## Supplementary Table 3. Multivariable Logistic Regression Analysis for Willingness to Immediately Change to 2-mSv CT

| Covariates | Willingness to Immediately Change to 2-mSv CT* | Univariable Analysis | Multivariable Analysis |
|------------|-----------------------------------------------|----------------------|------------------------|
|            | Odds Ratio (95% CI) | P | Odds Ratio (95% CI) | P |
| **Participant characteristics** | | | | |
| Department | | | | |
| Radiology   | 62/221 (28.1%) | Reference | Reference |
| Emergency medicine | 45/196 (23%) | 0.8 (0.5–1.2) | 0.24 | 0.7 (0.4–1.1) | 0.130 |
| Surgery     | 51/162 (32%) | 1.2 (0.8–1.8) | 0.47 | 1.2 (0.7–1.9) | 0.57 |
| Job title   | | | | |
| Attendings  | 73/203 (36.0%) | 1.9 (1.3–2.8) | 0.001 | 1.9 (1.2–2.9) | 0.004 |
| Trainees    | 85/376 (22.6%) | Reference | Reference |
| Q4. Acceptance of 2-mSv CT† | | | | |
| Yes         | 150/396 (37.9%) | 13.3 (6.4–27.9) | < 0.001 |
| Partly or no† | 8/183 (4%) | Reference |
| Q5. Maintaining dedicated appendix CT protocol in hospital information system | | | | |
| Yes         | 120/298 (40.3%) | 4.3 (2.9–6.5) | < 0.001 | 4.2 (2.7–6.5) | < 0.001 |
| Partly or no† | 38/281 (13.5%) | Reference |
| Q6. Timeliness and accuracy of CT reports† | | | | |
| Yes         | 137/471 (29.1%) | 1.7 (1.0–2.8) | 0.044 |
| Partly or no† | 21/108 (19%) | Reference |
| Q7. Timeliness and accuracy of 2-mSv CT reports† | | | | |
| Yes         | 136/468 (29.1%) | 1.7 (1.0–2.8) | 0.051 |
| Partly or no† | 22/111(20%) | Reference |
| Q8. In comparison to natural background radiation | | | | |
| 0.4-fold or less‡ | 44/178 (25%) | 0.7 (0.5–1.1) | 0.145 | 0.8 (0.5–1.3) | 0.40 |
| 4-fold      | 63/200 (31.5%) | Reference | Reference |
| 40-fold or more‡ | 51/201 (25.4%) | 0.7 (0.5–1.1) | 0.174 | 0.8 (0.5–1.3) | 0.32 |
| Q9. Evidence level of carcinogenic risk | | | | |
| Yes         | 64/181 (35%) | 1.8 (1.2–2.6) | 0.003 | 1.6 (1.1–2.5) | 0.028 |
| Partly or no‡ | 94/398 (23.6%) | Reference |
| **Hospital characteristics** | | | | |
| Using iterative reconstruction | | | | |
| Yes         | 78/268 (29.1%) | 0.8 (0.6–1.2) | 0.36 | 1.1 (0.7–1.7) | 0.73 |
| No          | 80/311 (25.7%) | Reference | Reference |
| Number of annual appendectomies | | | | |
| < 200       | 58/200 (29.0%) | Reference | Reference |
| 200–399     | 55/183 (30%) | 1.1 (0.7–1.6) | 0.82 | 0.9 (0.5–1.6) | 0.66 |
| ≥ 400       | 45/196 (23%) | 0.7 (0.5–1.1) | 0.171 | 0.7 (0.4–1.2) | 0.195 |
| Number of beds | | | | |
| < 700       | 23/99 (23%) | Reference | Reference |
| 700–999     | 43/190 (23%) | 1.0 (0.5–1.7) | 0.91 | 1.4 (0.7–2.9) | 0.37 |
| ≥ 1000      | 92/290 (31.7%) | 1.5 (0.9–2.6) | 0.111 | 2.0 (1.1–3.9) | 0.031 |
| Number of enrolled patients in LOCAT | | | | |
| < 100       | 74/263 (28.1%) | Reference | Reference |
| ≥ 100       | 84/316 (26.6%) | 0.9 (0.6–1.3) | 0.68 | 0.9 (0.5–1.4) | 0.55 |

For questions regarding willingness or acceptance, “yes” indicated ‘completely and consistently’ while “partly” indicated ‘not consistently but selectively (e.g., during working hours).’ *Data are numbers of participants who responded as “yes” to Q1 out of all participants in category (and percentages). †Not included in multivariable analysis. ‡Categories with small numbers of patients (< 50) were merged into nearby categories. CI = confidence interval, LOCAT = Low-dOse CT for Appendicitis Trial.