)

| | No. of riskfactors | | | |
|----------|--------------------|------------|------------|------------|
| | 0 | 1 | 2 | 3+ |
| CKD45(+) | 1(0.2%) | 4(1.0%) | 2(1.1%) | 0(0%) |
| CKD45(-) | 460(99.8%) | 381(99.0%) | 186(98.9%) | 71(100.0%) |
| Total | 461 | 385 | 188 | 71 |

Table 2-6-2. Women, 40-64years

| | No. of riskfactors | | | |
|----------|--------------------|------------|-------------|------------|
| | 0 | 1 | 2 | 3+ |
| CKD45(+) | 0(0%) | 1(0.5%) | 0(0%) | 0(0%) |
| CKD45(-) | 353(100.0%) | 218(99.5%) | 115(100.0%) | 37(100.0%) |
| Total | 353 | 219 | 115 | 37 |

Table 2-6-3. Women, 65-74years

| | No. of riskfactors | | | |
|----------|--------------------|------------|-----------|------------|
| | 0 | 1 | 2 | 3+ |
| CKD45(+) | 1(0.9%) | 3(1.8%) | 2(2.7%) | 0(0%) |
| CKD45(-) | 107(99.1%) | 163(98.2%) | 71(97.3%) | 34(100.0%) |
| Total | 108 | 166 | 73 | 34 |

Table 2-6-4. Women, All(40-74years)

| | No. of riskfactors | | | |
|----------|--------------------|------------|------------|-----------|
| | 0 | 1 | 2 | 3+ |
| CKD60(+) | 34(7.4%) | 32(8.3%) | 24(12.8%) | 9(12.7%) |
| CKD60(-) | 427(92.6%) | 353(91.7%) | 164(87.2%) | 62(87.3%) |
| Total | 461 | 385 | 188 | 71 |

Table 2-6-5. Women, 40-64years

| | No. of riskfactors | | | |
|----------|--------------------|------------|------------|-----------|
| | 0 | 1 | 2 | 3+ |
| CKD60(+) | 16(4.5%) | 8(3.7%) | 6(5.2%) | 3(8.1%) |
| CKD60(-) | 337(95.5%) | 211(96.4%) | 109(94.8%) | 34(91.9%) |
| Total | 353 | 219 | 115 | 37 |

Table 2-6-6. Women, 65-74years

| | No. of riskfactors | | | |
|----------|--------------------|------------|-----------|-----------|
| | 0 | 1 | 2 | 3+ |
| CKD60(+) | 18(16.7%) | 24(14.5%) | 18(24.7%) | 6(17.7%) |
| CKD60(-) | 90(83.3%) | 142(85.5%) | 55(75.3%) | 28(82.4%) |
| Total | 108 | 166 | 73 | 34 |

Table 3-1. Hazard ratios (HR) of incident DM according to metabolic syndrome among men

| | MetS (-) | MetS (+) | MetS IDF (-) | MetS IDF (+) |
|--|-----------|--------------------|--------------|--------------------|
| Total | | | | |
| No at risk | 812 | 249 | 809 | 252 |
| Cases / Person-years | 62 / 3769 | 45 / 1001 | 63 / 3750 | 44 / 1019 |
| Standardized incidence rate, per 1,000 | 16.0 | 45.0 | 15.9 | 45.1 |
| Age-adjusted HR | 1.00 | 2.73 (1.86 - 4.01) | 1.00 | 2.57 (1.75 - 3.78) |
| Multivariable HR* | 1.00 | 1.82 (1.15 - 2.88) | 1.00 | 1.68 (1.07 - 2.65) |
| Aged 40 to 64 years | | | | |
| No at risk | 538 | 155 | 525 | 168 |
| Cases / Person-years | 43 / 2548 | 33 / 639 | 42 / 2498 | 34 / 688 |
| Standardized incidence rate, per 1,000 | 14.6 | 49.8 | 15.8 | 41.8 |
| Age-adjusted HR | 1.00 | 3.01 (1.91 - 4.74) | 1.00 | 2.86 (1.82 - 4.51) |
| Multivariable HR* | 1.00 | 1.95 (1.13 - 3.37) | 1.00 | 1.83 (1.07 - 3.11) |
| Aged 65 to 74 years | | | | |
| No at risk | 274 | 94 | 284 | 84 |
| Cases / Person-years | 19 / 1221 | 12 / 361 | 21 / 1252 | 10 / 331 |
| Standardized incidence rate, per 1,000 | 15.8 | 31.6 | 16.7 | 30.6 |
| Age-adjusted HR | 1.00 | 2.12 (1.03 - 4.38) | 1.00 | 1.78 (0.84 - 3.78) |
| Multivariable HR* | 1.00 | 1.67 (0.68 - 4.12) | 1.00 | 1.27 (0.49 - 3.27) |

*Adjusted for systolic blood pressure, anti-hypertensive medication use, serum triglycerides, serum high density lipoprotein cholesterol, lipid-

Table 3-2. Hazard ratios (HR) of incident DM according to metabolic syndrome among women

| | MetS (-) | MetS (+) | MetS IDF (-) | MetS IDF (+) |
|--|-----------|---------------------|--------------|--------------------|
| Total | | | | |
| No at risk | 1645 | 144 | 850 | 940 |
| Cases / Person-years | 50 / 7992 | 18 / 595 | 16 / 4160 | 52 / 4435 |
| Standardized incidence rate, per 1,000 | 6.4 | 32.5 | 4.8 | 11.4 |
| Age-adjusted HR | 1.00 | 4.11 (2.37 - 7.14) | 1.00 | 2.67 (1.50 - 4.77) |
| Multivariable HR* | 1.00 | 2.69 (1.49 - 4.85) | 1.00 | 1.64 (0.85 - 3.18) |
| Aged 40 to 64 years | | | | |
| No at risk | 1238 | 88 | 715 | 611 |
| Cases / Person-years | 35 / 6194 | 13 / 353 | 12 / 3550 | 36 / 2997 |
| Standardized incidence rate, per 1,000 | 5.1 | 22.7 | 5.2 | 7.9 |
| Age-adjusted HR | 1.00 | 5.40 (2.82 - 10.34) | 1.00 | 3.03 (1.56 - 5.92) |
| Multivariable HR* | 1.00 | 3.87 (1.94 - 7.72) | 1.00 | 2.14 (1.00 - 4.61) |
| Aged 65 to 74 years | | | | |
| No at risk | 407 | 56 | 135 | 329 |
| Cases / Person-years | 15 / 1798 | 5 / 242 | 4 / 610 | 16 / 1437 |
| Standardized incidence rate, per 1,000 | 9.5 | 20.7 | 8.2 | 12.0 |
| Age-adjusted HR | 1.00 | 2.38 (0.86 - 6.55) | 1.00 | 1.65 (0.55 - 4.93) |
| Multivariable HR* | 1.00 | 1.22 (0.39 - 3.83) | 1.00 | 0.72 (0.20 - 2.61) |

*Adjusted for systolic blood pressure, anti-hypertensive medication use, serum triglycerides, serum high density lipoprotein cholesterol, lipid-

Table 4-1. Hazard ratios (HR) of incident DM according to the quartiles of waist circumference among men

| | Quartiles of waist circumference | | | |
|--|----------------------------------|--------------------|--------------------|--------------------|
| | Q1 | Q2 | Q3 | Q4 |
| Total | | | | |
| Median (range) of waist circumference, cm | 77 (63 - 81) | 84 (81 - 86) | 89 (87 - 91) | 96 (92 - 114) |
| No at risk | 274 | 250 | 269 | 268 |
| Cases / Person-years | 19 / 1185 | 24 / 1110 | 33 / 1241 | 31 / 1232 |
| Standardized incidence rate, per 1000 person-years | 13.3 | 21.0 | 27.4 | 26.1 |
| Age-adjusted HR | 1.00 | 1.35 (0.74 - 2.46) | 1.64 (0.93 - 2.89) | 1.57 (0.89 - 2.78) |
| Multivariable HR* | 1.00 | 0.97 (0.52 - 1.80) | 1.05 (0.58 - 1.90) | 0.91 (0.49 - 1.68) |
| Aged 40 to 64 years | | | | |
| Median (range) of waist circumference, cm | 77 (63 - 81) | 84 (81 - 86) | 89 (87 - 91) | 96 (92 - 114) |
| No at risk | 173 | 169 | 180 | 171 |
| Cases / Person-years | 10 / 772 | 16 / 790 | 27 / 824 | 23 / 802 |
| Standardized incidence rate, per 1000 person-years | 10.8 | 20.3 | 32.8 | 28.7 |
| Age-adjusted HR | 1.00 | 1.51 (0.69 - 3.34) | 2.39 (1.15 - 4.93) | 2.14 (1.02 - 4.50) |
| Multivariable HR* | 1.00 | 1.10 (0.49 - 2.47) | 1.55 (0.72 - 3.35) | 1.27 (0.57 - 2.81) |
| Aged 65 to 74 years | | | | |
| Median (range) of waist circumference, cm | 77 (65 - 81) | 85 (82 - 86) | 89 (87 - 91) | 96 (92 - 110) |
| No at risk | 101 | 81 | 89 | 97 |
| Cases / Person-years | 9 / 413 | 8 / 321 | 6 / 418 | 8 / 431 |
| Standardized incidence rate, per 1000 person-years | 22.0 | 24.8 | 14.3 | 17.8 |
| Age-adjusted HR | 1.00 | 1.14 (0.44 - 2.96) | 0.66 (0.24 - 1.88) | 0.85 (0.33 - 2.21) |
| Multivariable HR* | 1.00 | 0.71 (0.26 - 1.96) | 0.42 (0.14 - 1.24) | 0.46 (0.16 - 1.35) |

*Adjusted for systolic blood pressure, anti-hypertensive medication use, serum triglycerides, serum high density lipoprotein cholesterol,

Table 4-2. Hazard ratios (HR) of incident DM according to the quartiles of waist circumference among women

| | Quartiles of waist circumference | | | |
|--|----------------------------------|--------------------|--------------------|---------------------|
| | Q1 | Q2 | Q3 | Q4 |
| Total | | | | |
| Median (range) of waist circumference, cm | 73 (58 - 77) | 81 (78 - 83) | 87 (84 - 90) | 95 (91 - 123) |
| No at risk | 463 | 446 | 458 | 423 |
| Cases / Person-years | 8 / 2192 | 9 / 2229 | 19 / 2244 | 32 / 1929 |
| Standardized incidence rate, per 1000 person-years | 4.4 | 4.3 | 8.9 | 17.1 |
| Age-adjusted HR | 1.00 | 1.07 (0.41 - 2.78) | 2.16 (0.94 - 4.96) | 3.94 (1.78 - 8.70) |
| Multivariable HR* | 1.00 | 0.84 (0.32 - 2.19) | 1.53 (0.66 - 3.58) | 2.54 (1.12 - 5.74) |
| Aged 40 to 64 years | | | | |
| Median (range) of waist circumference, cm | 73 (58 - 77) | 81 (78 - 83) | 87 (84 - 90) | 95 (91 - 119) |
| No at risk | 376 | 343 | 336 | 271 |
| Cases / Person-years | 5 / 1843 | 6 / 1753 | 14 / 1696 | 23 / 1256 |
| Standardized incidence rate, per 1000 person-years | 2.8 | 3.4 | 8.3 | 18.3 |
| Age-adjusted HR | 1.00 | 1.19 (0.36 - 3.90) | 2.75 (0.98 - 7.67) | 5.54 (2.06 - 14.89) |
| Multivariable HR* | 1.00 | 0.99 (0.30 - 3.26) | 2.14 (0.75 - 6.07) | 4.00 (1.46 - 10.99) |
| Aged 65 to 74 years | | | | |
| Median (range) of waist circumference, cm | 73 (59 - 77) | 81 (78 - 83) | 87 (84 - 90) | 95 (91 - 123) |
| No at risk | 87 | 103 | 122 | 152 |
| Cases / Person-years | 3 / 350 | 3 / 476 | 5 / 548 | 9 / 673 |
| Standardized incidence rate, per 1000 person-years | 9.4 | 7.2 | 11.4 | 13.8 |
| Age-adjusted HR | 1.00 | 0.80 (0.16 - 3.95) | 1.12 (0.27 - 4.69) | 1.61 (0.44 - 5.95) |
| Multivariable HR* | 1.00 | 0.54 (0.11 - 2.75) | 0.50 (0.11 - 2.24) | 0.73 (0.18 - 2.86) |

*Adjusted for systolic blood pressure, anti-hypertensive medication use, serum triglycerides, serum high density lipoprotein cholesterol,

Table 5-1. Cumulative incidence of CKD60 rate per 1000 person-years among men

| Year | Incidence rate | Standardized incidence rate | Annual incidence rate |
|------|----------------|-----------------------------|-----------------------|
| 1 | 9.9 | 8.1 | 8.1 |
| 2 | 46.2 | 41.9 | 21.0 |
| 3 | 69.6 | 64.0 | 21.3 |
| 4 | 88.7 | 82.6 | 20.7 |
| 5 | 104.8 | 98.2 | 19.6 |

Table 5-2. Cumulative incidence of CKD45 rate per 1000 person-years among men

| Year | Incidence rate | Standardized incidence rate | Annual incidence rate |
|------|----------------|-----------------------------|-----------------------|
| 1 | 1.8 | 1.2 | 1.2 |
| 2 | 18.9 | 15.3 | 7.7 |
| 3 | 37.2 | 29.4 | 9.8 |
| 4 | 44.0 | 36.0 | 9.0 |
| 5 | 49.0 | 40.5 | 8.1 |

Table 5-3. Cumulative incidence of CKD60 rate per 1000 person-years among women

| Year | Incidence rate | Standardized incidence rate | Annual incidence rate |
|------|----------------|-----------------------------|-----------------------|
| 1 | 4.6 | 4.7 | 4.7 |
| 2 | 35.6 | 35.9 | 18.0 |
| 3 | 47.2 | 47.3 | 15.8 |
| 4 | 60.7 | 61.6 | 15.4 |
| 5 | 68.3 | 69.5 | 13.9 |

