

**imPACT Review Questionnaire for each Cancer Centre/Hospital/Unit**

**DIAGNOSIS and TREATMENT**

<ul style="list-style-type: none"><li>▪ <i>Name of Cancer Centre/Hospital/Unit:</i></li><li>▪ <i>Location (city, town):</i></li><li>▪ <i>Date of Questionnaire completion:</i></li></ul>	
<p>1. Please describe the general characteristics of the centre (number of beds, staff, oncology services)</p> <hr/> <hr/>	
<p>Please categorize type of institution:</p>	
<input type="checkbox"/> <b>Public</b>	
<input type="checkbox"/> <b>Private</b>	<i>(profit/non-profit)</i>
<input type="checkbox"/> <b>Regional/District level</b>	
<input type="checkbox"/> <b>National</b>	
<input type="checkbox"/> <b>University affiliated</b>	
<input type="checkbox"/> <b>Other</b>	
<p>What is the catchment area and population?</p> <hr/>	
<p>What proportion of patients is from outside of the catchment area?</p>	
<p>Is there any support — financial or in-kind (e.g. accommodation, meals, transport) — for patients and families?</p>	
<p><input type="checkbox"/> <b>Yes</b>   <input type="checkbox"/> <b>No</b></p>	
<p><i>Please specify</i></p> <hr/> <hr/> <hr/>	

**DIAGNOSIS**

2. Describe the overall situation for cancer diagnostic imaging services. Are there plans to expand these services?

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What are the strengths and the challenges of these diagnostic services?

Strengths	Challenges

3. What equipment/devices are available?

Equipment	Operational?	Quantity	Years in Operation
<input type="checkbox"/> Conventional X-ray units	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Ultrasound units	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Mammography units	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Computed tomography (CT) scanners	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Magnetic resonance imaging (MRI) units	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Gamma cameras (for single photon emission computed tomography [SPECT])	<input type="checkbox"/> Yes <input type="checkbox"/> No		

<input type="checkbox"/> SPECT–CT units	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Positron emission tomography (PET) units	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> PET–CT units	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Endoscopy units	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Interventional radiology	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Other ( <i>Please specify</i> )  _____  _____  _____  _____  _____  _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____  _____  _____  _____  _____  _____	_____  _____  _____  _____  _____  _____

4. What is the number of staff (excluding students) for diagnostic imaging services?

Speciality	Quantity	Qualifications	Available full-time?
<input type="checkbox"/> Radiologists			
<input type="checkbox"/> Nuclear medicine physicians			
<input type="checkbox"/> Medical physicists (for radiology/nuclear medicine)			
<input type="checkbox"/> Radiopharmacists			
<input type="checkbox"/> Technologists (for radiology/nuclear medicine)			

<input type="checkbox"/> Nurses (for radiology/nuclear medicine)			
<input type="checkbox"/> Biomedical engineers (for radiology/nuclear medicine)			
<input type="checkbox"/> Radiation protection officers (for radiology/nuclear medicine)			

5. How long is the waiting list for the following diagnostic activities?

<b>Procedures</b>	<b>Average number of procedures per year</b>	<b>Waiting time (in days)</b>	<b>Comments</b>
<input type="checkbox"/> Conventional X-rays			
<input type="checkbox"/> Ultrasonography			
<input type="checkbox"/> Interventional radiology			
<input type="checkbox"/> Mammography			
<input type="checkbox"/> CT scan			
<input type="checkbox"/> MRI			
<input type="checkbox"/> PET scan			
<input type="checkbox"/> PET-CT scan			
<input type="checkbox"/> Scintigraphy (planar/SPECT)			
<input type="checkbox"/> SPECT/CT			
<input type="checkbox"/> Endoscopic procedures			
<input type="checkbox"/> Other ( <i>Please specify</i> )			



8. Please report the number of studies performed in each laboratory per year

Histopathology	
Cytology (Pap test, fine needle aspiration [FNA], Fluids, etc.)	
Immunohistochemistry (oestrogen receptor [ER], progesterone receptor [PR], human epidermal growth factor receptor type 2 [HER2], others)	
Autopsies	
Haematological tests	
Biochemistry tests	

9. Are intra-operative frozen section examinations in place?

Yes  No

If Yes, provide the **number per year**:

10. Are true-cut biopsies performed?

Yes  No

If Yes, provide the **number per year**:

11. On average, how long does it take to have the histopathology report of a patient after the biopsy is taken (in days):

12. Does the centre/unit/ward perform testing for the following biomarkers? What percentage of patients has access to such testing?

