Supplementary Online Content

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eAppendix. Survey Questions
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This supplementary material has been provided by the authors to give readers additional information about their work.
A. Personal data

A1. Gender
   1. male
   2. female

A2. Age ______

A3. Which language is mainly spoken in your family of origin?
   1. Italian
   2. Other

A4. Which is your marital status?
   1. Unmarried
   2. Civil partnership
   3. Married
   4. Separated
   5. Divorced
   6. Widowed

A5. Whom have you mostly lived in the last 12 months with?
   1. Partner/cohabitee
   2. Parents/relatives
   3. Friends
   4. Alone

A6. What is your qualification level?
   1. None
   2. Primary school
   3. Secondary school
4. College
5. Bachelor's degree
6. Master’s degree
7. Postgraduate degree

A7. What is your employment?
1. Employed, permanent work
2. Employed, temporary work
3. Freelance
4. Unemployed
5. Housewife/househusband
6. Unable to work
7. Student
8. Retired
B. Knowledge

B1. Which of the following radiological tests have you undergone in your lifetime? (multiple choices allowed)
   1. Radiography
   2. Mammography
   3. Dental X-ray
   4. Magnetic resonance
   5. Computed tomography
   6. Ultrasound
   7. Scintigraphy/PET

B2. Which of the following radiological tests have you undergone more than three times in your lifetime? (multiple choices allowed)
   1. Radiography
   2. Mammography
   3. Dental X-ray
   4. Magnetic resonance
   5. Computed tomography
   6. Ultrasound
   7. Scintigraphy/PET

B3. Do you have any children under the age of 14 years old who have undergone radiological examinations?
   1. Yes
   2. No
   3. I have no children

B4. In your opinion, is there a natural source of ionizing radiation which we are all exposed to?
   1. YES
   2. No
B5. Which of these radiological examinations involve exposure to ionizing radiation? (multiple choices allowed)
   1. Ultrasound
   2. COMPUTED TOMOGRAPHY
   3. Magnetic resonance
   4. MAMMOGRAPHY

B6. Which of the following imaging tests delivers a higher radiation dose?
   1. CHEST CT
   2. Chest X-ray
   3. The amount of radiation is the same

B7. Following which radiological tests can one emit radiation (even some time after it)?
   1. Contrast enhanced ultrasound
   2. Contrast enhanced CT
   3. SCINTIGRAPHY
   4. All of the above
   5. None of the above

B8. For an abdominal CT scan, how does the amount of radiation dose delivered to a thinner patient (60kg weight) compare to that delivered to a larger one (100kg weight)?
   1. Higher in the thinner patient
   2. HIGHER IN THE LARGER PATIENT
   3. It is comparable

B9. How dangerous is it to undergo radiological tests using ionizing radiation?
   1. NOT VERY DANGEROUS
   2. Quite dangerous
   3. Very dangerous

B10. For which of the following is it riskier to undergo a radiological test using ionizing radiation?
1. A CHILD
2. A 25-year-old man
3. A 25-year-old woman
4. A middle-aged adult
5. An elderly
6. No difference (the risk is comparable)
C. Communication

C1. How do you evaluate your knowledge about the risks associated with the use of ionizing radiation for medical purposes?
   1. Excellent
   2. Good
   3. Fair
   4. Sufficient
   5. Inadequate

C2. From which communication channels have you usually received information about the risks associated with the use of ionizing radiation for medical purposes? (multiple answers allowed)
   1. TV/radio
   2. Magazine/Newspaper
   3. Internet or social media (Facebook, etc.)
   4. Booklets
   5. School, University
   6. I have never received any information about ionizing radiation

C3. If you underwent a diagnostic examination with ionizing radiation, did you receive information about the risks associated with the use of ionizing radiation for that examination?
   1. Yes
   2. I have never received any information about ionizing radiation

C4. From which of the following would you like to receive information regarding the risks associated with the use of ionizing radiation for medical purposes? (multiple answers allowed)
   1. TV/radio
   2. Magazine/Newspaper
   3. Internet or social media (Facebook, etc.)
   4. Booklets
   5. School, University

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6. Healthcare professionals

C5. In the healthcare environment, from which professional would you prefer to receive information about the risks associated with the use of ionizing radiation? (multiple answers allowed)

1. Radiologist
2. Medical physicist
3. Radiographer
4. General practitioner

C6. At the end of a radiological exam, how would you prefer to be informed about the amount of radiation received? In terms of: (multiple answers allowed)

1. The radiation value expressed in terms of radiation units (i.e. 10 milliSieverts)
2. The equivalent risk to a given number of smoked cigarettes
3. The equivalent risk to a given number of days of background radiation exposure
4. The equivalent risk to a given number of kilometers traveled by car
5. I don't want to be informed
cTable 1. Literature References Used for Generation of the Survey Items