Table 5-4. Cumulative incidence of CKD45 rate per 1000 person-years among women

| Year | Incidence rate | Standardized incidence rate | Annual incidence rate |
|------|----------------|-----------------------------|-----------------------|
| 1 | 1.1 | 1.1 | 1.1 |
| 2 | 6.8 | 6.5 | 3.2 |
| 3 | 12.5 | 11.4 | 3.8 |
| 4 | 20.9 | 19.1 | 4.8 |
| 5 | 22.7 | 21.1 | 4.2 |

Table 6-1. Hazard ratios (HR) of incident CKD60 according to metabolic syndrome among men

| | MetS (-) | MetS (+) | MetS IDF (-) | MetS IDF (+) |
|--|-----------|--------------------|--------------|--------------------|
| No at risk | 605 | 201 | 605 | 203 |
| Cases / Person-years | 53 / 2759 | 28 / 823 | 54 / 2760 | 27 / 832 |
| Standardized incidence rate, per 1000 person-years | 18.4 | 31.5 | 18.9 | 29.9 |
| Age-adjusted HR | 1.00 | 1.69 (1.07 - 2.68) | 1.00 | 1.59 (1.00 - 2.52) |
| Multivariable HR* | 1.00 | 1.93 (1.05 - 3.56) | 1.00 | 1.68 (0.91 - 3.11) |
| Aged 40 to 64 years | | | | |
| No at risk | 453 | 137 | 442 | 150 |
| Cases / Person-years | 39 / 2108 | 19 / 599 | 38 / 2075 | 20 / 642 |
| Standardized incidence rate, per 1000 person-years | 16.8 | 29.1 | 16.9 | 27.2 |
| Age-adjusted HR | 1.00 | 1.71 (0.98 - 2.96) | 1.00 | 1.56 (0.90 - 2.68) |
| Multivariable HR* | 1.00 | 1.80 (0.84 - 3.86) | 1.00 | 1.51 (0.69 - 3.26) |
| Aged 65 to 74 years | | | | |
| No at risk | 152 | 64 | 163 | 53 |
| Cases / Person-years | 14 / 652 | 9 / 224 | 16 / 686 | 7 / 190 |
| Standardized incidence rate, per 1000 person-years | 23.0 | 41.4 | 25.7 | 36.7 |
| Age-adjusted HR | 1.00 | 1.68 (0.72 - 3.90) | 1.00 | 1.41 (0.58 - 3.46) |
| Multivariable HR* | 1.00 | 1.40 (0.45 - 4.37) | 1.00 | 0.94 (0.28 - 3.20) |

*Adjusted for baseline estimated glomerular filtration rate, serum albumin, proteinuria, drinking status, and smoking

Table 6-2. Hazard ratios (HR) of incident CKD60 according to metabolic syndrome among women

| | MetS (-) | MetS (+) | MetS IDF (-) | MetS IDF (+) |
|--|-----------|---------------------|--------------|--------------------|
| Total (aged 40 to 74 years) | | | | |
| No at risk | 1201 | 95 | 647 | 651 |
| Cases / Person-years | 90 / 5549 | 9 / 391 | 44 / 2954 | 55 / 2995 |
| Standardized incidence rate, per 1000 person-years | 17.0 | 16.0 | 17.6 | 15.8 |
| Age-adjusted HR | 1.00 | 1.11 (0.56 - 2.21) | 1.00 | 0.89 (0.59 - 1.35) |
| Multivariable HR* | 1.00 | 1.44 (0.52 - 3.99) | 1.00 | 0.80 (0.47 - 1.35) |
| Aged 40 to 64 years | | | | |
| No at risk | 959 | 62 | 559 | 462 |
| Cases / Person-years | 59 / 4507 | 5 / 253 | 31 / 2593 | 33 / 2167 |
| Standardized incidence rate, per 1000 person-years | 12.5 | 11.2 | 12.3 | 11.7 |
| Age-adjusted HR | 1.00 | 1.20 (0.48 - 3.02) | 1.00 | 1.01 (0.61 - 1.67) |
| Multivariable HR* | 1.00 | 1.43 (0.42 - 4.83) | 1.00 | 0.90 (0.45 - 1.79) |
| Aged 65 to 74 years | | | | |
| No at risk | 242 | 33 | 88 | 189 |
| Cases / Person-years | 31 / 1042 | 4 / 138 | 13 / 361 | 22 / 828 |
| Standardized incidence rate, per 1000 person-years | 30.8 | 29.4 | 36.6 | 27.6 |
| Age-adjusted HR | 1.00 | 1.02 (0.36 - 2.90) | 1.00 | 0.67 (0.34 - 1.35) |
| Multivariable HR* | 1.00 | 1.38 (0.17 - 11.52) | 1.00 | 0.57 (0.24 - 1.33) |

*Adjusted for baseline estimated glomerular filtration rate, serum albumin, drinking status, and smoking status

Table 6-3. Hazard ratios (HR) of incident CKD45 according to metabolic syndrome among men

| | MetS (-) | MetS (+) | MetS IDF (-) | MetS IDF (+) |
|--|-----------|--------------------|--------------|--------------------|
| No at risk | 829 | 284 | 828 | 288 |
| Cases / Person-years | 37 / 3917 | 23 / 1226 | 38 / 3901 | 22 / 1260 |
| Standardized incidence rate, per 1000 person-years | 8.5 | 15.0 | 8.7 | 14.2 |
| Age-adjusted HR | 1.00 | 1.99 (1.18 - 3.35) | 1.00 | 1.81 (1.07 - 3.05) |
| Multivariable HR* | 1.00 | 1.61 (0.69 - 3.79) | 1.00 | 0.94 (0.37 - 2.39) |
| Aged 40 to 64 years | | | | |
| No at risk | 552 | 183 | 539 | 198 |
| Cases / Person-years | 22 / 2664 | 14 / 822 | 22 / 2607 | 14 / 889 |
| Standardized incidence rate, per 1000 person-years | 7.3 | 13.1 | 7.4 | 11.8 |
| Age-adjusted HR | 1.00 | 2.05 (1.05 - 4.00) | 1.00 | 1.74 (0.89 - 3.41) |
| Multivariable HR* | 1.00 | 1.39 (0.42 - 4.62) | 1.00 | 0.83 (0.22 - 3.17) |
| Aged 65 to 74 years | | | | |
| No at risk | 277 | 101 | 289 | 90 |
| Cases / Person-years | 15 / 1253 | 9 / 404 | 16 / 1294 | 8 / 371 |
| Standardized incidence rate, per 1000 person-years | 12.4 | 22.0 | 12.8 | 21.5 |
| Age-adjusted HR | 1.00 | 1.93 (0.84 - 4.42) | 1.00 | 1.88 (0.80 - 4.45) |
| Multivariable HR* | 1.00 | 2.07 (0.60 - 7.18) | 1.00 | 1.10 (0.27 - 4.40) |

*Adjusted for baseline estimated glomerular filtration rate, serum albumin, drinking status, and smoking status

Table 6-4. Hazard ratios (HR) of incident CKD45 according to metabolic syndrome among women

| | MetS (-) | MetS (+) | MetS IDF (-) | MetS IDF (+) |
|--|-----------|---------------------|--------------|--------------------|
| Total (aged 40 to 74 years) | | | | |
| No at risk | 1671 | 148 | 849 | 972 |
| Cases / Person-years | 44 / 8129 | 6 / 633 | 18 / 4143 | 32 / 4627 |
| Standardized incidence rate, per 1000 person-years | 5.4 | 6.3 | 5.0 | 5.3 |
| Age-adjusted HR | 1.00 | 1.38 (0.58 - 3.26) | 1.00 | 1.13 (0.62 - 2.05) |
| Multivariable HR* | 1.00 | 0.91 (0.12 - 6.97) | 1.00 | 0.87 (0.32 - 2.38) |
| Aged 40 to 64 years | | | | |
| No at risk | 1258 | 89 | 715 | 632 |
| Cases / Person-years | 25 / 6280 | 3 / 383 | 13 / 3542 | 15 / 3121 |
| Standardized incidence rate, per 1000 person-years | 3.5 | 5.0 | 3.6 | 3.2 |
| Age-adjusted HR | 1.00 | 1.60 (0.48 - 5.38) | 1.00 | 1.01 (0.48 - 2.14) |
| Multivariable HR* | - | - | 1.00 | 0.74 (0.21 - 2.67) |
| Aged 65 to 74 years | | | | |
| No at risk | 413 | 59 | 134 | 340 |
| Cases / Person-years | 19 / 1849 | 3 / 250 | 5 / 602 | 17 / 1506 |
| Standardized incidence rate, per 1000 person-years | 10.9 | 10.5 | 8.8 | 11.5 |
| Age-adjusted HR | 1.00 | 1.21 (0.36 - 4.08) | 1.00 | 1.38 (0.51 - 3.75) |
| Multivariable HR* | 1.00 | 4.50 (0.48 - 42.30) | 1.00 | 1.34 (0.22 - 8.08) |

*Adjusted for baseline estimated glomerular filtration rate, serum albumin, drinking status, and smoking status

Table 7-1-1. Men, CKD60, 40-74 years

| No. of CKD riskfactors | No at risk | Pearson-years | Total death | | | | | CVD | | | | | Stroke | | | | | Cerebral infarction | | | | | Myocardial infarction | | | | |
|------------------------|------------|---------------|-------------|------|------|-------------|---------|-------|------|------|-------------|---------|--------|------|------|--------------|---------|---------------------|-----|------|-------------|---------|-----------------------|-----|------|--------------|---------|
| | | | Cases | MR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value |
| non-CKD+non-risks | 460 | 5,996 | 74 | 1234 | ref | - | - | 15 | 253 | ref | - | - | 9 | 151 | ref | - | - | 7 | 118 | ref | - | - | 2 | 33 | ref | - | - |
| non-CKD+risk 1 | 992 | 12,649 | 188 | 1486 | 1.10 | 0.84 - 1.45 | 0.48 | 56 | 452 | 1.65 | 0.93 - 2.92 | 0.09 | 41 | 330 | 1.88 | 0.91 - 3.87 | 0.09 | 25 | 201 | 1.47 | 0.63 - 3.41 | 0.37 | 6 | 47 | 1.58 | 0.32 - 7.83 | 0.58 |
| non-CKD+risk 2 | 912 | 11,109 | 161 | 1449 | 1.16 | 0.88 - 1.53 | 0.30 | 53 | 487 | 1.81 | 1.02 - 3.23 | 0.04 | 41 | 375 | 2.20 | 1.06 - 4.53 | 0.03 | 28 | 256 | 1.95 | 0.85 - 4.48 | 0.12 | 6 | 54 | 1.83 | 0.37 - 9.09 | 0.46 |
| non-CKD+risk 3+ | 921 | 11,269 | 132 | 1171 | 1.03 | 0.78 - 1.38 | 0.82 | 63 | 574 | 2.27 | 1.29 - 4.00 | 0.004 | 37 | 335 | 2.15 | 1.04 - 4.47 | 0.04 | 32 | 289 | 2.45 | 1.08 - 5.55 | 0.03 | 18 | 161 | 4.85 | 1.12 - 20.93 | 0.03 |
| CKD+non-risks | 54 | 651 | 16 | 2456 | 1.36 | 0.79 - 2.36 | 0.27 | 4 | 646 | 1.39 | 0.40 - 4.83 | 0.60 | 2 | 311 | 1.25 | 0.25 - 6.27 | 0.79 | 2 | 311 | 1.85 | 0.38 - 8.92 | 0.45 | 0 | 0 | - | - | - |
| CKD+risk 1 | 147 | 1,667 | 42 | 2519 | 1.27 | 0.87 - 1.86 | 0.22 | 8 | 487 | 1.33 | 0.56 - 3.16 | 0.51 | 6 | 364 | 1.57 | 0.55 - 4.42 | 0.40 | 2 | 121 | 0.62 | 0.13 - 3.02 | 0.56 | 2 | 120 | 3.15 | 0.44 - 22.64 | 0.25 |
| CKD+risk 2 | 164 | 1,920 | 42 | 2187 | 1.23 | 0.84 - 1.81 | 0.28 | 29 | 1592 | 4.54 | 2.42 - 8.53 | <0.001 | 23 | 1253 | 5.66 | 2.60 - 12.34 | <0.001 | 13 | 708 | 3.82 | 1.51 - 9.68 | 0.005 | 4 | 211 | 5.44 | 0.98 - 30.13 | 0.052 |
| CKD+risk 3+ | 262 | 2,747 | 74 | 2694 | 1.84 | 1.32 - 2.55 | 0.0003 | 28 | 1065 | 3.31 | 1.75 - 6.26 | 0.0002 | 15 | 560 | 2.83 | 1.23 - 6.56 | 0.015 | 11 | 411 | 2.58 | 0.99 - 6.72 | 0.053 | 9 | 332 | 9.24 | 1.96 - 43.57 | 0.005 |
| Total | 3912 | | 729 | | | | | 256 | | | | | 174 | | | | | 120 | | | | | 47 | | | | |