<input type="checkbox"/> Hormone receptors (at least ER,PR, HER2)	%	Please specify in what ways patients have access to testing for these biomarkers.
<input type="checkbox"/> Cancer genetic markers	%	

<input type="checkbox"/> Other immunohistochemical markers  <input type="checkbox"/> Radioimmunological assay  <p><i>(please specify)</i></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p style="text-align: center;">%</p> <p style="text-align: center;">%</p>	<hr/>
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13. What is the number of staff (excluding students) in the laboratory?

Speciality	Quantity	Qualifications	Comments
<input type="checkbox"/> Haematologists			
<input type="checkbox"/> Biochemists			
<input type="checkbox"/> Molecular biologists			
<input type="checkbox"/> Technologists			
<input type="checkbox"/> Others <i>(Please specify)</i>  <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/>


**CANCER TREATMENT**

14. Describe the overall situation for cancer treatment services. Are there plans to expand these services?

- Yes  No

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What treatment facilities /services are available?

- |  |   |                                     |
|--|---|-------------------------------------|
| <input type="checkbox"/> Cancer surgery      | <input type="checkbox"/> Nuclear medicine therapy   | <i>Please describe the modality</i> |
| <input type="checkbox"/> Medical oncology    | <input type="checkbox"/> Psychosocial support       |                                     |
| <input type="checkbox"/> Paediatric oncology | <input type="checkbox"/> Palliative/Supportive care | <hr/>                               |
| <input type="checkbox"/> Radiation oncology  | <input type="checkbox"/> Rehabilitation services    | <hr/>                               |
|  |   | <hr/>                               |

15. Are there tumour boards or multidisciplinary teams for specific cancer sites?

- Yes  No

If Yes, describe the composition and frequency of the tumour board meetings.

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16. Are professionals who participate in the cancer diagnostic process (imaging/pathology/etc.) part of the tumour boards or multidisciplinary teams?

- Yes  No

<p>17. Are there guidelines for treatment of frequent cancers?</p> <p><input type="checkbox"/> <b>Yes</b>   <input type="checkbox"/> <b>No</b></p> <p>If <b>Yes</b>, <i>describe</i> for which cancer sites, whether they are national or hospital-specific, the dates of adoption and the process for developing the treatment guidelines.</p> <hr/> <hr/>				
<p>18. Is there a policy for follow-up of cancer patients?</p> <p><input type="checkbox"/> <b>Yes</b>   <input type="checkbox"/> <b>No</b></p>				
<p>19. Are comprehensive quality assurance audits (QAAs) conducted periodically?</p> <p><input type="checkbox"/> <b>Yes</b>   <input type="checkbox"/> <b>No</b></p> <p><i>Specify</i> diagnostic and treatment procedures for which QAAs are performed.</p> <hr/> <hr/>				
<p>20. Is the dosimetry audit conducted separately?</p> <p><input type="checkbox"/> <b>Yes</b>   <input type="checkbox"/> <b>No</b></p>				
<p>21. Is informed consent for treatments obtained from all patients?</p> <p><input type="checkbox"/> <b>Yes</b>   <input type="checkbox"/> <b>No</b></p>				
<p>22. Are the following support services available (or accessible to patients)?</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"><input type="checkbox"/> <b>Psychosocial support</b></td> <td style="width: 50%;"><input type="checkbox"/> <b>Reemployment</b></td> </tr> <tr> <td><input type="checkbox"/> <b>Spiritual support</b></td> <td><input type="checkbox"/> <b>Rehabilitation (nutrition, speech, hearing, etc.)</b></td> </tr> </table>	<input type="checkbox"/> <b>Psychosocial support</b>	<input type="checkbox"/> <b>Reemployment</b>	<input type="checkbox"/> <b>Spiritual support</b>	<input type="checkbox"/> <b>Rehabilitation (nutrition, speech, hearing, etc.)</b>
<input type="checkbox"/> <b>Psychosocial support</b>	<input type="checkbox"/> <b>Reemployment</b>			
<input type="checkbox"/> <b>Spiritual support</b>	<input type="checkbox"/> <b>Rehabilitation (nutrition, speech, hearing, etc.)</b>			

