Innovative RT - Breast - APBI and Boost

The variables with REQ in superscript are required.

The variables with a ☐ are single-select variables; only one answer can be selected.

The variables with a ☐ are multi-select variables; multiple answers can be selected.
Administrative patient data

Hospital **REQ**: ........................................................................................................................................
Health insurance institution **REQ**: ..........................................................................................................
NISS/INSZ number **REQ**: ........................................................................................................................
Last name **REQ**: ........................................................ First name **REQ**: ......................................................
Postal code **REQ**: ........................................................ City **REQ**: ..............................................................
Country **REQ**: .............................................................. Health insurance number: ........................................
Date of birth **REQ**: .... / .... / .... (dd/mm/yyyy) Sex **REQ**: .................................................................

I confirm that this registration meets the inclusion criteria of the project ‘2011-26 HTA_Innovative radiotherapy’ and is in accordance with the convention for financing of the project ‘Innovative techniques in radiotherapy’. **REQ**

An overview of the techniques and cancer indications can be found in table 1 of the KCE Report 198C (https://kce.fgov.be/sites/default/files/page_documents/KCE_198C_Innovativeradiotherapy.pdf).
The inclusion and exclusion criteria for the registration can be found in attachment 1 of the convention for financing of the project ‘Innovative techniques in radiotherapy’.

1. Diagnostics

A. Details primary tumor

Incidence date **REQ**: ....... / ....... / ....... (dd/mm/yyyy)

Basis for diagnosis **REQ**:

- 1 - Autopsy
- 2 - Histology of primary tumor
- 3 - Histology metastasis
- 4 - Cytology/hematology
- 5 - Technical (f.ex. CT scan, endoscopy, ...)
- 6 - Clinical
- 7 - Tumor marker (f.ex. PSA, HCG, AFP, Ig, ...)
- Unknown
WHO score at diagnosis **REQ:**
- 0 - Asymptomatic, normal activity
- 1 - Symptomatic, but ambulant
- 2 - Symptomatic, bedbound < 50% day
- 3 - Symptomatic, bedbound > 50% day
- 4 - Completely dependent, 100% bedbound
- Unknown

Primary tumor localization **REQ:**
- C50.0 Nipple
- C50.1 Central portion of the breast
- C50.2 Upper-inner quadrant of breast
- C50.3 Lower-inner quadrant of breast
- C50.4 Upper-outer quadrant of breast
- C50.5 Lower-outer quadrant of breast
- C50.6 Axillary tail of breast
- C50.8 Overlapping lesion of breast
- C50.9 Breast, NOS

Laterality **REQ:**
- Left
- Right

Histological diagnosis **REQ:**
- 8211/3 - Tubular carcinoma
- 8480/3 - Mucinous/colloid carcinoma
- 8500/3 - Invasive ductal carcinoma, NOS
- 8510/3 - Medullary carcinoma
- 8520/3 - Invasive lobular carcinoma

Tumor differentiation grade **REQ:**
- 1 - Well differentiated
- 2 - Moderately differentiated
- 3 - Poorly differentiated
- 4 - Undifferentiated
- Unknown

Clinical stage (cTNM): cT: ........ cN: .......... cM: ........

Pathological stage (pTNM) **REQ:**
BRCA1/2 mutation status\(^{\text{REQ}}\):  
- Present  
- Not present  
- Test performed but result could not be determined  
- Unknown  

Breast MRI performed \(^{\text{REQ?}}\):  
- Yes  
- No  

Breast implants present in the irradiated breast\(^{\text{REQ?}}\):  
- Yes  
- No  

B. Radiotherapy details

Centre where the RT was performed\(^{\text{REQ}}\): .................................................................

Centre that referred the patient to the RT\(^{\text{REQ}}\): .................................................................

Number of fractions delivered\(^{\text{REQ}}\): ..............

Total dose delivered\(^{\text{REQ}}\): ............\(\text{Gy}\)

Start date of RT\(^{\text{REQ}}\): .... /...... / .... (dd/mm/yyyy)

End date of RT\(^{\text{REQ}}\): .... /.... / .... (dd/mm/yyyy)
2. Treatment specifications

Type of treatment and RT technique\(^{\text{REQ}}\):