Table 7-1-2. Men, CKD60, 40-64 years

| No. of CKD riskfactors | No at risk | Pearson-years | Total death | | | | | CVD | | | | | Stroke | | | | | Cerebral infarction | | | | | Myocardial infarction | | | | |
|------------------------|------------|---------------|-------------|------|------|-------------|---------|-------|------|------|--------------|---------|--------|------|-------|--------------|---------|---------------------|-----|------|--------------|---------|-----------------------|-----|-------|---------------|---------|
| | | | Cases | MR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value |
| non-CKD+non-risks | 344 | 4,652 | 31 | 666 | ref | - | - | 8 | 173 | ref | - | - | 4 | 87 | ref | - | - | 3 | 65 | ref | - | - | 1 | 22 | ref | - | - |
| non-CKD+risk 1 | 696 | 9,117 | 81 | 888 | 1.21 | 0.80 - 1.84 | 0.37 | 29 | 324 | 1.72 | 0.78 - 3.76 | 0.18 | 19 | 211 | 2.13 | 0.72 - 6.29 | 0.17 | 10 | 111 | 1.49 | 0.41 - 5.42 | 0.55 | 5 | 55 | 2.68 | 0.31 - 23.03 | 0.37 |
| non-CKD+risk 2 | 637 | 8,095 | 68 | 840 | 1.20 | 0.78 - 1.84 | 0.41 | 26 | 326 | 1.71 | 0.77 - 3.79 | 0.19 | 22 | 275 | 2.72 | 0.93 - 7.94 | 0.07 | 14 | 175 | 2.39 | 0.68 - 8.35 | 0.17 | 2 | 25 | 1.22 | 0.11 - 13.53 | 0.87 |
| non-CKD+risk 3+ | 700 | 8,881 | 70 | 788 | 1.14 | 0.75 - 1.75 | 0.54 | 42 | 483 | 2.64 | 1.24 - 5.64 | 0.01 | 24 | 274 | 2.92 | 1.01 - 8.44 | 0.048 | 20 | 229 | 3.26 | 0.96 - 11.02 | 0.06 | 13 | 147 | 6.37 | 0.83 - 48.75 | 0.07 |
| CKD+non-risks | 27 | 370 | 4 | 1082 | 0.95 | 0.33 - 2.70 | 0.92 | 0 | 0 | - | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - |
| CKD+risk 1 | 62 | 747 | 12 | 1607 | 1.82 | 0.93 - 3.55 | 0.08 | 0 | 0 | - | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - |
| CKD+risk 2 | 73 | 922 | 16 | 1736 | 2.09 | 1.14 - 3.83 | 0.02 | 16 | 1832 | 8.18 | 3.48 - 19.24 | <0.001 | 11 | 1240 | 10.66 | 3.37 - 33.75 | <0.001 | 7 | 789 | 8.57 | 2.19 - 33.46 | 0.002 | 3 | 330 | 12.84 | 1.33 - 124.22 | 0.03 |
| CKD+risk 3+ | 138 | 1,537 | 26 | 1691 | 2.28 | 1.35 - 3.87 | 0.002 | 13 | 888 | 4.43 | 1.82 - 10.77 | 0.001 | 5 | 332 | 3.22 | 0.86 - 12.08 | 0.08 | 3 | 199 | 2.33 | 0.46 - 11.66 | 0.30 | 8 | 532 | 25.27 | 3.11 - 205.22 | 0.003 |
| Total | 2677 | | 308 | | | | | 134 | | | | | 85 | | | | | 57 | | | | | 32 | | | | |

Table 7-1-3. Men, CKD60, 65-74 years

| No. of CKD riskfactors | No at risk | Pearson-years | Total death | | | | | CVD | | | | | Stroke | | | | | Cerebral infarction | | | | | Myocardial infarction | | | | |
|------------------------|------------|---------------|-------------|------|------|-------------|---------|-------|------|------|-------------|---------|--------|------|------|--------------|---------|---------------------|-----|------|--------------|---------|-----------------------|-----|------|--------------|---------|
| | | | Cases | MR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value |
| non-CKD+non-risks | 116 | 1,344 | 43 | 3200 | ref | - | - | 7 | 530 | ref | - | - | 5 | 377 | ref | - | - | 4 | 302 | ref | - | - | 1 | 75 | ref | - | - |
| non-CKD+risk 1 | 296 | 3,532 | 107 | 3029 | 1.03 | 0.72 - 1.47 | 0.88 | 27 | 790 | 1.55 | 0.67 - 3.59 | 0.31 | 22 | 641 | 1.67 | 0.63 - 4.44 | 0.31 | 15 | 437 | 1.50 | 0.49 - 4.56 | 0.48 | 1 | 28 | 0.45 | 0.03 - 7.29 | 0.57 |
| non-CKD+risk 2 | 275 | 3,014 | 93 | 3086 | 1.14 | 0.79 - 1.65 | 0.49 | 27 | 924 | 1.86 | 0.80 - 4.31 | 0.15 | 19 | 645 | 1.72 | 0.64 - 4.65 | 0.29 | 14 | 475 | 1.67 | 0.54 - 5.12 | 0.37 | 4 | 133 | 2.31 | 0.25 - 21.35 | 0.46 |
| non-CKD+risk 3+ | 221 | 2,388 | 62 | 2597 | 0.99 | 0.67 - 1.47 | 0.96 | 21 | 916 | 1.80 | 0.76 - 4.25 | 0.18 | 13 | 561 | 1.52 | 0.54 - 4.28 | 0.43 | 12 | 518 | 1.85 | 0.59 - 5.75 | 0.29 | 5 | 211 | 2.98 | 0.34 - 26.00 | 0.32 |
| CKD+non-risks | 27 | 282 | 12 | 4258 | 1.76 | 0.92 - 3.37 | 0.09 | 4 | 1604 | 2.34 | 0.60 - 9.12 | 0.22 | 2 | 732 | 2.11 | 0.41 - 10.98 | 0.37 | 2 | 732 | 2.80 | 0.51 - 15.48 | 0.24 | 0 | 0 | - | - | - |
| CKD+risk 1 | 85 | 921 | 30 | 3259 | 1.11 | 0.69 - 1.77 | 0.67 | 8 | 892 | 1.75 | 0.63 - 4.85 | 0.28 | 6 | 667 | 1.79 | 0.54 - 5.91 | 0.34 | 2 | 222 | 0.76 | 0.14 - 4.18 | 0.75 | 2 | 218 | 2.96 | 0.26 - 33.62 | 0.38 |
| CKD+risk 2 | 91 | 999 | 26 | 2603 | 0.96 | 0.59 - 1.57 | 0.87 | 13 | 1371 | 2.69 | 1.06 - 6.79 | 0.04 | 12 | 1266 | 3.43 | 1.20 - 9.83 | 0.02 | 6 | 633 | 2.19 | 0.61 - 7.84 | 0.23 | 1 | 101 | 1.38 | 0.08 - 22.62 | 0.82 |
| CKD+risk 3+ | 124 | 1,210 | 48 | 3968 | 1.68 | 1.10 - 2.56 | 0.02 | 15 | 1289 | 2.64 | 1.07 - 6.55 | 0.04 | 10 | 853 | 2.48 | 0.84 - 7.34 | 0.10 | 8 | 683 | 2.57 | 0.76 - 8.65 | 0.13 | 1 | 83 | 1.06 | 0.07 - 17.38 | 0.97 |
| Total | 1235 | | 421 | | | | | 122 | | | | | 89 | | | | | 63 | | | | | 15 | | | | |

*Adjusted for age, drinking status (never-drinker, ex-drinker, current drinker of <23.0g, 23.0 to 45.9g, 46.0 to 68.9g, >= 69.0 g ethanol per day), and smoking status (never-smoker, ex-smoker, <20 and >= 20 cigarettes per day).

†MR: Mortality rate per 100,000 person-years, IR: incidence rate per 100,000 person-years, HR: hazard ratio.

Table 7-2-1. Men, CKD45, 40-74 years

| No. of CKD riskfactors | No at risk | Pearson-years | Total death | | | | | CVD | | | | | Stroke | | | | | Cerebral infarction | | | | | Myocardial infarction | | | | |
|------------------------|------------|---------------|-------------|------|------|-------------|---------|-------|------|------|--------------|---------|--------|------|-------|--------------|---------|---------------------|------|-------|--------------|---------|-----------------------|-----|-------|---------------|---------|
| | | | Cases | MR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value |
| non-CKD+non-risks | 501 | 6,504 | 85 | 1307 | ref | - | - | 17 | 265 | ref | - | - | 9 | 139 | ref | - | - | 7 | 108 | ref | - | - | 2 | 31 | ref | - | - |
| non-CKD+risk 1 | 1109 | 13,992 | 219 | 1565 | 1.09 | 0.85 - 1.41 | 0.50 | 64 | 467 | 1.73 | 1.00 - 3.00 | 0.05 | 47 | 342 | 2.19 | 1.06 - 4.50 | 0.03 | 27 | 196 | 1.55 | 0.67 - 3.57 | 0.30 | 8 | 57 | 2.04 | 0.43 - 9.64 | 0.37 |
| non-CKD+risk 2 | 1032 | 12,514 | 186 | 1486 | 1.11 | 0.86 - 1.44 | 0.44 | 72 | 589 | 2.21 | 1.28 - 3.81 | 0.004 | 57 | 464 | 3.03 | 1.49 - 6.19 | 0.002 | 37 | 301 | 2.45 | 1.09 - 5.52 | 0.03 | 9 | 72 | 2.58 | 0.56 - 11.97 | 0.23 |
| non-CKD+risk 3+ | 1102 | 13,152 | 184 | 1399 | 1.16 | 0.90 - 1.51 | 0.26 | 81 | 632 | 2.50 | 1.46 - 4.29 | 0.001 | 47 | 364 | 2.59 | 1.26 - 5.32 | 0.01 | 39 | 302 | 2.73 | 1.22 - 6.11 | 0.01 | 22 | 168 | 5.54 | 1.30 - 23.60 | 0.02 |
| CKD+non-risks | 13 | 144 | 5 | 3474 | 2.68 | 1.08 - 6.64 | 0.03 | 2 | 1477 | 6.29 | 1.44 - 27.50 | 0.01 | 2 | 1477 | 10.66 | 2.28 - 49.79 | 0.003 | 2 | 1477 | 13.10 | 2.69 - 63.66 | 0.001 | 0 | 0 | - | - | - |
| CKD+risk 1 | 30 | 325 | 11 | 3385 | 2.21 | 1.18 - 4.16 | 0.01 | 0 | 0 | - | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - |
| CKD+risk 2 | 44 | 516 | 17 | 3297 | 2.30 | 1.36 - 3.88 | 0.00 | 10 | 2034 | 7.23 | 3.27 - 16.02 | <0.001 | 7 | 1414 | 8.39 | 3.09 - 22.75 | <0.001 | 4 | 808 | 5.70 | 1.66 - 19.59 | 0.01 | 1 | 195 | 7.14 | 0.64 - 79.44 | 0.11 |
| CKD+risk 3+ | 81 | 864 | 22 | 2545 | 1.92 | 1.20 - 3.08 | 0.01 | 10 | 1262 | 4.61 | 2.08 - 10.22 | 0.0002 | 5 | 606 | 3.97 | 1.32 - 11.96 | 0.01 | 4 | 485 | 3.73 | 1.08 - 12.83 | 0.04 | 5 | 597 | 19.82 | 3.78 - 104.02 | 0.0004 |
| Total | 3912 | | 729 | | | | | 256 | | | | | 174 | | | | | 120 | | | | | 47 | | | | |

Table 7-2-2. Men, CKD45, 40-64 years

| No. of CKD riskfactors | No at risk | Pearson-years | Total death | | | | | CVD | | | | | Stroke | | | | | Cerebral infarction | | | | | Myocardial infarction | | | | |
|------------------------|------------|---------------|-------------|------|------|--------------|---------|-------|------|-------|--------------|---------|--------|------|-------|--------------|---------|---------------------|------|-------|--------------|---------|-----------------------|-----|-------|---------------|---------|
| | | | Cases | MR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value |
| non-CKD+non-risks | 364 | 4,920 | 34 | 691 | ref | - | - | 8 | 164 | ref | - | - | 4 | 82 | ref | - | - | 3 | 61 | ref | - | - | 1 | 20 | ref | - | - |
| non-CKD+risk 1 | 736 | 9,610 | 85 | 884 | 1.22 | 0.82 - 1.82 | 0.33 | 29 | 307 | 1.78 | 0.81 - 3.89 | 0.15 | 19 | 200 | 2.19 | 0.74 - 6.45 | 0.16 | 10 | 105 | 1.52 | 0.42 - 5.54 | 0.53 | 5 | 52 | 2.84 | 0.33 - 24.40 | 0.34 |
| non-CKD+risk 2 | 685 | 8,699 | 77 | 885 | 1.27 | 0.84 - 1.90 | 0.26 | 35 | 410 | 2.34 | 1.08 - 5.08 | 0.03 | 28 | 326 | 3.49 | 1.22 - 10.01 | 0.02 | 17 | 198 | 2.91 | 0.85 - 9.96 | 0.09 | 4 | 46 | 2.53 | 0.28 - 22.68 | 0.41 |
| non-CKD+risk 3+ | 792 | 9,864 | 89 | 902 | 1.31 | 0.88 - 1.95 | 0.18 | 47 | 487 | 2.88 | 1.36 - 6.10 | 0.01 | 26 | 267 | 3.05 | 1.06 - 8.76 | 0.04 | 21 | 216 | 3.28 | 0.97 - 11.05 | 0.06 | 16 | 163 | 7.98 | 1.06 - 60.27 | 0.04 |
| CKD+non-risks | 7 | 102 | 1 | 984 | 1.42 | 0.19 - 10.41 | 0.73 | 0 | 0 | - | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - |
| CKD+risk 1 | 22 | 254 | 8 | 3155 | 2.93 | 1.34 - 6.38 | 0.007 | 0 | 0 | - | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - |
| CKD+risk 2 | 25 | 318 | 7 | 2200 | 2.78 | 1.23 - 6.29 | 0.014 | 7 | 2348 | 12.11 | 4.37 - 33.55 | <0.001 | 5 | 1659 | 15.69 | 4.19 - 58.77 | <0.001 | 4 | 1327 | 16.38 | 3.64 - 73.74 | 0.00 | 1 | 318 | 14.94 | 0.93 - 241.35 | 0.06 |
| CKD+risk 3+ | 46 | 555 | 7 | 1262 | 1.89 | 0.83 - 4.27 | 0.13 | 8 | 1628 | 10.04 | 3.74 - 26.90 | <0.001 | 3 | 572 | 6.36 | 1.41 - 28.61 | 0.02 | 2 | 382 | 5.16 | 0.85 - 31.28 | 0.07 | 5 | 947 | 57.44 | 6.62 - 498.82 | <0.001 |
| Total | 2677 | | 308 | | | | | 134 | | | | | 85 | | | | | 57 | | | | | 32 | | | | |