## SURGICAL ONCOLOGY

23. Describe the general situation of surgical oncology services in the centre

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24. How many cancer patients with solid tumours are treated surgically/year? (adults and paediatric)

**Number of major surgeries:**

25. How many curative surgeries are performed per year? **Number of curative surgeries:**

26. How many palliative surgeries are performed per year? **Number of palliative surgeries:**

27. What is the outcome of surgical treatment for cancer patients in terms of:

Surgical mortality (within 60 days of surgery)	(number or %)
Complication rate	(number or %)

28. How long does it take between prescription of surgery and surgical treatment (in days)?

Please give some examples citing specific cancer sites.

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29. What is the total number of surgeons for treating cancer patients per speciality?

Speciality	Numbers	Comments
<input type="checkbox"/> Head and neck		
<input type="checkbox"/> Gastrointestinal tract		
<input type="checkbox"/> Thoracic		
<input type="checkbox"/> Breast		
<input type="checkbox"/> Gynaecological (pelvis)		
<input type="checkbox"/> Urology		
<input type="checkbox"/> Soft and bone tissues		
<input type="checkbox"/> Neurosurgery		
<input type="checkbox"/> Paediatric		
<input type="checkbox"/> Others ( <i>Please specify</i> ) <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

30. Describe the education and training programme for oncology surgeons

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31. How many operating theatres does the centre/unit/ward have?

32. How many patients have potentially curable (by surgery) tumours?                      % of all patients

33. How many patients have advanced disease at the time of surgery?	% of all patients	
34. Which are the five most frequent cancers for surgery in males, in females and in children? Please list and provide numbers		
<b>Males</b>	<b>Females</b>	<b>Children</b>
1)	1)	1)
2)	2)	2)
3)	3)	3)
4)	4)	4)
5)	5)	5)
35. Is video laparoscopy available?		
<input type="checkbox"/> Yes <input type="checkbox"/> No		
<i>Specify</i>		
36. Is robotic surgery available? <input type="checkbox"/> Yes <input type="checkbox"/> No		
37. Are there round-table or clinical sessions to treatment approach and outcome?		
<input type="checkbox"/> Yes <input type="checkbox"/> No		
<b>MEDICAL ONCOLOGY</b>		
38. Describe the general situation of medical oncology services in the centre		

39. How many new cancer patients receive medical oncology treatment per year in the centre?

Type of medical oncology treatment	Numbers of patients per year	Comments
<input type="checkbox"/> Chemotherapy		
<input type="checkbox"/> Hormonal therapy		
<input type="checkbox"/> Biological/immunotherapy		
<b>Total</b>		

40. What is the total number of medical oncologists in the centre? |                      | How are they trained?

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41. What is the number of haemato-oncologists in the country? |                      | How are they trained?

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42. What is the number of paediatric medical oncologists in the country? |                      | How are they trained?

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<p>43. What is the number of oncology nurses, trained to administrate chemotherapy?               </p> <p>Is there a special training programme for oncology nurses?</p> <hr/> <hr/>
<p>44. What is the number of oncopharmacists in the centre?                How are they trained?</p> <hr/> <hr/>
<p>45. How many paediatric cancer patients are treated per year?               </p>
<p>46. How many beds for medical oncology are available in the centre?               </p>
<p>47. Does the country have a list of essential drugs for oncology?</p> <p><input type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p><i>Specify: Access/Cost/Availability</i></p> <hr/> <hr/>
<p>48. Is there funding for cancer medicine outside the essential drugs list?</p> <p><input type="checkbox"/> Yes   <input type="checkbox"/> No</p>
<p>49. Is there a mechanism/process to review new anticancer drugs and approve coverage?</p> <p><input type="checkbox"/> Yes   <input type="checkbox"/> No</p>
<p>50. Is there funding for the provision of supportive medication to counter the side effects of chemotherapy?</p> <p><input type="checkbox"/> Yes   <input type="checkbox"/> No</p>

51. Is there a process/mechanism to periodically review and include new anticancer medicine on the essential drugs list?

Yes  No

52. Are the essential anticancer drugs available on a regular basis?

Yes  No

53. Is the preparation of chemotherapy carried out in a centralized area?

Yes  No

*Please describe*

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54. Are measures implemented to protect patients, health professionals and the environment from contaminants?