| Year | First author | Country   | Title                                                                                           | Patients (N=) | Items (N=) |
|------|--------------|-----------|------------------------------------------------------------------------------------------------|---------------|------------|
| 2018 | Al Ewaidat   | Jordan    | Knowledge and awareness of CT radiation dose and risk among patients                           | 600           | 24         |
| 2015 | Alhasan      | Jordan    | Medical radiation knowledge among patients in local hospitals                                 | 400           | 10         |
| 2017 | Al-Mallah    | Bahrain   | Awareness and knowledge of ionizing radiation risks between prescribed and self-presenting patients for common diagnostic radiological procedures in Bahrain | 416           | 20         |
| 2011 | Baumann      | United States | Patient perceptions of computed tomographic imaging and their understanding of radiation risk and exposure | 1168          | 15         |
| 2016 | Bohl         | United States | Patient knowledge regarding radiation exposure from spinal imaging                           | 99            | 14         |
| 2016 | Gemechis     | Ethiopia  | Knowledge about radiation related health hazards and protective measures among patients waiting for radiologic imaging in Jimma University Hospital, Southwest Ethiopia | 388           | 21         |
| Year | Author   | Country         | Title                                                                 | Pages | References |
|------|----------|-----------------|----------------------------------------------------------------------|-------|------------|
| 2013 | Hartwig  | United States   | Parental knowledge of radiation exposure in medical imaging used in the pediatric emergency department | 342   | not reported |
| 2019 | Kenny    | Ireland         | Perception of medical radiation risk in Ireland: results of a public survey | 326   | 14         |
| 2019 | Lambertova | Czech Republic | Patient awareness, perception and attitude to contrast-enhanced CT examination: implications for communication and compliance with patients’ preferences | 263   | 17         |
| 2017 | Lumbreras| Spain           | Avoiding fears and promoting shared decision-making: how should physicians inform patients about radiation exposure from imaging tests? | 602   | 14         |
| 2019 | Oikarinen | Finland         | Parents’ received and expected information about their child’s radiation exposure during radiographic examinations | 41    | 13         |
| 2016 | Repplinger | United States   | Emergency department patients’ perceptions of radiation from medical imaging | 500   | 12         |
| 2017 | Ria      | Italy           | Awareness of medical radiation exposure among patients: a patient survey as a first step for effective communication of ionizing radiation risks | 737   | 13         |
| 2013 | Ricketts | United States   | Perception of radiation exposure and risk among patients, medical students, and referring physicians at a tertiary care community hospital | 127   | not reported |

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| Year | Author | Location | Title | Page | Comments |
|------|--------|----------|-------|------|----------|
| 2018 | Salerno | Italy    | Complete written/oral information about dose exposure in CT: is it really useful to guarantee the patients’ awareness about radiation risks? | 430 | 39 |
| 2017 | Schuster | United States | Awareness of radiation risks from CT scans among patients and providers and obstacles for informed decision-making | 101 | 18 |
| 2012 | Sin | Hong Kong | Assessing local patients’ knowledge and awareness of radiation dose and risks associated with medical imaging: a questionnaire study | 173 | 28 |
| 2016 | Singh | Australia | A snapshot of patients’ awareness of radiation dose and risks associated with medical imaging examinations at an Australian radiology clinic | 238 | 14 |
| 2010 | Takakuwa | United States | Knowledge and attitudes of emergency department patients regarding radiation risk of CT: effects of age, sex, race, education, insurance, body mass index, pain, and seriousness of illness | 383 | 6 |
| 2014 | Youssef | United States | Emergency department patient knowledge, opinions and risks tolerance regarding computed tomography scan radiation | 409 | 25 |
| 2014 | Zwank | United States | Emergency department patient knowledge and physician communication regarding CT scans | 200 | not reported |

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**Table 2. Psychometric Properties of the 10-Item KIRQ**

| Item                                                                 | Coeff. | Std. Err. | z      | P>|z|   | [95% CI] |
|---------------------------------------------------------------------|--------|-----------|--------|-------|----------|
| B4. Natural sources of ionizing radiation                          | 0.342  | 0.029     | 11.62  | 0.000 | 0.284    | 0.400    |
| B5.a Ultrasound                                                     | 0.202  | 0.026     | 7.27   | 0.000 | 0.140    | 0.244    |
| B5.b Computed tomography                                            | 0.478  | 0.027     | 17.61  | 0.000 | 0.425    | 0.532    |
| B5.c Magnetic resonance                                            | 0.382  | 0.025     | 15.49  | 0.000 | 0.333    | 0.430    |
| B5.d Mammography                                                    | 0.284  | 0.026     | 10.72  | 0.000 | 0.336    | 0.232    |
| B6. Amount of radiation used                                       | 0.374  | 0.025     | 14.97  | 0.000 | 0.325    | 0.423    |
| B7. Radiation emission after the examination                       | 0.313  | 0.026     | 11.87  | 0.000 | 0.261    | 0.364    |
| B8. Patient body size and amount of radiation                      | 0.204  | 0.026     | 7.71   | 0.000 | 0.152    | 0.256    |
| B9. Perception of potential danger of radiological tests using ionizing radiation | 0.301  | 0.025     | 11.21  | 0.000 | 0.253    | 0.350    |
| B10. Subjects at risk for ionizing radiation                       | 0.282  | 0.026     | 10.93  | 0.000 | 0.231    | 0.332    |

Internal consistency: Cronbach $\alpha = 0.742$ (CI95 0.706–0.796)

Goodness of fit indexes: Standardized Root Mean Square = 0.018, Root Mean Square error of Approximation = 0.026, Comparative Fit Index = 0.958, Tucker-Lewis index = 0.927