## Supplementary

## **Appendix 1**

**Methods:** The differences in spectral CT parameters between the left and right kidneys were assessed using the paired sample *t*-test. We evaluated the differences in spectral CT parameters between the upper, middle, and lower poles of both kidneys using a one-way analysis of variance.

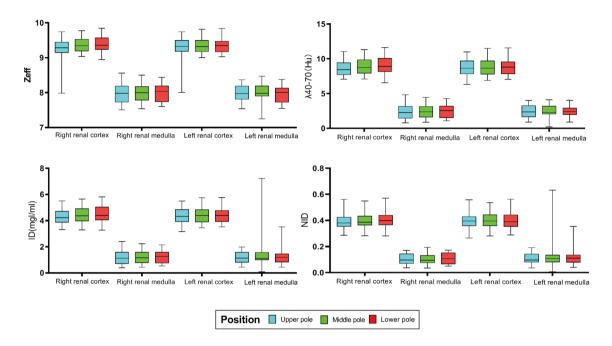


Figure S1 Parameter metric differences of the upper, middle, and lower poles of kidney cortex and medulla in cortical phase in the diabetic group. Zeff, effective atomic number;  $\lambda$ , the slope of the energy spectrum curves; ID, the iodine density; NID, the normalized iodine density.

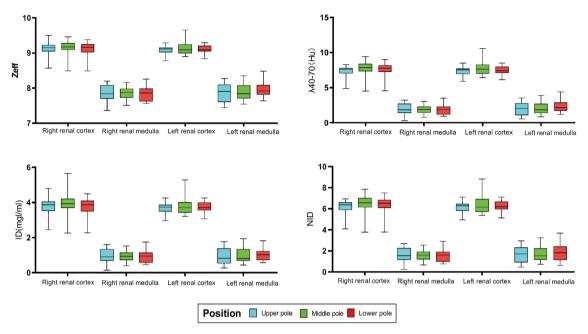
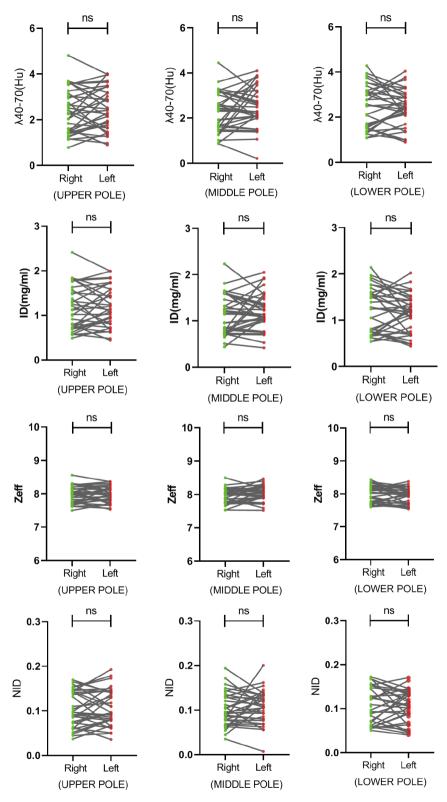


Figure S2 In the control group, parameter metric differences of the upper, middle, and lower poles renal cortex and medulla in cortical phase. Zeff, effective atomic number;  $\lambda$ , the slope of the energy spectrum curves; ID, the iodine density; NID, the normalized iodine density.



**Figure S3** In the diabetic group, the paired sample *t*-test was used to compare the upper, middle, and lower poles between the cortex of kidneys in cortical phase. Zeff, effective atomic number;  $\lambda$ , the slope of the energy spectrum curves; ID, the iodine density; NID, the normalized iodine density.

