Supplemental Data 1

In cases of standard uncertainty of urinary albumin (u(Alb)/Alb) and creatinine (u(Cr/Cr)) as 9.0% and 9.1%, respectively, the combined uncertainty of ACR (u(ACR)/ACR) can be calculated as follows:

\[
\begin{align*}
(u(ACR)/ACR)^2 &= (u(Alb)/Alb)^2 + (u(Cr)/Cr)^2 \\
u(ACR)/ACR &= ((u(Alb)/Alb)^2 + (u(Cr)/Cr)^2)^{1/2} = (9.0^2 + 9.1^2)^{1/2} = 12.8 \text{ (%)}
\end{align*}
\]

The expanded uncertainty of ACR (U(ACR)/ACR) can be computed by multiplying the standard uncertainty with a coverage factor of 2.

\[
U(ACR)/ACR = u(ACR)/ACR \times 2 = 25.6 \text{ (%)}
\]

If a patient’s ACR value is determined to be 35 mg/g creatinine, the 95% confidence interval (CI) of the result can be estimated as follows:

- Lower bound: 35–35 × 0.256 = 26.04
- Upper bound: 35+35 × 0.256 = 43.96

Thus, the 95% CI of the patient’s result is [26.04, 43.96], which includes the boundary for the ACR category (30 mg/g creatinine). In this case, the patient’s result would be assigned as an “ambiguous case” due to measurement uncertainty.