Figure S20. Meta-analyzed adjusted prevalence (25th and 75th percentile cohort) of abnormalities (categorical laboratory measures) in general population and high risk cohorts by diabetes status

No Diabetes

Anemia

eGFR	A1	A2	A3
>90	5.0% (3.9, 7.0)	6.5% (5.1, 9.2)	9.8% (7.8, 13.6)
75-89	4.5% (3.5, 6.4)	6.9% (5.5, 9.7)	8.5% (6.7, 11.8)
60-74	6.0% (4.7, 8.5)	8.7% (6.9, 12.1)	10.4% (8.3, 14.3)
45-59	11.5% (9.2, 15.9)	13.8% (11.0, 18.7)	17.0% (13.7, 22.8)
30-44	22.5% (18.4, 29.6)	25.6% (21.1, 33.2)	30.3% (25.2, 38.6)
15-29	50.4% (44.2, 59.5)	51.3% (45.0, 60.4)	57.4% (51.1, 66.0)

Hyperkalemia

eGFR	A1	A2	A3
>90	1.5% (0.4, 4.6)	1.1% (0.3, 3.2)	1.4% (0.4, 4.4)
75-89	1.7% (0.5, 5.1)	1.6% (0.5, 4.8)	1.5% (0.5, 4.7)
60-74	2.3% (0.7, 7.0)	2.0% (0.6, 6.0)	2.3% (0.7, 7.0)
45-59	4.5% (1.4, 12.8)	3.5% (1.1, 10.3)	5.2% (1.6, 14.6)
30-44	9.5% (3.0, 24.8)	10.5% (3.3, 26.9)	11.3% (3.6, 28.5)
15-29	16.1% (5.3, 37.5)	19.0% (6.4, 42.5)	23.7% (8.3, 49.4)

Acidosis

eGFR	A1	A2	A3
>90	3.3% (2.7, 4.7)	3.9% (3.2, 5.6)	1.7% (1.4, 2.5)
75-89	3.4% (2.9, 5.0)	3.7% (3.1, 5.3)	4.6% (3.9, 6.6)
60-74	4.0% (3.4, 5.8)	5.6% (4.7, 8.0)	6.3% (5.3, 9.0)
45-59	6.7% (5.7, 9.6)	10.7% (9.1, 15.0)	11.3% (9.6, 15.9)
30-44	14.5% (12.4, 20.1)	24.0% (20.9, 31.8)	20.9% (18.0, 28.0)
15-29	24.9% (21.7, 32.9)	39.4% (35.2, 49.0)	38.3% (34.2, 47.9)

Hyperparathyroidism

eGFR	A1	A2	A3
>90	9.7% (7.1, 12.7)	12.2% (9.1, 15.8)	11.5% (8.5, 14.9)
75-89	9.9% (7.3, 12.9)	12.5% (9.2, 16.1)	14.1% (10.5, 18.1)
60-74	11.7% (8.7, 15.1)	15.7% (11.7, 20.0)	12.8% (9.5, 16.4)
45-59	21.0% (15.9, 26.3)	29.5% (23.0, 35.9)	34.7% (27.5, 41.6)
30-44	38.0% (30.5, 45.2)	31.6% (24.8, 38.3)	51.6% (43.3, 58.9)
15-29	64.8% (56.8, 71.2)	61.6% (53.4, 68.3)	75.8% (69.1, 80.8)

Hyperphosphatemia

eGFR	A1	A2	A3
>90	3.3% (1.4, 3.8)	4.1% (1.8, 4.7)	4.3% (1.9, 4.9)
75-89	4.0% (1.8, 4.6)	4.2% (1.8, 4.7)	5.2% (2.3, 5.9)
60-74	5.3% (2.3, 5.9)	4.5% (2.0, 5.1)	3.5% (1.5, 4.0)
45-59	6.6% (2.9, 7.4)	6.0% (2.7, 6.8)	7.6% (3.4, 8.6)
30-44	10.6% (4.8, 11.9)	8.3% (3.7, 9.4)	11.8% (5.4, 13.2)
15-29	28.3% (14.3, 30.9)	31.1% (16.1, 34.0)	33.2% (17.4, 36.1)

Hypocalcemia

eGFR	A1	A2	A3
>90	15.0% (7.9, 22.5)	10.2% (5.3, 15.9)	9.8% (5.0, 15.2)
75-89	12.0% (6.2, 18.4)	9.6% (4.9, 15.0)	8.1% (4.1, 12.7)
60-74	9.8% (5.0, 15.3)	8.2% (4.2, 12.9)	6.0% (3.0, 9.6)
45-59	6.2% (3.1, 9.9)	8.4% (4.3, 13.2)	5.2% (2.6, 8.4)
30-44	6.2% (3.1, 9.8)	12.2% (6.3, 18.7)	1.7% (0.8, 2.7)
15-29	12.4% (6.4, 18.9)	18.1% (9.7, 26.7)	7.2% (3.6, 11.3)

Diabetes

Anemia

eGFR	A1	A2	A3
>90	6.3% (4.9, 8.8)	8.8% (6.9, 12.2)	8.7% (6.9, 12.2)
75-89	6.5% (5.1, 9.1)	10.5% (8.4, 14.5)	14.4% (11.5, 19.5)
60-74	8.7% (6.9, 12.2)	13.5% (10.8, 18.4)	15.9% (12.8, 21.4)
45-59	14.9% (12.0, 20.2)	19.6% (15.9, 26.0)	25.9% (21.4, 33.6)
30-44	26.9% (22.2, 34.7)	31.3% (26.2, 39.7)	40.3% (34.4, 49.4)
15-29	45.6% (39.5, 54.8)	48.8% (42.6, 57.9)	60.7% (54.6, 69.1)