Yes  No

*Please describe*

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55. Are there facilities for administration of high dose chemotherapy and salvage treatment with bone marrow or stem cell transplantation?

Yes  No

If Yes, how many bone marrow transplants are performed per year? |            |

**RADIOTHERAPY/RADIATION ONCOLOGY**

56. Describe the general situation of radiotherapy services in the centre

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57. What are the five most frequent cancers treated with radiotherapy per year: in males, in females, in children? Please list and provide numbers

Males	Females	Children
1)	1)	1)
2)	2)	2)
3)	3)	3)
4)	4)	4)
5)	5)	5)

58. Number of **curative cases** treated with radiotherapy per year | =        |

59. Number of **palliative cases** treated with radiotherapy per year? | =        |

60. What is the average waiting time for first consultation with a radiation oncologist? | =        days |

61. What is the average waiting time from first consultation to the start of radiotherapy? | =        days |

62. How many of the following pieces of equipment/facilities are available in the centre?

Equipment	Units	Comments
<input type="checkbox"/> Simulator (conventional)		
<input type="checkbox"/> CT Simulator		
<input type="checkbox"/> Mould room facility		
<input type="checkbox"/> Immobilization devices available and routinely used		

63. How many treatment planning system (TPS) units are available in the centre?

Equipment	Units	Comments
<input type="checkbox"/> TPS supporting two-dimensional (2D) treatment planning		
<input type="checkbox"/> TPS supporting three-dimensional (3D) treatment planning		
<input type="checkbox"/> TPS supporting multi-leaf collimator (MLC)		
<input type="checkbox"/> TPS supporting intensity-modulated radiation therapy (IMRT)		
<input type="checkbox"/> TPS supporting brachytherapy planning		

64. What treatment techniques are used and number of patients treated per year by each technique

Equipment	Units	Comments
<input type="checkbox"/> 1D (calculation using percentage depth dose [PDD] and tissue phantom ratio [TPR] only)		
<input type="checkbox"/> 2D (isodose distribution using TPS)		
<input type="checkbox"/> 3D		
<input type="checkbox"/> IMRT		
<input type="checkbox"/> Image guided radiation therapy (IGRT)		
<input type="checkbox"/> Total body irradiation (TBI)/Hemibody irradiation (HBI)		
<input type="checkbox"/> Stereotactic radiotherapy (SRT)/Stereotactic radiosurgery (SRS)		

65. How many teletherapy machines are available in the centre?	
<input type="checkbox"/> Cobalt-60	=
<input type="checkbox"/> Linacs	=
<input type="checkbox"/> Others ( <i>please specify</i> )	=
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

66. How many new cancer patients are treated with teletherapy per year? | = |

67. How many brachytherapy units are available in the centre?	
<input type="checkbox"/> High dose rate (HDR)	=
<input type="checkbox"/> Low dose rate (LDR)	=
<input type="checkbox"/> Others ( <i>please specify</i> )	=
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

68. How many new cancer patients are treated with brachytherapy per year? | = |

69. Which type of brachytherapy is practiced?	
<input type="checkbox"/> Intracavitary	<input type="checkbox"/> Interstitial

Intraluminal     Surface moulds

70. Does the facility have a record and verify system?  Yes     No

71. Does the centre have the following dosimetry equipment?

Equipment	Units	Comments
<input type="checkbox"/> For external beam calibration (photon/electron beam)		
<input type="checkbox"/> Brachytherapy		
<input type="checkbox"/> Beam scanning dosimetry system		
<input type="checkbox"/> For in vivo dosimetry		
<input type="checkbox"/> Thermoluminescent dosimeters (TLDs) /diodes/ionization chambers		

72. Does the centre have an institutional Radiotherapy Quality Assurance Committee?  Yes     No

73. Is there a documented quality assurance programme for radiotherapy centres in the country?

Yes     No

If **Yes**, is it linked to the national Cancer Control programme?  Yes     No

*Please specify*

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74. Is there a secondary standards dosimetry laboratory (SSDL) in the country?  Yes     No

75. Does the centre participate in a dosimetry audit programme for teletherapy machines?

Yes     No

76. Are there radiotherapy protocols?  Yes  No

If Yes, which radiotherapy protocols are followed? Are they documented?