Table 7-2-3. Men, CKD45, 65-74 years

| No. of CKD riskfactors | No at risk | Pearson-years | Total death | | | | | CVD | | | | | Stroke | | | | | Cerebral infarction | | | | | Myocardial infarction | | | | |
|------------------------|------------|---------------|-------------|------|------|-------------|---------|-------|------|-------|--------------|---------|--------|------|-------|--------------|---------|---------------------|------|-------|---------------|---------|-----------------------|-----|------|--------------|---------|
| | | | Cases | MR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value |
| non-CKD+non-risks | 137 | 1,583 | 51 | 3221 | ref | - | - | 9 | 585 | ref | - | - | 5 | 320 | ref | - | - | 4 | 256 | ref | - | - | 1 | 63 | ref | - | - |
| non-CKD+risk 1 | 373 | 4,381 | 134 | 3058 | 0.99 | 0.71 - 1.37 | 0.94 | 35 | 825 | 1.65 | 0.76 - 3.57 | 0.21 | 28 | 657 | 2.01 | 0.77 - 5.24 | 0.15 | 17 | 399 | 1.57 | 0.52 - 4.69 | 0.42 | 3 | 69 | 1.27 | 0.13 - 12.36 | 0.84 |
| non-CKD+risk 2 | 347 | 3,815 | 109 | 2857 | 0.99 | 0.71 - 1.39 | 0.97 | 37 | 1006 | 2.03 | 0.94 - 4.38 | 0.07 | 29 | 783 | 2.42 | 0.93 - 6.30 | 0.07 | 20 | 540 | 2.15 | 0.73 - 6.35 | 0.16 | 5 | 132 | 2.59 | 0.30 - 22.65 | 0.39 |
| non-CKD+risk 3+ | 310 | 3,288 | 95 | 2889 | 1.08 | 0.76 - 1.52 | 0.68 | 34 | 1078 | 2.16 | 1.00 - 4.68 | 0.051 | 21 | 659 | 2.10 | 0.79 - 5.59 | 0.14 | 18 | 565 | 2.34 | 0.79 - 6.96 | 0.13 | 6 | 184 | 3.06 | 0.36 - 25.74 | 0.30 |
| CKD+non-risks | 6 | 42 | 4 | 9464 | 3.50 | 1.24 - 9.87 | 0.02 | 2 | 5934 | 10.88 | 2.26 - 52.48 | 0.003 | 2 | 5934 | 16.50 | 3.11 - 87.67 | 0.001 | 2 | 5934 | 21.20 | 3.73 - 120.52 | 0.001 | 0 | 0 | - | - | - |
| CKD+risk 1 | 8 | 71 | 3 | 4201 | 1.62 | 0.50 - 5.24 | 0.42 | 0 | 0 | - | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - |
| CKD+risk 2 | 19 | 198 | 10 | 5063 | 2.00 | 1.01 - 3.98 | 0.048 | 3 | 1550 | 3.49 | 0.91 - 13.36 | 0.07 | 2 | 1033 | 3.57 | 0.68 - 18.71 | 0.13 | 0 | 0 | - | - | - | 0 | 0 | - | - | - |
| CKD+risk 3+ | 35 | 310 | 15 | 4845 | 2.00 | 1.12 - 3.60 | 0.02 | 2 | 664 | 1.32 | 0.28 - 6.24 | 0.73 | 2 | 664 | 2.10 | 0.40 - 10.95 | 0.38 | 2 | 664 | 2.63 | 0.47 - 14.54 | 0.27 | 0 | 0 | - | - | - |
| Total | 1235 | | 421 | | | | | 122 | | | | | 89 | | | | | 63 | | | | | 15 | | | | |

*Adjusted for age, drinking status (never-drinker, ex-drinker, current drinker of <23.0g, 23.0 to 45.9g, 46.0 to 68.9g, >= 69.0 g ethanol per day), and smoking status (never-smoker, ex-smoker, <20 and >= 20 cigarettes per day).

†MR: Mortality rate per 100,000 person-years, IR: incidence rate per 100,000 person-years, HR: hazard ratio.

Table 8-1-1. Women, CKD60, 40-74 years

| No. of CKD riskfactors | No at risk | Pearson-years | Total death | | | | | CVD | | | | | Stroke | | | | Cerebral infarction | | | | Myocardial infarction | | | | | | |
|------------------------|------------|---------------|-------------|------|------|-------------|---------|-------|-----|------|-------------|---------|--------|-----|------|--------------|---------------------|-------|-----|------|-----------------------|---------|-------|-----|------|--------------|---------|
| | | | Cases | MR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value |
| non-CKD+non-risks | 1217 | 16,550 | 50 | 302 | ref | - | - | 13 | 79 | ref | - | - | 8 | 49 | ref | - | - | 4 | 24 | ref | - | - | 2 | 12 | ref | - | - |
| non-CKD+risk 1 | 1844 | 24,546 | 122 | 497 | 1.01 | 0.73 - 1.41 | 0.94 | 53 | 218 | 1.88 | 1.02 - 3.47 | 0.04 | 46 | 189 | 2.69 | 1.26 - 5.74 | 0.011 | 28 | 115 | 2.95 | 1.02 - 8.52 | 0.046 | 6 | 24 | 1.38 | 0.27 - 6.95 | 0.70 |
| non-CKD+risk 2 | 1494 | 19,336 | 127 | 657 | 1.17 | 0.84 - 1.63 | 0.35 | 41 | 214 | 1.60 | 0.85 - 3.01 | 0.15 | 31 | 162 | 1.99 | 0.91 - 4.38 | 0.09 | 12 | 63 | 1.31 | 0.42 - 4.14 | 0.64 | 7 | 36 | 1.86 | 0.38 - 9.24 | 0.45 |
| non-CKD+risk 3+ | 1329 | 16,545 | 123 | 743 | 1.23 | 0.88 - 1.72 | 0.23 | 55 | 338 | 2.30 | 1.24 - 4.28 | 0.01 | 48 | 295 | 3.32 | 1.55 - 7.12 | 0.002 | 28 | 172 | 3.24 | 1.12 - 9.43 | 0.03 | 4 | 24 | 1.18 | 0.21 - 6.71 | 0.85 |
| CKD+non-risks | 78 | 1,066 | 8 | 750 | 1.33 | 0.63 - 2.80 | 0.46 | 2 | 189 | 1.45 | 0.33 - 6.47 | 0.62 | 1 | 94 | 1.19 | 0.15 - 9.51 | 0.87 | 1 | 94 | 2.10 | 0.23 - 18.94 | 0.51 | 1 | 94 | 5.27 | 0.47 - 59.24 | 0.18 |
| CKD+risk 1 | 173 | 2,292 | 30 | 1309 | 1.55 | 0.98 - 2.46 | 0.06 | 13 | 576 | 3.19 | 1.46 - 6.99 | 0.004 | 11 | 486 | 4.44 | 1.76 - 11.20 | 0.002 | 4 | 177 | 2.51 | 0.62 - 10.18 | 0.20 | 2 | 88 | 3.28 | 0.44 - 24.39 | 0.25 |
| CKD+risk 2 | 208 | 2,701 | 25 | 925 | 1.22 | 0.75 - 1.98 | 0.43 | 12 | 457 | 2.71 | 1.22 - 6.01 | 0.015 | 8 | 302 | 2.97 | 1.10 - 8.01 | 0.03 | 2 | 76 | 1.23 | 0.22 - 6.79 | 0.82 | 4 | 149 | 5.97 | 1.04 - 34.19 | 0.04 |
| CKD+risk 3+ | 264 | 3,271 | 41 | 1253 | 1.44 | 0.94 - 2.20 | 0.09 | 20 | 632 | 3.26 | 1.59 - 6.70 | 0.001 | 16 | 501 | 4.26 | 1.78 - 10.19 | 0.0011 | 12 | 376 | 5.00 | 1.57 - 15.95 | 0.007 | 1 | 31 | 1.15 | 0.10 - 13.36 | 0.91 |
| Total | 6607 | | 526 | | | | | 209 | | | | | 169 | | | | | 91 | | | | | 27 | | | | |

Table 8-1-2. Women, CKD60, 40-64 years

| No. of CKD riskfactors | No at risk | Pearson-years | Total death | | | | | CVD | | | | | Stroke | | | | Cerebral infarction | | | | Myocardial infarction | | | | | | |
|------------------------|------------|---------------|-------------|-----|------|-------------|---------|-------|-----|------|--------------|---------|--------|-----|-------|--------------|---------------------|-------|-----|-------|-----------------------|---------|-------|----|------|--------------|---------|
| | | | Cases | MR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value |
| non-CKD+non-risks | 1103 | 15,099 | 33 | 219 | ref | - | - | 5 | 33 | ref | - | - | 3 | 20 | ref | - | - | 1 | 7 | ref | - | - | 1 | 7 | ref | - | - |
| non-CKD+risk 1 | 1424 | 19,326 | 49 | 254 | 0.92 | 0.59 - 1.44 | 0.71 | 25 | 130 | 3.01 | 1.14 - 7.90 | 0.03 | 23 | 120 | 4.60 | 1.37 - 15.41 | 0.013 | 11 | 57 | 6.21 | 0.80 - 48.47 | 0.08 | 3 | 16 | 1.62 | 0.17 - 15.77 | 0.68 |
| non-CKD+risk 2 | 1054 | 14,023 | 44 | 314 | 1.06 | 0.67 - 1.69 | 0.79 | 23 | 166 | 3.41 | 1.28 - 9.05 | 0.014 | 18 | 129 | 4.43 | 1.29 - 15.19 | 0.02 | 5 | 36 | 3.35 | 0.39 - 29.03 | 0.27 | 4 | 29 | 2.69 | 0.29 - 24.68 | 0.38 |
| non-CKD+risk 3+ | 861 | 11,133 | 53 | 476 | 1.50 | 0.96 - 2.35 | 0.08 | 30 | 274 | 5.28 | 2.02 - 13.83 | <0.0001 | 25 | 227 | 7.19 | 2.14 - 24.16 | 0.0014 | 13 | 118 | 10.01 | 1.29 - 77.93 | 0.03 | 4 | 36 | 3.21 | 0.35 - 29.65 | 0.30 |
| CKD+non-risks | 54 | 761 | 2 | 263 | 0.93 | 0.22 - 3.90 | 0.92 | 0 | 0 | - | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - |
| CKD+risk 1 | 93 | 1,269 | 8 | 630 | 1.67 | 0.76 - 3.67 | 0.20 | 4 | 318 | 4.91 | 1.29 - 18.70 | 0.02 | 3 | 238 | 5.94 | 1.17 - 30.16 | 0.03 | 0 | 0 | - | - | - | 1 | 79 | 5.30 | 0.32 - 89.11 | 0.25 |
| CKD+risk 2 | 115 | 1,514 | 7 | 462 | 1.31 | 0.57 - 3.01 | 0.52 | 5 | 339 | 5.89 | 1.67 - 20.73 | 0.006 | 4 | 270 | 7.53 | 1.65 - 34.31 | 0.009 | 1 | 68 | 5.22 | 0.32 - 84.88 | 0.25 | 1 | 66 | 5.01 | 0.29 - 85.48 | 0.27 |
| CKD+risk 3+ | 117 | 1,505 | 9 | 598 | 1.55 | 0.73 - 3.30 | 0.26 | 8 | 538 | 8.34 | 2.66 - 26.16 | <0.0001 | 6 | 403 | 10.19 | 2.49 - 41.76 | 0.0013 | 3 | 202 | 13.74 | 1.39 - 136.06 | 0.03 | 1 | 67 | 4.62 | 0.27 - 78.25 | 0.29 |
| Total | 4821 | | 205 | | | | | 100 | | | | | 82 | | | | | 34 | | | | | 15 | | | | |

Table 8-1-3. Women, CKD60, 65-74 years

| No. of CKD riskfactors | No at risk | Pearson-years | Total death | | | | | CVD | | | | | Stroke | | | | Cerebral infarction | | | | Myocardial infarction | | | | | | |
|------------------------|------------|---------------|-------------|------|------|-------------|---------|-------|-----|------|-------------|---------|--------|-----|------|-------------|---------------------|-------|-----|------|-----------------------|---------|-------|-----|------|--------------|---------|
| | | | Cases | MR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value |
| non-CKD+non-risks | 114 | 1,451 | 17 | 1172 | ref | - | - | 8 | 570 | ref | - | - | 5 | 352 | ref | - | - | 3 | 211 | ref | - | - | 1 | 69 | ref | - | - |
| non-CKD+risk 1 | 420 | 5,220 | 73 | 1398 | 1.21 | 0.71 - 2.05 | 0.49 | 28 | 549 | 0.95 | 0.43 - 2.08 | 0.89 | 23 | 450 | 1.24 | 0.47 - 3.27 | 0.66 | 17 | 332 | 1.49 | 0.44 - 5.09 | 0.53 | 3 | 58 | 0.91 | 0.09 - 8.71 | 0.93 |
| non-CKD+risk 2 | 440 | 5,313 | 83 | 1562 | 1.39 | 0.83 - 2.35 | 0.21 | 18 | 342 | 0.58 | 0.25 - 1.34 | 0.21 | 13 | 246 | 0.69 | 0.24 - 1.93 | 0.47 | 7 | 133 | 0.60 | 0.15 - 2.31 | 0.45 | 3 | 57 | 0.73 | 0.07 - 7.29 | 0.79 |
| non-CKD+risk 3+ | 468 | 5,412 | 70 | 1294 | 1.26 | 0.74 - 2.14 | 0.40 | 25 | 472 | 0.85 | 0.38 - 1.89 | 0.69 | 23 | 434 | 1.25 | 0.48 - 3.30 | 0.65 | 15 | 283 | 1.31 | 0.38 - 4.53 | 0.67 | 0 | 0 | - | - | - |
| CKD+non-risks | 24 | 305 | 6 | 1967 | 1.71 | 0.68 - 4.35 | 0.26 | 2 | 675 | 1.19 | 0.25 - 5.63 | 0.82 | 1 | 335 | 0.94 | 0.11 - 8.06 | 0.96 | 1 | 335 | 1.59 | 0.17 - 15.33 | 0.69 | 1 | 330 | 5.38 | 0.34 - 86.18 | 0.23 |
| CKD+risk 1 | 80 | 1,023 | 22 | 2151 | 1.69 | 0.89 - 3.18 | 0.11 | 9 | 899 | 1.50 | 0.58 - 3.89 | 0.41 | 8 | 796 | 2.13 | 0.70 - 6.54 | 0.18 | 4 | 398 | 1.68 | 0.38 - 7.53 | 0.50 | 1 | 98 | 1.41 | 0.09 - 22.49 | 0.81 |
| CKD+risk 2 | 93 | 1,187 | 18 | 1516 | 1.35 | 0.69 - 2.62 | 0.38 | 7 | 608 | 1.09 | 0.39 - 3.00 | 0.87 | 4 | 343 | 1.01 | 0.27 - 3.77 | 0.98 | 1 | 86 | 0.42 | 0.04 - 4.03 | 0.45 | 3 | 256 | 3.47 | 0.35 - 34.25 | 0.29 |
| CKD+risk 3+ | 147 | 1,766 | 32 | 1812 | 1.55 | 0.86 - 2.81 | 0.15 | 12 | 714 | 1.18 | 0.48 - 2.90 | 0.72 | 10 | 586 | 1.60 | 0.55 - 4.70 | 0.39 | 9 | 528 | 2.27 | 0.61 - 8.40 | 0.22 | 0 | 0 | - | - | - |
| Total | 1786 | | 321 | | | | | 109 | | | | | 87 | | | | | 57 | | | | | 12 | | | | |