Hyperkalemia

eGFR	A1	A2	A3
>90	1.8% (0.5, 5.5)	3.6% (1.1, 10.5)	1.0% (0.3, 3.0)
75-89	2.8% (0.8, 8.3)	4.0% (1.2, 11.6)	4.6% (1.4, 13.0)
60-74	3.9% (1.2, 11.2)	5.0% (1.5, 14.2)	6.6% (1.8, 17,4)
45-59	8.8% (2.7, 23.3)	9.9% (3.1, 25.5)	11.4% (3.6, 28.8)
30-44	12.8% (4.1, 31.5)	18.7% (6.3, 41.9)	87.5% (67.1, 95.6)
15-29	24.7% (8.8, 50.8)	31.5% (11.9, 59.1)	34.4% (13.3, 62.2)

Acidosis

eGFR	A1	A2	A3
>90	4.7% (4.0, 6.8)	5.0% (4.2, 7.2)	3.7% (3.1, 5.3)
75-89	5.3% (4.4, 7.6)	6.2% (5.2, 8.8)	4.7% (3.9, 6.7)
60-74	6.3% (5.3, 9.0)	7.2% (6.0, 10.2)	10.4% (8.8, 14.6)
45-59	7.7% (6.5, 11.0)	11.7% (10.0, 16.4)	15.8% (13.6, 21.7)
30-44	15.3% (13.1, 21.1)	20.2% (17.5, 27.3)	21.4% (18.5, 28.7)
15-29	29.7% (26.1, 38.4)	32.1% (28.3, 41.1)	35.9% (31.8, 45.2)

Hyperparathyroidism

eGFR	A1	A2	A3
>90	5.8% (4.2, 7.7)	6.8% (4.9, 8.9)	10.7% (7.9, 13.8)
75-89	7.3% (5.3, 9.6)	7.2% (5.2, 9.4)	7.3% (5.4, 9.6)
60-74	8.6% (6.3, 11.2)	9.5% (7.0, 12.4)	15.7% (11.8, 20.1)
45-59	13.6% (10.1, 17.5)	18.7% (14.1, 23.6)	16.9% (12.6, 21.4)
30-44	22.0% (16.8, 27.5)	28.6% (22.2, 35.0)	43.5% (35.4, 50.8)
15-29	40.1% (32.3, 47.3)	65.2% (57.2, 71.5)	72.5% (65.3, 77.9)

Hyperphosphatemia

eGFR	A1	A2	A3
>90	5.1% (2.2, 5.8)	4.8% (2.1, 5.4)	6.4% (2.8, 7.2)
75-89	6.0% (2.6, 6.8)	6.1% (2.7, 6.8)	5.7% (2.5, 6.5)
60-74	7.1% (3.1, 8.0)	8.3% (3.7, 9.3)	5.9% (2.6, 6.6)
45-59	10.2% (4.6, 11.4)	12.3% (5.6, 13.7)	9.9% (4.5, 11.2)
30-44	17.3% (8.2, 19.3)	12.7% (5.8, 14.1)	18.2% (8.6, 20.2)
15-29	43.7% (24.8, 46.9)	28.9% (14.7, 31.6)	52.2% (31.7, 55.4)

Hypocalcemia

eGFR	A1	A2	A3
>90	12.1% (6.3, 18.6)	7.1% (3.6, 11.2)	5.8% (2.9, 9.2)
75-89	8.8% (4.5, 13.7)	6.3% (3.2, 10.1)	3.9% (1.9, 6.2)
60-74	6.8% (3.4, 10.7)	5.6% (2.8, 9.0)	4.7% (2.4, 7.6)
45-59	3.1% (1.5, 5.0)	4.3% (2.1, 6.9)	3.8% (1.9, 6.1)
30-44	4.7% (2.3, 7.6)	2.5% (1.2, 4.0)	3.2% (1.6, 5.2)
15-29	12.0% (6.2, 18.4)	8.8% (4.5, 13.8)	8.8% (4.5, 13.8)

The adjusted prevalence of each abnormality at each eGFR and albuminuria stage was computed as follows: first, we converted the random-effects weighted adjusted mean odds at the reference point (eGFR 50 ml/min/1.73m^2) into a prevalence estimate. To the reference estimate, we applied the meta-analyzed odds ratios to obtain prevalence estimates at eGFR 95, 80, 65, 35, and 20 ml/min/1.73 m^2 for each stage of albuminuria. The prevalence estimates were adjusted to 60

years old, half male, non-black, 20% history of CVD, 40% ever smoker, and body-mass index 30 kg/m^2. The 25th and 75th percentiles for predicted prevalence were the estimates from individual cohorts in the corresponding percentiles of the random-effects weighted distribution of adjusted odds. This was done separately for each abnormality.

Note that the cohorts included in the analyses of each abnormality may differ based on data availability. For example, the cohort in the 25th percentile of anemia may not be the same as the cohort in the 25th percentile of hyperparathyroidism.

Color coding is based on odds ratio quartile within each abnormality. Bold red font indicates the reference cell.

Definitions of each abnormality are as follows: Anemia: Hgb: male<13 g/dL, female<12 g/dL; Hct: male<39%, female<36%. Hyperkalemia: potassium >5 mmol/L. Acidosis: bicarbonate <22 mmol/L. Hyperparathyroidism: intact PTH >65 pg/mL. Hyperphosphatemia: phosphorus >4.5 mg/dL. Hypocalcemia: corrected calcium <8.5 mg/dL.