1. APBI - Low risk - IORT (electrons) (Complete sections: 3A, 5A, 5D)
2. APBI - Low risk - IORT (photons) (Intrabeam, Other) (Complete sections: 3B, 4, 5A, 5D)
3. APBI - Low risk - Brachytherapy - Interstitial Brachytherapy (Complete sections: 3C, 5B)
4. APBI - Low risk - Brachytherapy - Intracavitary Volume Implants (Complete sections: 3D, 5B)
5. APBI - Low risk - External Radiation Therapy (Complete sections: 3E, 4, 5C, 5D)
6. APBI - Intermediate risk - IORT (electrons) (Complete sections: 3A, 4, 5A, 5D)
7. APBI - Intermediate risk - IORT (photons) (Intrabeam, Other) (Complete sections: 3B, 4, 5A, 5D)
8. APBI - Intermediate risk - Brachytherapy - Interstitial Brachytherapy (Complete sections: 3C, 4, 5B)
9. APBI - Intermediate risk - Brachytherapy - Intracavitary Volume Implants (Complete sections: 3D, 4, 5B)
11. Boost - Low risk - IORT (photons) (Intrabeam, Other) (Complete section: 3B, 3F, 4, 5A, 5D)

3. Applied technique

A. IORT - Electrons

Type of equipment (electrons)\(^{\text{REQ}}\):

- Mobetron
- Novac7
- LIAC
- Other

Specify\(^{\text{REQ}}\): ........................................................................................................

Electron energy\(^{\text{REQ}}\): ......... MeV

B. IORT - Photons

Type of equipment (photons)\(^{\text{REQ}}\):

- Intrabeam
- Other

Specify\(^{\text{REQ}}\): ........................................................................................................

Photon energy\(^{\text{REQ}}\): ......... kV
C. Brachytherapy - Interstitial Brachytherapy

Dose rate \textsuperscript{REQ}: \(\circ\) LDR  
\(\circ\) PDR  
\(\circ\) HDR

D. Brachytherapy - Intracavitary Volume Implants

Radiotherapy system – Intracavitary Volume Implants \textsuperscript{REQ}: \(\circ\) MammoSite Radiation Therapy System  
\(\circ\) Contura  
\(\circ\) ClearPath  
\(\circ\) SAVI  
\(\circ\) Axxent

E. External Radiation Therapy

Radiotherapy system - External Radiation Therapy \textsuperscript{REQ}: \(\circ\) 3D-CRT  
\(\circ\) IMRT  
\(\circ\) Rotational IMRT  
\(\circ\) Rotational 3D  
\(\circ\) Other

Specify \textsuperscript{REQ}: ........................................

F. Boost

Immediate continuation of whole breast RT (no interruption = within 1 month after boost date) \textsuperscript{REQ}?

\(\circ\) Yes  
\(\circ\) No

4. Clinical trial details

Reference number of the ethics committee approval \textsuperscript{REQ}: .........................................................

Reference number of the public clinical trial registry \textsuperscript{REQ}: .................................................................
5. Technical aspects

A. Patient specific technical aspects - IORT

Thoracic wall protection \( \text{REQ} \):
- Aluminium-lead shielding disk
- Surgical blankets including Tungsten
- None
- Other
  Specify \( \text{REQ} \): ..........................................................

B. Patient specific technical aspects - Brachytherapy

Image guidance for treatment planning \( \text{REQ} \):
- Mammography - Guided
- Template - Guided
- CT - Guided
- MRI - Guided
- Ultrasound - Guided

C. Technical aspects of tumor localization - External Radiation Therapy

Patient position \( \text{REQ} \):
- Prone
- Supine
- Other
  Specify \( \text{REQ} \): ..........................................................

Personalized immobilization \( \text{REQ} \):
- Yes
- No

Identification of tumor motion \( \text{REQ} \):
- kV fluoroscopy
- 4D-CT scan
- Maximum inspiration/expiration breath hold CT
- None
- Other
  Specify \( \text{REQ} \): ..........................................................
Tumor motion compensation strategy **REQ**:  
- Abdominal compression  
- Breath hold  
- Gating  
- Tracking  
- None  
- Other  
  Specify **REQ**: ............................................................

Image fusion for target delineation **REQ**:  
- Yes  
- No

On-treatment imaging **REQ**:  
- kV fluoroscopy  
- EPID  
- CBCT  
- MVCT  
- Exactrac  
- Other  
  Specify **REQ**: ............................................................

Markers **REQ**:  
- Implanted markers  
- External skin sensors  
- No markers

**D. Dose specific aspects**

Dose calculation algorithm **REQ**:  
- Pencil beam algorithm  
- Convolution superposition algorithm: Anisotropic Analytic Algorithm – AAA  
- Convolution superposition algorithm: Collapsed Cone Convolution – CCC  
- Monte Carlo (f.ex. Voxel Monte Carlo – VMC++)  
- Other  
  Specify **REQ**: ............................................................

Patient specific Quality Assurance (QA) prior to start **REQ**:  
- 1D (point) verification  
- 2D verification  
- 3D verification  
- 4D verification  
- None
6. Nomenclature

Nomenclature number(s) used \(^{\text{REQ}}\): 444172 or 444183
- 444253 or 444264
- 444312 or 444323
- 444393 or 444404