*Adjusted for age, drinking status (never-drinker, ex-drinker, current drinker of <23.0g, 23.0 to 45.9g, 46.0 to 68.9g, >= 69.0 g ethanol per day), and smoking status (never-smoker, ex-smoker, <20 and >= 20 cigarettes per day).
†MR: Mortality rate per 100,000 person-years, IR: incidence rate per 100,000 person-years, HR: hazard ratio.

Table 8-2-1. Women, CKD45, 40-74 years

| No. of CKD riskfactors | No at risk | Pearson-years | Total death | | | | | CVD | | | | | Stroke | | | | | Cerebral infarction | | | | | Myocardial infarction | | | | |
|------------------------|------------|---------------|-------------|------|------|--------------|---------|-------|------|------|--------------|---------|--------|------|-------|--------------|---------|---------------------|-----|------|--------------|---------|-----------------------|-------|---------------|---------------|---------|
| | | | Cases | MR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value |
| non-CKD+non-risks | 1286 | 17,497 | 56 | 320 | ref | - | 14 | 80 | ref | - | 9 | 52 | ref | - | 5 | 29 | ref | - | 2 | 11 | ref | - | 2 | 11 | ref | - | - |
| non-CKD+risk 1 | 1996 | 26,587 | 145 | 545 | 1.05 | 0.77 - 1.43 | 0.77 | 62 | 236 | 1.98 | 1.10 - 3.57 | 0.02 | 53 | 201 | 2.68 | 1.31 - 5.47 | 0.007 | 31 | 118 | 2.52 | 0.97 - 6.55 | 0.06 | 8 | 30 | 1.74 | 0.36 - 8.30 | 0.49 |
| non-CKD+risk 2 | 1666 | 21,593 | 143 | 662 | 1.13 | 0.82 - 1.54 | 0.45 | 49 | 229 | 1.69 | 0.93 - 3.09 | 0.09 | 36 | 168 | 1.97 | 0.94 - 4.13 | 0.07 | 13 | 61 | 1.10 | 0.39 - 3.12 | 0.86 | 10 | 46 | 2.45 | 0.52 - 11.45 | 0.26 |
| non-CKD+risk 3+ | 1525 | 19,049 | 149 | 782 | 1.21 | 0.89 - 1.66 | 0.23 | 69 | 369 | 2.46 | 1.37 - 4.44 | 0.003 | 59 | 315 | 3.34 | 1.63 - 6.82 | 0.001 | 36 | 192 | 3.06 | 1.18 - 7.94 | 0.02 | 5 | 26 | 1.30 | 0.25 - 6.95 | 0.76 |
| CKD+non-risks | 9 | 119 | 2 | 1680 | 4.64 | 1.13 - 19.07 | 0.03 | 1 | 854 | 8.74 | 1.14 - 66.85 | 0.04 | 0 | 0 | - | - | - | 0 | 0 | - | - | 1 | 854 | 60.07 | 5.13 - 704.06 | 0.0011 | |
| CKD+risk 1 | 21 | 250 | 7 | 2796 | 2.96 | 1.34 - 6.53 | 0.007 | 4 | 1684 | 8.30 | 2.69 - 25.66 | <0.001 | 4 | 1684 | 13.42 | 4.05 - 44.48 | <0.001 | 1 | 421 | 4.74 | 0.54 - 41.33 | 0.16 | 0 | 0 | - | - | - |
| CKD+risk 2 | 36 | 444 | 9 | 2025 | 2.83 | 1.39 - 5.75 | 0.004 | 4 | 967 | 6.03 | 1.96 - 18.53 | 0.002 | 3 | 725 | 7.09 | 1.90 - 26.50 | 0.004 | 1 | 242 | 3.41 | 0.39 - 29.50 | 0.27 | 1 | 225 | 10.14 | 0.87 - 118.68 | 0.06 |
| CKD+risk 3+ | 68 | 767 | 15 | 1955 | 2.26 | 1.27 - 4.03 | 0.006 | 6 | 806 | 3.99 | 1.51 - 10.55 | 0.005 | 5 | 672 | 5.29 | 1.74 - 16.07 | 0.003 | 4 | 537 | 5.87 | 1.54 - 22.39 | 0.01 | 0 | 0 | - | - | - |
| Total | 6607 | | 526 | | | | 209 | | | | | 169 | | | | | | | | | | 91 | | | | 27 | |

Table 8-2-2. Women, CKD45, 40-64 years

| No. of CKD riskfactors | No at risk | Pearson-years | Total death | | | | | CVD | | | | | Stroke | | | | | Cerebral infarction | | | | | Myocardial infarction | | | | |
|------------------------|------------|---------------|-------------|------|------|--------------|---------|-------|------|-------|---------------|---------|--------|------|-------|--------------|---------|---------------------|-----|------|-------------|---------|-----------------------|----|------|--------------|---------|
| | | | Cases | MR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value |
| non-CKD+non-risks | 1151 | 15,771 | 34 | 216 | ref | - | 5 | 32 | ref | - | 3 | 19 | ref | - | 1 | 6 | ref | - | 1 | 6 | ref | - | 1 | 6 | ref | - | - |
| non-CKD+risk 1 | 1507 | 20,479 | 54 | 264 | 0.96 | 0.62 - 1.48 | 0.85 | 27 | 133 | 3.14 | 1.20 - 8.21 | 0.02 | 24 | 118 | 0.21 | 0.06 - 0.72 | 0.012 | 11 | 54 | 0.17 | 0.02 - 1.30 | 0.09 | 4 | 20 | 2.05 | 0.23 - 18.61 | 0.52 |
| non-CKD+risk 2 | 1145 | 15,235 | 48 | 315 | 1.08 | 0.69 - 1.69 | 0.73 | 27 | 179 | 3.85 | 1.47 - 10.09 | 0.006 | 21 | 139 | 1.07 | 0.60 - 1.92 | 0.82 | 6 | 40 | 0.66 | 0.24 - 1.78 | 0.41 | 5 | 33 | 3.19 | 0.37 - 27.87 | 0.29 |
| non-CKD+risk 3+ | 950 | 12,317 | 59 | 479 | 1.52 | 0.98 - 2.35 | 0.06 | 36 | 297 | 5.89 | 2.28 - 15.24 | <0.001 | 30 | 247 | 1.73 | 1.01 - 2.98 | 0.047 | 16 | 132 | 1.95 | 0.90 - 4.23 | 0.09 | 5 | 41 | 3.62 | 0.41 - 31.98 | 0.25 |
| CKD+non-risks | 6 | 90 | 1 | 1109 | 5.44 | 0.73 - 40.45 | 0.098 | 0 | 0 | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - | 0 | 0 | - | - | - | |
| CKD+risk 1 | 10 | 116 | 3 | 2591 | 9.05 | 2.67 - 30.69 | <0.001 | 2 | 1858 | 47.85 | 9.01 - 254.28 | <0.001 | 2 | 1858 | 15.64 | 3.58 - 68.33 | 0.0003 | 0 | 0 | - | - | - | 0 | 0 | - | - | - |
| CKD+risk 2 | 24 | 302 | 3 | 993 | 3.02 | 0.91 - 10.06 | 0.07 | 1 | 351 | 5.62 | 0.64 - 49.43 | 0.12 | 1 | 351 | 1.95 | 0.26 - 14.72 | 0.52 | 0 | 0 | - | - | - | 0 | 0 | - | - | - |
| CKD+risk 3+ | 28 | 322 | 3 | 933 | 2.78 | 0.84 - 9.13 | 0.09 | 2 | 630 | 11.45 | 2.19 - 59.88 | 0.004 | 1 | 315 | 1.98 | 0.27 - 14.70 | 0.51 | 0 | 0 | - | - | - | 0 | 0 | - | - | - |
| Total | 4821 | | 205 | | | | 100 | | | | | 82 | | | | | | | | | | 34 | | | | 15 | |

Table 8-2-3. Women, CKD45, 65-74 years

| No. of CKD riskfactors | No at risk | Pearson-years | Total death | | | | | CVD | | | | | Stroke | | | | | Cerebral infarction | | | | | Myocardial infarction | | | | |
|------------------------|------------|---------------|-------------|------|------|--------------|---------|-------|------|------|--------------|---------|--------|------|------|--------------|---------|---------------------|-----|------|--------------|---------|-----------------------|-------|----------------|---------------|---------|
| | | | Cases | MR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value | Cases | IR | HR | 95% CI | P value |
| non-CKD+non-risks | 135 | 1,727 | 22 | 1274 | ref | - | 9 | 538 | ref | - | 6 | 355 | ref | - | 4 | 237 | ref | - | 1 | 58 | ref | - | 1 | 58 | ref | - | - |
| non-CKD+risk 1 | 489 | 6,109 | 91 | 1490 | 1.17 | 0.73 - 1.86 | 0.51 | 35 | 586 | 1.07 | 0.51 - 2.23 | 0.85 | 29 | 484 | 1.33 | 0.55 - 3.21 | 0.52 | 20 | 334 | 1.33 | 0.45 - 3.89 | 0.60 | 4 | 66 | 1.20 | 0.13 - 10.77 | 0.87 |
| non-CKD+risk 2 | 521 | 6,358 | 95 | 1494 | 1.23 | 0.77 - 1.96 | 0.38 | 22 | 350 | 0.64 | 0.29 - 1.39 | 0.26 | 15 | 238 | 0.67 | 0.26 - 1.72 | 0.40 | 7 | 111 | 0.45 | 0.13 - 1.55 | 0.21 | 5 | 79 | 1.18 | 0.13 - 10.61 | 0.88 |
| non-CKD+risk 3+ | 575 | 6,732 | 90 | 1337 | 1.16 | 0.73 - 1.86 | 0.53 | 33 | 504 | 0.95 | 0.45 - 1.98 | 0.88 | 29 | 441 | 1.26 | 0.52 - 3.04 | 0.61 | 20 | 304 | 1.25 | 0.43 - 3.65 | 0.69 | 0 | 0 | - | - | - |
| CKD+non-risks | 3 | 29 | 1 | 3461 | 4.03 | 0.54 - 29.95 | 0.17 | 1 | 3709 | 7.54 | 0.95 - 59.78 | 0.06 | 0 | 0 | - | - | - | 0 | 0 | - | - | 1 | 3709 | 84.66 | 5.00 - 1433.23 | 0.002 | |
| CKD+risk 1 | 11 | 135 | 4 | 2973 | 2.05 | 0.71 - 5.97 | 0.19 | 2 | 1539 | 2.30 | 0.50 - 10.72 | 0.29 | 2 | 1539 | 3.37 | 0.68 - 16.82 | 0.14 | 1 | 770 | 2.55 | 0.28 - 22.95 | 0.41 | 0 | 0 | - | - | - |
| CKD+risk 2 | 12 | 142 | 6 | 4219 | 3.04 | 1.23 - 7.52 | 0.02 | 3 | 2337 | 3.78 | 1.02 - 14.07 | 0.047 | 2 | 1558 | 3.71 | 0.74 - 18.51 | 0.11 | 1 | 779 | 2.51 | 0.28 - 22.65 | 0.41 | 1 | 703 | 13.55 | 0.83 - 221.87 | 0.07 |
| CKD+risk 3+ | 40 | 446 | 12 | 2693 | 2.21 | 1.09 - 4.48 | 0.03 | 4 | 937 | 1.63 | 0.50 - 5.30 | 0.42 | 4 | 937 | 2.40 | 0.67 - 8.51 | 0.18 | 4 | 937 | 3.41 | 0.85 - 13.71 | 0.08 | 0 | 0 | - | - | - |
| Total | 1786 | | 321 | | | | 109 | | | | | 87 | | | | | | | | | | 57 | | | | 12 | |

*Adjusted for age, drinking status (never-drinker, ex-drinker, current drinker of <23.0g, 23.0 to 45.9g, 46.0 to 68.9g, >= 69.0 g ethanol per day), and smoking status (never-smoker, ex-smoker, <20 and >= 20 cigarettes per day).

†MR: Mortality rate per 100,000 person-years, IR: incidence rate per 100,000 person-years, HR: hazard ratio.