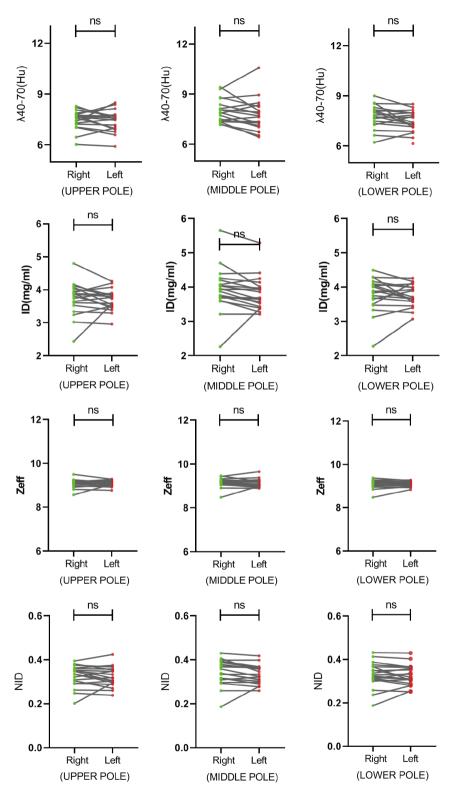
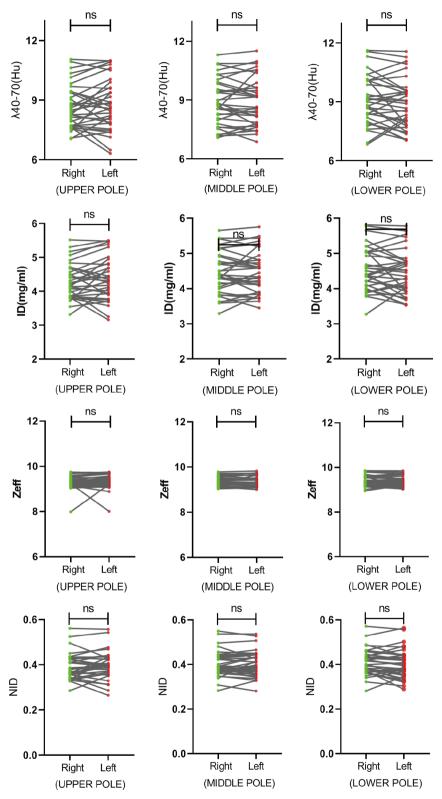


Figure S4 In the diabetic group, the paired sample *t*-test was used to compare the upper, middle, and lower poles between the renal medulla in cortical phase. Zeff, effective atomic number;  $\lambda$ , the slope of the energy spectrum curves; ID, the iodine density; NID, the normalized iodine density.



**Figure S5** In the control group, the paired sample *t*-test was used to compare the upper, middle, and lower poles between the renal cortex in cortical phase. Zeff, effective atomic number;  $\lambda$ , the slope of the energy spectrum curves; ID, the iodine density; NID, the normalized iodine density.

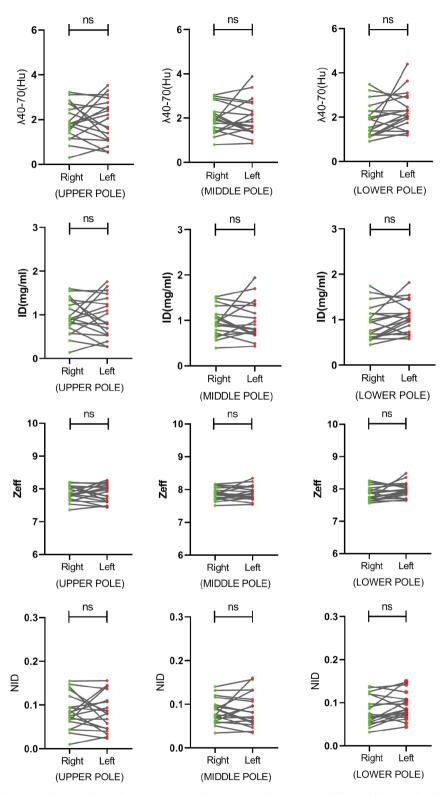


Figure S6 In the control group, the paired sample *t*-test was used to compare the upper, middle, and lower poles between the renal medulla in cortical phase. Zeff, effective atomic number;  $\lambda$ , the slope of the energy spectrum curves; ID, the iodine density; NID, the normalized iodine density.