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77. Is repair of the equipment carried out by

Service contract *(specify downtime of equipment)*

In-house/external engineers *(specify downtime of equipment)*

78. Is preventive maintenance routinely carried out?  Yes  No

If Yes, is it documented?  Yes  No

79. How many of the following radiotherapy related human resources are available in the centre?

Position	Numbers	Average hrs/week	Related qualifications	Continuing medical education (CME) programmes	Comments
<input type="checkbox"/> Radiation oncologists					
<input type="checkbox"/> Radiation therapy medical physicists					
<input type="checkbox"/> Radiation therapy technologists (RTTs)					
<input type="checkbox"/> Radiation oncology nurses					
<input type="checkbox"/> Repair and maintenance (Biomedical engineers/technologists)					

80. What is the frequency of departmental radiation surveys?  Weekly  Monthly

81. Does the centre have an incident reporting mechanism/committee?

Yes  No

## NUCLEAR MEDICINE THERAPY

82. Describe the general situation of nuclear therapy services in the centre

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83. Provide following treatment data:

Indications	Treatments per year
Thyroid cancer (I131)	
Bone metastases (Ra223, Sm153, Sr89, 32P)	
Neuroendocrine tumours (I131 MIBG, Y90-peptides, Lu177-peptides)	
Onco-haematology (I131 or 90Y-monoclonal antibodies)	
Prostate cancer (Lu177-PSMA, 225Ac-PSMA)	
Selective internal radiation therapy (Y90-microspheres)	

84. How many rooms for nuclear medicine are available in the centre? | = |

*Please specify*

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85. How many of the following nuclear medicine therapy related human resources are available in the centre?

Position	Numbers	Average hrs/week	Comments
<input type="checkbox"/> Nuclear physicians			
<input type="checkbox"/> Nuclear medicine medical physicists			
<input type="checkbox"/> Radiopharmacists			
<input type="checkbox"/> Nuclear medicine technologists			
<input type="checkbox"/> Nurses trained for nuclear medicine			

86. Are there any national guidelines for treatment of thyroid cancer?  Yes  No

If **Yes**, please specify the date | | and the process of developing them

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87. Are there national guidelines for other radionuclide therapies?

Yes  No

If **Yes**, please specify the date | | and the process of developing them

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88. Are there any national guidelines for radioactive waste management in the country's nuclear medicine departments?  Yes  No

89. Is there a specific training programme for nuclear medicine physicists?

Yes  No

If **Yes**, please describe

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90. Is there any documented quality assurance programme for nuclear medicine in the centre?

Yes  No

91. Are the following personal dosimeters available for staff?

Film badge

Radiation survey meter

TLD (Badge/Ring)

Departmental surveys (weekly / monthly)

Alarm pocket dosimeter

92. Is there any incident reporting committee?

Yes  No

93. Is the country involved in structured teaching and training programmes leading to the certification of nuclear medicine related human resources?

Yes  No *Please fill out below*

<b>Speciality</b>	<b>Certificate/Diploma/Degree/others obtained</b>	<b>Expected numbers in next five years</b>
<input type="checkbox"/> Nuclear Physician		
<input type="checkbox"/> Medical Physicist		
<input type="checkbox"/> Radiopharmacist		
<input type="checkbox"/> Nuclear Medicine Technologist		
<input type="checkbox"/> Radiation Protection Officer		
<input type="checkbox"/> Radiopharmacist		

Please provide contact details of the principal author and co-authors of the questionnaire.

<b>Principal author</b> (person in charge of coordinating questionnaire inputs)	
<i>Last name</i>	<i>First name</i>
<i>Position/Title</i>	
<i>Organization</i>	
<i>City, Country</i>	
<i>Telephone (including country code); Mobile</i>	
<i>E-mail</i>	

<b>Co-author</b>	
<i>Last name</i>	<i>First name</i>
<i>Position/Title</i>	
<i>Organization</i>	
<i>City, Country</i>	
<i>Telephone (including country code); Mobile</i>	
<i>E-mail</i>	

<b>Co-author</b>	
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<i>Position/Title</i>	
<i>Organization</i>	
<i>City, Country</i>	
<i>Telephone (including country code); Mobile</i>	
<i>E-mail</i>	