厚生労働科学研究 循環器疾患・糖尿病等生活習慣病対策総合研究事業
特定健診・保健指導における健診項目等の見直しに関する研究
分担研究報告書

メタボリックシンドロームと尿蛋白、CRE の関連

～地域、職域健診における検討～

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研究要旨: メタボリックシンドローム(MetS)と尿蛋白、CRE の関連を検討する目的で、地域・職域健診の健診データのうち、MetS 有無における、蛋白尿、慢性腎臓病(CKD)の分析を行った。

地域健診については、2011 年度健診受診者のうち、心血管疾患、癌既往がない 40-74 歳 1,865 名(男性 726 名、女性 1,139 名、平均年齢:男性 64.5±8.1 歳、女性 62.3±8.5 歳)を対象とした。職域健診については、2012 年度健診受診者のうち、A企業は心血管疾患がなく、尿蛋白所見がある 40-74 歳 47,838 名(男性 32,879 名、女性 14,959 名、平均年齢:男性 49.7±6.3 歳、女性 48.0±5.7 歳)を、B企業は心血管疾患がなく、尿蛋白所見がある 40-64 歳 22,958 名(男性 21,548 名、女性 1,410 名、平均年齢男性 49.3±5.8 歳、女性 44.7±4.6 歳)を対象に分析を行った。

- 1) MetS 有病率、蛋白尿有所見率を検討した。
- 2) CKD 有無別の MetS 有病率を検討した。
- 3) リスク数別の CKD 有病率を検討した。
- 4) 尿蛋白へ及ぼす要因の検討

市町村 40-74 歳、企業 40-64 歳の蛋白尿有所見率は男性 2.0~5.2%、女性 1.3~3.2%、MetS 有病率は男性 11.5~21.2%、女性 2.8~9.1%であった。また、MetS 該当者の蛋白尿有所見率は男性 7.9~18.4%、女性 6.3~12.5%で女性より男性で高い傾向であった。CKD 有無別の MetS 有病率では、eGFR カットオフ値を 60 から 45 ml/min にすると有病率が高くなった。血圧、血糖、脂質、肥満の MetS リスク数が増加するほど、CKD 有病率が増大した。また、eGFR カットオフ値を 60 から 45 ml/min に変更すると、リスク 0 個での CKD 該当率が 40-64 歳男性では 4.3%~6.9%が 0.0%~1.4%へ、40-64 歳女性では 4.3%~7.2%が 0.4%~1.7%と低下した。尿蛋白へ及ぼす因子は①MetS 該当、②男性、③年齢、であり、保険者は有意ではなかった。

Mets 該当者では MetS 非該当者より蛋白尿有所見率が高く、特定保健指導において支援が可能と考えられた。CKD 発症予防、進展予防の観点から、Mets リスク数を増やさないような生活習慣改善支援が必要と考えられた。しかし eGFR のカットオフ値は引き続き検討が必要と考えられた。

A. 研究目的

特定健診は、内臓脂肪型肥満に基づいた生活習慣病対策として、糖尿病、高血圧症、脂質異常症等の発症、あるいは重症化や合併症への進

行の予防に重点を置いた重要な取り組みとして位置付けられている。また、CKD は高齢化とともに増加しており、メタボリックシンドローム(MetS)は慢性腎臓病(CKD)発症との関わりが報

告されている。そこで、本研究では、メタボリックシンドローム(MetS)と尿蛋白、CRE の関連を検討する目的で、地域・職域健保の健診データのうち、MetS 有無における、蛋白尿、慢性腎臓病(CKD)の分析を行った。

B. 研究方法

【対象】①2011 年度市町村健診受診した心血管疾患、癌既往がなく、尿蛋白所見がある 40-74 歳 1,865 名(男性 726 名、女性 1,139 名)を、職域健診については、2012 年度健診受診者のうち、②A企業は心血管疾患がなく、尿蛋白所見がある 40-74 歳 47,838 名(男性 32,879 名、女性 14,959 名)を、③B企業は心血管疾患がなく、尿蛋白所見がある 40-64 歳 22,958 名(男性 21,548 名、女性 1,410 名)を対象とした。

【方法】

永井班共通の分析方法により、下記 1)～3)の検討を実施した。

1)MetS 有病率、蛋白尿有所見率の検討

MetS はウエスト周囲長 \geq 男性 85cm、女性 90cm に加え、血圧(収縮期血圧 \geq 130mmHg または拡張期血圧 \geq 85mmHg)、耐糖能(空腹時血糖 \geq 110mg/dl または HbA1c(NGSP) \geq 6.5%)、脂質(TG \geq 150mg/dl または HDL-C $<$ 40mg/dl)のいずれか 2 項目以上該当とした。蛋白尿については+以上を所見有りとし、性、年代別ごとに検討した。

2)CKD 有無別の MetS 有病率の検討

CRE より eGFR を算出($eGFR=194 \times CRE^{-1.094} \times \text{年齢} \times^{-0.287}$ (女性は $\times 0.739$))し、eGFR $<$ 60ml/min、eGFR $<$ 45ml/min それぞれについて、性、年代別ごとに検討した。また MetS の定義を、i)現行の MetS 基準に加え、高コレステロール血症(LDL-C160mg/dl 以上)のいずれか該当、ii)血圧高値、脂質異常、高血糖の 2 項目該当、iii)血圧高値、脂質異常、高血糖の 2 項目該当に加え、高コレステロール血症(LDL-C160mg/dl 以上)の

いずれか該当にそれぞれ変更して、MetS 有病率を検討した。

3)リスク数別の CKD 有病率の検討

血圧高値、高血糖、高 TG、低 HDL-C、肥満(ウエスト周囲長 \geq 男性 85cm、女性 \geq 90cm)の合併数(0 個、1 個、2 個、3 個以上)別の CKD 有病率を eGFR $<$ 60ml/min、eGFR $<$ 45ml/min それぞれについて、性、年代別ごとに CKD 有病率を検討した。

4)尿蛋白へ及ぼす要因の検討

尿蛋白へ影響する因子を検討するため、従属変数は尿蛋白有無(有 1、無 0)、説明変数は、性別(男性 1、女性 2)、年齢、MetS(該当 1、非該当 0)、保険者(市町村 1、企業 2)として、ロジスティック回帰を実施した。

解析には、統計解析ソフトウェア PASW Statistics 22 を使用し、統計学的有意水準は $p<0.05$ とした。

(倫理面の配慮)

健康保険組合による健診データ分析は保険者業務として実施しており、保険組合加入者には了解を得ている。また本研究においては個人が特定できないよう、匿名化したデータセットを使用し分析した。

C. 研究結果

市町村健診の平均年齢は男性 64.5 歳、女性 62.3 歳、企業健診では男性 49.7 歳、49.3 歳、女性 48.0 歳、44.7 歳であったため、市町村健診は 40-64 歳、65-74 歳について、企業健診については 40-64 歳について主に述べる。

1)MetS 有病率、蛋白尿有所見率の検討

市町村健診を図表 1、2、A企業健診を図表 3、4、B企業健診を図表 5、6 に示す。

MetS 有病率は、市町村健診では 40-64 歳男性では 19.6%、女性 5.2%、65-74 歳男性では 21.2%、女性 9.1%であり、男性が女性より多かった。企業健診では 40-64 歳男性 11.5% (A)、16.9%

(B)、女性 2.8% (A)、3.9% (B) であり、企業間に若干の差があるが、女性より男性が多かった。また、同年齢の市町村よりも企業において低値であった。

尿蛋白有所見率は、市町村健診では 40-64 歳男性では 5.2%、女性 1.8%、65-74 歳男性では 4.8%、女性 1.3% であり、男性が女性より多かった。企業健診では 40-64 歳男性 2.8%(A)、3.2%(B)、女性 2.0% (A)、2.0% (B) であり、男性では同年齢の市町村よりも低値であった。

男性 MetS 該当者のうち尿蛋白有所見率は男性で 7.9~18.4%、女性は 6.3~12.5% であった。企業間は同程度であったが、同年齢の市町村では高値であった。

男性の尿蛋白該当者のうち MetS 有病率は 40-64 歳男性で 36.3~69.2%、女性は 13.3~36.4% であり、企業間は同程度であったが、同年齢の市町村で高値であった。

2) CKD 有無別の MetS 有病率の検討

i) 現行の MetS 基準に加え、高コレステロール血症 (LDL-C160mg/dl 以上) のいずれか該当の有病率

市町村の MetS 有病率は、eGFR<60ml/min において 40-64 歳男性 38.2%、女性 6.8%、65-74 歳男性 30.9%、女性 10.0% であり、eGFR<45 ml/min における有病率は 40-64 歳男性 64.3%、女性 33.3%、65-74 歳男性 40.0%、女性 33.3% と、eGFR <45 ml/min における有病率が増加した。企業でも同様にみると、40-64 歳男性 25.3% から 36.3% (A)、30.8% から 41.0% (B) へ、40-64 歳女性 6.8% から 13.2% (A)、9.6% から 13.8% (B) へ有病率が増加した。

MetS、高コレステロール血症のいずれか該当の有病率は、eGFR<60ml/min および eGFR <45 ml/min それぞれ、市町村男性 40-64 歳 47.1%、71.4%、65-74 歳 37.5%、50.0%、企業 40-64 歳男性 34.6%、44.1% (A)、40.9%、49.0% (B) であった。市町村女性では、40-64 歳 27.0%、41.7%、65-74 歳 29.0%、44.4%、企業 40-64 歳女性では、

23.2%、23.8% (A)、19.3%、17.2% (B) であった。

ii) 血圧高値、脂質異常、高血糖の 2 項目該当の有病率

eGFR<60ml/min における有病率は市町村 40-64 歳男性 52.9%、女性 25.7%、65-74 歳男性 47.1%、女性 41.0%、eGFR<45ml/min における有病率は 40-64 歳男性 71.4%、女性 58.3%、65-74 歳男性 56.7%、女性 77.8% であった。企業 40-64 歳男性の eGFR<60ml/min における有病率は 36.9% (A)、42.9% (B)、40-64 歳女性では 15.1% (A)、4.5% (B)、eGFR<45ml/min における有病率は男性 49.1% (A)、55.4% (B)、女性 23.5% (A)、13.8% (B) であった。

iii) 血圧高値、脂質異常、高血糖の 2 項目該当に加え、高コレステロール血症 (LDL-C160 mg/dl 以上) のいずれか該当

eGFR<60 および eGFR<45 ml/min における有病率は、市町村男性 40-64 歳 55.9%、78.6%、65-74 歳 50.7%、63.3%、企業 40-64 歳男性 44.8%、54.6% (A)、51.3%、61.4% (B) であった。市町村女性では、40-64 歳 44.6%、58.3%、65-74 歳 55.0%、77.8%、企業 40-64 歳女性では、29.7%、31.7% (A)、22.9%、17.2% (B) であった。

3) リスク数別の CKD 有病率の検討

合併数 0 個の eGFR <60、<45 ml/min の該当率をみると、市町村 40-64 歳男性 6.9%、0.0%、65-74 歳男性 19.7%、4.2%、市町村 40-64 歳女性 7.2%、0.4%、市町村 65-74 歳女性 15.5%、0.0% であった。企業では 40-64 歳男性 4.3%、1.3% (A)、6.4%、1.4% (B)、40-64 歳女性 5.2%、1.4% (A)、4.3%、1.7% (B) であった。

4) 尿蛋白へ及ぼす要因の検討

MetS (Exp (B) 4.179、95%信頼区間 3.775-4.626、 $p < 0.001$)、性別 (Exp (B) 0.874、95%信頼区間 0.773-0.987、 $p = 0.031$)、年齢 (Exp (B) 1.023、95%信頼区間 1.016-1.031、 $p < 0.001$) で有意差を認め、保険者では有意差を認めなかった。

D. 考察

MetS と尿蛋白、CRE の関連を検討する目的で、地域・職域健保の健診データのうち、MetS 有無における、蛋白尿、CKD の分析を行った。

MetS と尿蛋白の該当率、有所見率を検討したところ、40-64 歳において、女性より男性において高値であった。住民健診を対象にした研究では、尿蛋白有所見率は女性では 2~3%程度、男性は 3~6%で女性より高値であるとされており、本対象集団の尿蛋白有所見率は同様の傾向であると考えられた。また、どの集団においても、Mets 該当者では MetS 非該当者より蛋白尿有所見率が高く、MetS を対象とした特定保健指導において、CKD 発症、進展予防の生活習慣指導が重要と考えられた。

今回、市町村と企業の尿蛋白有所見率が大きく異なったが、平均年齢が市町村で高いことが影響していると考えられた。そこで、尿蛋白に及ぼす要因をロジスティック回帰分析にて検討したところ、保険者の影響は認めず、MetS 該当、性別、年齢が関与することがわかった。このことから、男性や高齢者、特に MetS 該当者への生活習慣改善支援が必要であると考えられた。

MetS 有病率を、eGFR カットオフ値ごとにみると、eGFR<45 において<60ml/min より MetS 有病率が増大した。現行の MetS 診断基準に加え、高コレステロール血症を含む MetS 有病率では、企業に比べ、市町村ではカットオフ値が eGFR<45 ml/min において、有病率が増加した。現行の MetS 診断基準からウエスト周囲長を除外し、血圧、脂質、血糖にて判定した MetS 有病率は、現行の MetS 基準の有病率よりも、どちらのカットオフ値も増大した。WC を除外した MetS に高コレステロール血症を加えた有病率が、企業B女性集団を除いて、最も高かった。性差、健保差があるものの、eGFR カットオフ値は 60 より 45 ml/min で MetS 有病率が高くなることから、ハイリスク者の検出においてはカットオフ値の検討が必要と考えられた。

リスク合併数別の CKD 有病率をみると、eGFR

カットオフ値を 60 ml/min から 45 ml/min に変更すると、リスク 0 個での CKD 該当率が男性では 0.0%~4.2%、女性では 0.0%~4.1%と低下した。とくにカットオフ値が eGFR<60 ml/min でリスク合併数が 0 個の市町村 65 歳~74 歳の CKD 有病率が男性 15.5%、女性 19.7%と高値であったことから、年齢に伴う eGFR 低下を反映するカットオフ値の検討が必要と考えられた。

リスク項目である、血圧、血糖、脂質、肥満のリスクの重なりがあれば特定健診後の特定保健指導者として選定される。CKD の生活指導として、減塩、BMI の是正、禁煙、節酒などが挙げられている。これらの生活習慣改善項目は、MetS に基づいた保健指導に合致しており、従来の保健指導の範疇で CKD の生活指導が可能であると考えられた。より多くの対象者に MetS 指導と合わせて CKD の生活指導を実施するには、eGFR カットオフ値についての検討が必要と考えられた。また、65 歳以上の対象者についての保健指導は、動機づけ支援となることから、対象者への重点的な生活習慣支援や経過観察受診のアドバイス等の検討が必要と考えられる。

E. 結論

健診項目の在り方を検討する目的で、地域・職域健保の健診データのうち、尿蛋白、CKD の分析を行った。

Mets 該当者では MetS 非該当者より蛋白尿有所見率が高く、特定保健指導において支援が可能と考えられた。CKD 発症予防、進展予防の観点から、Mets リスク数を増やさないような生活習慣改善支援が必要と考えられた。しかし eGFR のカットオフ値は引き続き検討が必要と考えられた。

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G. 研究発表

なし

(学会発表)

H. 知的所有権の出願・登録状況

該当なし

図表 1) 市町村健診 男性

| 1) | 40-74years | | 40-64years | | 65-74years | | |
|----------------|------------|------------|------------|-----------|------------|------------|---------|
| | Men | Mets(+) | Mets(-) | Mets(+) | Mets(-) | Mets(+) | Mets(-) |
| Proteinuria(+) | 20(13.3%) | 16(2.8%) | 9(18.4%) | 4(2.0%) | 11(10.9%) | 12(3.2%) | |
| Proteinuria(-) | 130(86.7%) | 560(97.2%) | 40(81.6%) | 197(98.0) | 90(89.1%) | 363(96.8%) | |
| Total | 150 | 576 | 49 | 201 | 101 | 375 | |

| | 40-74years | | 40-64years | | 65-74years | | |
|---------|------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | Men | Proteinuria(+) | Proteinuria(-) | Proteinuria(+) | Proteinuria(-) | Proteinuria(+) | Proteinuria(-) |
| Mets(+) | 20(55.6%) | 130(18.8%) | 9(69.2%) | 40(16.9%) | 11(47.8%) | 90(19.9%) | |
| Mets(-) | 16(44.4%) | 560(81.2%) | 4(30.8%) | 197(83.1) | 12(52.2%) | 363(80.1%) | |
| Total | 36 | 690 | 13 | 237 | 23 | 453 | |

| 2) i) | 40-74years | | 40-64years | | 65-74years | | |
|---------|------------|------------|------------|-----------|------------|------------|----------|
| | Men | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| Mets(+) | 21(47.7%) | 129(18.9%) | 9(64.3%) | 40(16.9%) | 12(40.0) | 89(20.0%) | |
| Mets(-) | 23(52.3%) | 553(81.1) | 5(35.7%) | 196(83.1) | 18(60.0) | 357(80.0%) | |
| Total | 44 | 682 | 14 | 236 | 30 | 446 | |

| | 40-74years | | 40-64years | | 65-74years | | |
|---------------------|------------|------------|------------|------------|------------|------------|----------|
| | Men | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| Mets / highLDL-C(+) | 25(56.8%) | 197(28.9%) | 10(71.4%) | 66(28.0%) | 15(50.0) | 131(29.4%) | |
| Mets / highLDL-C(-) | 19(43.2%) | 485(71.1%) | 4(28.6%) | 170(72.0%) | 15(50.0) | 315(70.6%) | |
| Total | 44 | 682 | 14 | 236 | 30 | 446 | |

| | 40-74years | | 40-64years | | 65-74years | | |
|---------|------------|------------|------------|------------|------------|------------|----------|
| | Men | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| Mets(+) | 55(32.4%) | 95(17.1%) | 13(38.2%) | 36(16.7%) | 42(30.9%) | 59(17.4%) | |
| Mets(-) | 115(67.6%) | 461(82.9%) | 21(61.8%) | 180(83.3%) | 94(69.1%) | 281(82.6%) | |
| Total | 170 | 556 | 34 | 216 | 136 | 340 | |

| 2) ii) | 40-74years | | 40-64years | | 65-74years | | |
|---------------------|------------|------------|------------|------------|------------|------------|----------|
| | Men | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| Mets / highLDL-C(+) | 67(39.4%) | 155(27.9%) | 16(47.1%) | 60(27.8%) | 51(37.5%) | 95(27.9%) | |
| Mets / highLDL-C(-) | 103(60.6%) | 401(72.1%) | 18(52.9%) | 156(72.2%) | 85(62.5%) | 245(72.1%) | |
| Total | 170 | 556 | 34 | 216 | 136 | 340 | |

| | 40-74years | | 40-64years | | 65-74years | | |
|----------------------|------------|------------|------------|------------|------------|------------|----------|
| | Men | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| Mets(+) [※] | 27(61.4%) | 229(33.6%) | 10(71.4%) | 71(30.1%) | 17(56.7%) | 158(35.4%) | |
| Mets(-) [※] | 17(38.6%) | 453(66.4%) | 4(28.6%) | 165(69.9%) | 13(43.3%) | 288(64.6%) | |
| Total | 44 | 682 | 14 | 236 | 30 | 446 | |

※Mets excluded waist criteria

| 2) iii) | 40-74years | | 40-64years | | 65-74years | | |
|----------------------|------------|------------|------------|------------|------------|------------|----------|
| | Men | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| Mets(+) [※] | 82(48.2%) | 174(31.3%) | 18(52.9%) | 63(29.2%) | 64(47.1%) | 111(32.6%) | |
| Mets(-) [※] | 88(51.8%) | 382(68.7%) | 16(47.1%) | 153(70.8%) | 72(52.9%) | 229(67.4%) | |
| Total | 170 | 556 | 34 | 216 | 136 | 340 | |

※Mets excluded waist criteria

| | 40-74years | | 40-64years | | 65-74years | | |
|----------------------------------|------------|------------|------------|------------|------------|------------|----------|
| | Men | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| Mets [※] / highLDL-C(+) | 30(68.2%) | 286(41.9%) | 11(78.6%) | 93(39.4%) | 19(63.3%) | 193(43.3%) | |
| Mets [※] / highLDL-C(-) | 14(31.8%) | 396(58.1%) | 3(21.4%) | 143(60.6%) | 11(36.7%) | 253(56.7%) | |
| Total | 44 | 682 | 14 | 236 | 30 | 446 | |

※Mets excluded waist criteria

| | 40-74years | | 40-64years | | 65-74years | | |
|----------------------------------|------------|------------|------------|------------|------------|------------|----------|
| | Men | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| Mets [※] / highLDL-C(+) | 88(51.8%) | 228(41.0%) | 19(55.9%) | 85(39.4%) | 69(50.7%) | 143(42.1%) | |
| Mets [※] / highLDL-C(-) | 82(48.2%) | 328(59.0%) | 15(44.1%) | 131(60.6%) | 67(49.3%) | 197(57.9%) | |
| Total | 170 | 556 | 34 | 216 | 136 | 340 | |

Men, All(40-74years)

| 3) | No. of riskfactors | | | |
|----------|--------------------|------------|------------|------------|
| | 0 | 1 | 2 | 3+ |
| CKD45(+) | 3(2.3%) | 7(3.6%) | 11(4.9%) | 23(12.9%) |
| CKD45(-) | 126(97.7%) | 188(96.4%) | 213(95.1%) | 155(87.1%) |
| Total | 129 | 195 | 224 | 178 |

Men, 40-64years

| | No. of riskfactors | | | |
|----------|--------------------|-----------|-----------|-----------|
| | 0 | 1 | 2 | 3+ |
| CKD45(+) | 0(0.0%) | 3(4.8%) | 2(2.8%) | 9(15.3%) |
| CKD45(-) | 58(100.0%) | 59(95.2%) | 69(97.2%) | 50(84.7%) |
| Total | 58 | 62 | 71 | 59 |

Men, 65-74years

| | No. of riskfactors | | | |
|----------|--------------------|------------|------------|------------|
| | 0 | 1 | 2 | 3+ |
| CKD45(+) | 3(4.2%) | 4(3.0%) | 9(5.9%) | 14(11.8%) |
| CKD45(-) | 68(95.8%) | 129(97.0%) | 144(94.1%) | 105(88.2%) |
| Total | 71 | 133 | 153 | 119 |

Men, All(40-74years)

| | No. of riskfactors | | | |
|----------|--------------------|------------|-----------|------------|
| | 0 | 1 | 2 | 3+ |
| CKD60(+) | 18(14.0%) | 38(19.5%) | 53(23.7%) | 61(34.3%) |
| CKD60(-) | 111(86.0%) | 157(80.5%) | 171(76.3) | 117(65.7%) |
| Total | 129 | 195 | 224 | 178 |

Men, 40-64years

| | No. of riskfactors | | | |
|----------|--------------------|-----------|-----------|-----------|
| | 0 | 1 | 2 | 3+ |
| CKD60(+) | 4(6.9%) | 8(12.9%) | 6(8.5%) | 16(27.1%) |
| CKD60(-) | 54(93.1%) | 54(87.1%) | 65(91.5%) | 43(72.9%) |
| Total | 58 | 62 | 71 | 59 |

Men, 65-74years

| | No. of riskfactors | | | |
|----------|--------------------|------------|------------|-----------|
| | 0 | 1 | 2 | 3+ |
| CKD60(+) | 14(19.7%) | 30(22.6%) | 47(30.7%) | 45(37.8%) |
| CKD60(-) | 57(80.3%) | 103(77.4%) | 106(69.3%) | 74(62.2%) |
| Total | 71 | 133 | 153 | 119 |

(図表2) 市町村健診 女性

| 1) | Women | 40-74years | | 40-64years | | 65-74years | |
|----------------|-------|------------|-------------|------------|------------|------------|------------|
| | | Mets(+) | Mets(-) | Mets(+) | Mets(-) | Mets(+) | Mets(-) |
| Proteinuria(+) | | 7(8.8%) | 11(1.0%) | 4(12.5%) | 7(1.2%) | 3(6.3%) | 4(0.8%) |
| Proteinuria(-) | | 73(91.3%) | 1048(99.0%) | 28(87.5%) | 574(98.8%) | 45(93.8%) | 474(99.2%) |
| Total | | 80 | 1,059 | 32 | 581 | 48 | 478 |

| | Women | 40-74years | | 40-64years | | 65-74years | |
|---------|-------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | Proteinuria(+) | Proteinuria(-) | Proteinuria(+) | Proteinuria(-) | Proteinuria(+) | Proteinuria(-) |
| Mets(+) | | 7(38.9%) | 73(6.5%) | 4(36.4%) | 28(4.7%) | 3(42.9) | 45(8.7%) |
| Mets(-) | | 11(61.1%) | 1048(93.5%) | 7(63.6%) | 574(95.3%) | 4(57.1) | 474(91.3%) |
| Total | | 18 | 1,121 | 11 | 602 | 7 | 519 |

| | Women | 40-74years | | 40-64years | | 65-74years | |
|---------|-------|------------|--------------|------------|------------|------------|------------|
| | | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| Mets(+) | | 7(33.3%) | 73(6.5%) | 4(33.3%) | 28(4.7%) | 3(33.3) | 45(8.7%) |
| Mets(-) | | 14(66.7%) | 1,045(93.5%) | 8(66.7%) | 573(95.3%) | 6(66.7) | 472(91.3%) |
| Total | | 21 | 1,118 | 12 | 601 | 9 | 517 |

| 2) i) | Women | 40-74years | | 40-64years | | 65-74years | |
|---------------------|-------|------------|------------|------------|------------|------------|------------|
| | | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| Mets / highLDL-C(+) | | 9(42.9%) | 269(24.1%) | 5(41.7%) | 129(21.5%) | 4(44.4%) | 140(27.1%) |
| Mets / highLDL-C(-) | | 12(57.1%) | 849(75.9%) | 7(58.3%) | 472(78.5%) | 5(55.6%) | 377(72.9%) |
| Total | | 21 | 1,118 | 12 | 601 | 9 | 517 |

| | Women | 40-74years | | 40-64years | | 65-74years | |
|---------|-------|------------|------------|------------|------------|------------|------------|
| | | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| Mets(+) | | 15(8.6%) | 65(6.7%) | 5(6.8%) | 27(5.0%) | 10(10.0%) | 38(8.9%) |
| Mets(-) | | 159(91.4%) | 900(93.3%) | 69(93.2%) | 512(95.0%) | 90(90.0%) | 388(91.1%) |
| Total | | 174 | 965 | 74 | 539 | 100 | 426 |

| | Women | 40-74years | | 40-64years | | 65-74years | |
|---------------------|-------|------------|------------|------------|------------|------------|------------|
| | | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| Mets / highLDL-C(+) | | 49(28.2%) | 229(23.7%) | 20(27.0%) | 114(21.2%) | 29(29.0%) | 115(27.0%) |
| Mets / highLDL-C(-) | | 125(71.8%) | 736(76.3%) | 54(73.0%) | 425(78.8%) | 71(71.0%) | 311(73.0%) |
| Total | | 174 | 965 | 74 | 539 | 100 | 426 |

| 2) ii) | Women | 40-74years | | 40-64years | | 65-74years | |
|----------------------|-------|------------|------------|------------|------------|------------|------------|
| | | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| Mets(+) [※] | | 14(66.7%) | 287(25.7%) | 7(58.3%) | 108(18.0%) | 7(77.8%) | 179(34.6%) |
| Mets(-) [※] | | 7(33.3%) | 831(74.3%) | 5(41.7%) | 493(82.0%) | 2(22.2%) | 338(65.4%) |
| Total | | 21 | 1,118 | 12 | 601 | 9 | 517 |

※Mets excluded waist criteria

| | Women | 40-74years | | 40-64years | | 65-74years | |
|----------------------|-------|------------|------------|------------|------------|------------|------------|
| | | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| Mets(+) [※] | | 60(34.5%) | 241(25.0%) | 19(25.7%) | 96(17.8%) | 41(41.0%) | 145(34.0%) |
| Mets(-) [※] | | 114(65.5%) | 724(75.0%) | 55(74.3%) | 443(82.2%) | 59(59.0%) | 281(66.0%) |
| Total | | 174 | 965 | 74 | 539 | 100 | 426 |

※Mets excluded waist criteria

| 2) iii) | Women | 40-74years | | 40-64years | | 65-74years | |
|----------------------------------|-------|------------|------------|------------|------------|------------|------------|
| | | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| Mets [※] / highLDL-C(+) | | 14(66.7%) | 449(40.2%) | 7(58.3%) | 194(32.3%) | 7(77.8%) | 255(49.3%) |
| Mets [※] / highLDL-C(-) | | 7(33.3%) | 669(59.8%) | 5(41.7%) | 407(67.7%) | 2(22.2%) | 262(50.7%) |
| Total | | 21 | 1,118 | 12 | 601 | 9 | 517 |

※Mets excluded waist criteria

| | Women | 40-74years | | 40-64years | | 65-74years | |
|----------------------------------|-------|------------|------------|------------|------------|------------|------------|
| | | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| Mets [※] / highLDL-C(+) | | 88(50.6%) | 375(38.9%) | 33(44.6%) | 168(31.2%) | 55(55.0%) | 207(48.6%) |
| Mets [※] / highLDL-C(-) | | 86(49.4%) | 590(61.1%) | 41(55.4%) | 371(68.8%) | 45(45.0%) | 219(51.4%) |
| Total | | 174 | 965 | 74 | 539 | 100 | 426 |

※Mets excluded waist criteria

Women, All(40-74years)

| | No. of riskfactors | | | |
|----------|--------------------|------------|------------|------------|
| | 0 | 1 | 2 | 3+ |
| CKD45(+) | 1(0.3%) | 5(1.2%) | 4(1.7%) | 11(8.9%) |
| CKD45(-) | 365(99.7%) | 411(98.8%) | 230(98.3%) | 112(91.1%) |
| Total | 366 | 416 | 234 | 123 |

Women, 40-64years

| | No. of riskfactors | | | |
|----------|--------------------|------------|-----------|-----------|
| | 0 | 1 | 2 | 3+ |
| CKD45(+) | 1(0.4%) | 3(1.4%) | 2(2.3%) | 6(11.8%) |
| CKD45(-) | 262(99.6%) | 208(98.6%) | 86(97.7%) | 45(88.2%) |
| Total | 263 | 211 | 88 | 51 |

Women, 65-74years

| | No. of riskfactors | | | |
|----------|--------------------|------------|------------|-----------|
| | 0 | 1 | 2 | 3+ |
| CKD45(+) | 0(0.0%) | 2(1.0%) | 2(1.4%) | 5(6.9%) |
| CKD45(-) | 103(100.0%) | 203(99.0%) | 144(98.6%) | 67(93.1%) |
| Total | 103 | 205 | 146 | 72 |

Women, All(40-74years)

| | No. of riskfactors | | | |
|----------|--------------------|------------|------------|-----------|
| | 0 | 1 | 2 | 3+ |
| CKD60(+) | 35(9.6%) | 66(15.9%) | 48(20.5%) | 25(20.3%) |
| CKD60(-) | 331(90.4%) | 350(84.1%) | 186(79.5%) | 98(79.7%) |
| Total | 366 | 416 | 234 | 123 |

Women, 40-64years

| | No. of riskfactors | | | |
|----------|--------------------|------------|-----------|-----------|
| | 0 | 1 | 2 | 3+ |
| CKD60(+) | 19(7.2%) | 29(13.7%) | 17(19.3%) | 9(17.6%) |
| CKD60(-) | 244(92.8%) | 182(86.3%) | 71(80.7%) | 42(82.4%) |
| Total | 263 | 211 | 88 | 51 |

Women, 65-74years

| | No. of riskfactors | | | |
|----------|--------------------|-----------|------------|-----------|
| | 0 | 1 | 2 | 3+ |
| CKD60(+) | 16(15.5%) | 37(18.0%) | 31(21.2%) | 16(22.2%) |
| CKD60(-) | 87(84.5%) | 168(82.0) | 115(78.8%) | 56(77.8%) |
| Total | 103 | 205 | 146 | 72 |

(図表3) A企業健診 男性

| 1) | Men | 40-74years | | 40-64years | | 65-74years | |
|----------------|-----|--------------|---------------|--------------|---------------|------------|-----------|
| | | Mets(+) | Mets(-) | Mets(+) | Mets(-) | Mets(+) | Mets(-) |
| Proteinuria(+) | | 338(8.9%) | 593(2.0%) | 337(8.9%) | 592(2.0%) | 1(14.3%) | 1(6.7%) |
| Proteinuria(-) | | 3,448(91.1%) | 28,500(98.0%) | 3,442(91.1%) | 28,486(98.0%) | 6(85.7%) | 14(93.3%) |
| Total | | 3,786 | 29,093 | 3,779 | 29,078 | 7 | 15 |

| | Men | 40-74years | | 40-64years | | 65-74years | |
|---------|-----|----------------|----------------|----------------|----------------|----------------|----------------|
| | | Proteinuria(+) | Proteinuria(-) | Proteinuria(+) | Proteinuria(-) | Proteinuria(+) | Proteinuria(-) |
| Mets(+) | | 338(36.3%) | 3,448(10.8%) | 337(36.3%) | 3,442(10.8%) | 1(50.0%) | 6(30.0%) |
| Mets(-) | | 593(63.7%) | 28,500(89.2%) | 592(63.7%) | 28,486(89.2%) | 1(50.0%) | 14(70.0%) |
| Total | | 931 | 31,948 | 929 | 31,928 | 2 | 20 |

| 2) i) | Men | 40-74years | | 40-64years | | 65-74years | |
|---------|-----|------------|---------------|------------|---------------|------------|-----------|
| | | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| Mets(+) | | 360(36.3%) | 3,426(10.7%) | 359(36.3%) | 3,420(10.7%) | 1(50.0%) | 6(30.0%) |
| Mets(-) | | 631(63.7%) | 28,462(89.3%) | 630(63.7%) | 28,448(89.3%) | 1(50.0%) | 14(70.0%) |
| Total | | 991 | 31,888 | 989 | 31,868 | 2 | 20 |

| | Men | 40-74years | | 40-64years | | 65-74years | |
|---------------------|-----|------------|---------------|------------|---------------|------------|-----------|
| | | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| Mets / highLDL-C(+) | | 437(44.1%) | 6,553(20.6%) | 436(44.1%) | 6,546(20.5%) | 1(50.0%) | 7(35.0%) |
| Mets / highLDL-C(-) | | 554(55.9%) | 25,335(79.4%) | 553(55.9%) | 25,322(79.5%) | 1(50.0%) | 13(65.0%) |
| Total | | 991 | 31,888 | 989 | 31,868 | 2 | 20 |

| | Men | 40-74years | | 40-64years | | 65-74years | |
|---------|-----|--------------|---------------|--------------|---------------|------------|----------|
| | | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| Mets(+) | | 613(25.2%) | 3,173(10.4%) | 612(25.3%) | 3,167(10.4%) | 1(11.1%) | 6(46.2%) |
| Mets(-) | | 1,816(74.8%) | 27,277(89.6%) | 1,808(74.7%) | 27,270(89.6%) | 8(88.9%) | 7(53.8%) |
| Total | | 2,429 | 30,450 | 2,420 | 30,437 | 9 | 13 |

| | Men | 40-74years | | 40-64years | | 65-74years | |
|---------------------|-----|--------------|---------------|--------------|---------------|------------|----------|
| | | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| Mets / highLDL-C(+) | | 839(34.5%) | 6,151(20.2%) | 837(34.6%) | 6,145(20.2%) | 2(22.2%) | 6(46.2%) |
| Mets / highLDL-C(-) | | 1,590(65.5%) | 24,299(79.8%) | 1,583(65.4%) | 24,292(79.8%) | 7(77.8%) | 7(53.8%) |
| Total | | 2,429 | 30,450 | 2,420 | 30,437 | 9 | 13 |

| 2) ii) | Men | 40-74years | | 40-64years | | 65-74years | |
|----------|-----|------------|---------------|------------|---------------|------------|-----------|
| | | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| Mets(+)* | | 488(49.2%) | 5,940(18.6%) | 486(49.1%) | 5,933(18.6%) | 2(100.0%) | 7(35.0%) |
| Mets(-)* | | 503(50.8%) | 25,948(81.4%) | 503(50.9%) | 25,935(81.4%) | 0(0.0%) | 13(65.0%) |
| Total | | 991 | 31,888 | 989 | 31,868 | 2 | 20 |

*Mets excluded waist criteria

| | Men | 40-74years | | 40-64years | | 65-74years | |
|----------|-----|--------------|---------------|--------------|---------------|------------|----------|
| | | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| Mets(+)* | | 897(36.9%) | 5,531(18.2%) | 894(36.9%) | 5,525(18.2%) | 3(33.3%) | 6(46.2%) |
| Mets(-)* | | 1,532(63.1%) | 24,919(81.8%) | 1,526(63.1%) | 24,912(81.8%) | 6(66.7%) | 7(53.8%) |
| Total | | 2,429 | 30,450 | 2,420 | 30,437 | 9 | 13 |

*Mets excluded waist criteria

| 2) iii) | Men | 40-74years | | 40-64years | | 65-74years | |
|----------------------|-----|------------|---------------|------------|---------------|------------|-----------|
| | | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) | CKD45(+) | CKD45(-) |
| Mets* / highLDL-C(+) | | 542(54.7%) | 8,712(27.3%) | 540(54.6%) | 8,704(27.3%) | 2(100.0%) | 8(40.0%) |
| Mets* / highLDL-C(-) | | 449(45.3%) | 23,176(72.7%) | 449(45.4%) | 23,164(72.7%) | 0(0.0%) | 12(60.0%) |
| Total | | 991 | 31,888 | 989 | 31,868 | 2 | 20 |

*Mets excluded waist criteria

| | Men | 40-74years | | 40-64years | | 65-74years | |
|----------------------|-----|--------------|---------------|--------------|---------------|------------|----------|
| | | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) | CKD60(+) | CKD60(-) |
| Mets* / highLDL-C(+) | | 1,087(44.8%) | 8,167(26.8%) | 1,083(44.8%) | 8,161(26.8%) | 4(44.4%) | 6(46.2%) |
| Mets* / highLDL-C(-) | | 1,342(55.2%) | 22,283(73.2%) | 1,337(55.2%) | 22,276(73.2%) | 5(55.6%) | 7(53.8%) |
| Total | | 2,429 | 30,450 | 2,420 | 30,437 | 9 | 13 |

*Mets excluded waist criteria

Men, All(40-74years)

| 3) | No. of riskfactors | | | |
|----------|--------------------|--------------|--------------|--------------|
| | 0 | 1 | 2 | 3+ |
| CKD45(+) | 164(1.3%) | 189(1.9%) | 252(4.0%) | 386(8.9%) |
| CKD45(-) | 12,315(98.7%) | 9,628(98.1%) | 6,006(96.0%) | 3,939(91.1%) |
| Total | 12,479 | 9,817 | 6,258 | 4,325 |

Men, 40-64years

| | No. of riskfactors | | | |
|----------|--------------------|--------------|--------------|--------------|
| | 0 | 1 | 2 | 3+ |
| CKD45(+) | 164(1.3%) | 189(1.9%) | 251(4.0%) | 385(8.9%) |
| CKD45(-) | 12,314(98.7%) | 9,623(98.1%) | 5,998(96.0%) | 3,933(91.1%) |
| Total | 12,478 | 9,812 | 6,249 | 4,318 |

Men, 65-74years

| | No. of riskfactors | | | |
|----------|--------------------|---------|----------|----------|
| | 0 | 1 | 2 | 3+ |
| CKD45(+) | 0(0%) | 0(0%) | 1(11.1%) | 1(14.3%) |
| CKD45(-) | 1(100%) | 5(100%) | 8(88.9%) | 6(85.7%) |
| Total | 1 | 5 | 9 | 7 |

Men, All(40-74years)

| | No. of riskfactors | | | |
|----------|--------------------|--------------|--------------|--------------|
| | 0 | 1 | 2 | 3+ |
| CKD60(+) | 537(4.3%) | 603(6.1%) | 615(9.8%) | 674(15.6%) |
| CKD60(-) | 11,942(95.7%) | 9,214(93.9%) | 5,643(90.2%) | 3,651(84.4%) |
| Total | 12,479 | 9,817 | 6,258 | 4,325 |

Men, 40-64years

| | No. of riskfactors | | | |
|----------|--------------------|--------------|--------------|--------------|
| | 0 | 1 | 2 | 3+ |
| CKD60(+) | 537(4.3%) | 601(6.1%) | 609(9.7%) | 673(15.6%) |
| CKD60(-) | 11,941(95.7%) | 9,211(93.9%) | 5,640(90.3%) | 3,645(84.4%) |
| Total | 12,478 | 9,812 | 6,249 | 4,318 |

Men, 65-74years

| | No. of riskfactors | | | |
|----------|--------------------|----------|----------|----------|
| | 0 | 1 | 2 | 3+ |
| CKD60(+) | 0(0.0%) | 2(40.0%) | 6(66.7%) | 1(14.3%) |
| CKD60(-) | 1(100.0%) | 3(60.0%) | 3(33.3%) | 6(85.7%) |
| Total | 1 | 5 | 9 | 7 |