

2007 QRRO Clinical Performance Measures (CPM)

Radiation Oncology –Breast Cancer

Measure #B_CM1A: Use of external beam regional node irradiation to the chest wall/breast and supraclavicular area in stage III breast cancer patients with ≥ 4 positive axillary nodes.

Type of Measure: This measure is appropriately used as a quality improvement measure.

Clinical Performance Measure
Quantifiable Measure: Percentage of stage III breast cancer patients with ≥ 4 positive axillary nodes that receive post chemotherapy external beam irradiation to the chest wall/breast and supraclavicular area
Numerator: Stage III breast cancer patients with ≥ 4 positive axillary nodes that receive post chemotherapy external beam irradiation to the chest wall/breast and supraclavicular area
Denominator: All stage III breast cancer patients with ≥ 4 positive axillary nodes that receive post chemotherapy external beam irradiation.
Denominator exclusions: None
Rationale for the measure: Multiple treatment guidelines, e.g., ASCO, ASTRO, NCCN have been published with recommendations for which breast cancer patients are recommended to be considered for treatment.
The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure: “ ≥ 4 positive axillary nodes \rightarrow postchemotherapy radiation to the chestwall/breast and supraclavicular area,”and “1-3 positive axillary nodes \rightarrow strongly consider postchemotherapy radiation to the chestwall/breast and supraclavicular area” (1)
QRRO Survey Form Questions: I1 – 19, 35, 85, 160, 201, 221, 231, 320 321, 331

References

1. NCCN Practice Guidelines in Oncology, Invasive Breast Cancer, . v2.2008 ;10-11
2. Recht A, Edge S, Solin L, et al. Postmastectomy Radiotherapy: Clinical Practice Guidelines of the American Society of Clinical Oncology. J Clin Oncol 2001;19:1539-1569.

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Radiation Oncology –Breast Cancer

Measure #B_CM1B: Use of external beam regional node irradiation to the chest wall/breast and supraclavicular area in stage II-III breast cancer patients with 1-3 positive axillary nodes.

Type of Measure: This measure is appropriately used as a quality improvement measure.

Clinical Performance Measure
Quantifiable Measure: Percentage of stage II-III breast cancer patients with 1-3 positive axillary nodes that receive post chemotherapy external beam irradiation to the chest wall/breast and supraclavicular area
Numerator: Stage II-III breast cancer patients with 1-3 positive axillary nodes that receive post chemotherapy external beam irradiation to the chest wall/breast and supraclavicular area
Denominator: All stage II-III breast cancer patients with 1-3 positive axillary nodes that receive post chemotherapy external beam irradiation.
Denominator exclusions: None
Rationale for the measure: Multiple treatment guidelines, e.g., ASCO, ASTRO, NCCN have been published with recommendations for which breast cancer patients are recommended to be considered for treatment.
The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure: “ \geq 4 positive axillary nodes → postchemotherapy radiation to the chestwall/breast and supraclavicular area,”and “1-3 positive axillary nodes → strongly consider postchemotherapy radiation to the chestwall/breast and supraclavicular area” (1)
QRRO Survey Form Questions: I1 – 19, 35, 85, 160, 201, 221, 231, 320, 321, 331

References

3. NCCN Practice Guidelines in Oncology, Invasive Breast Cancer, . v2.2008 ;10-11
4. Recht A, Edge S, Solin L, et al. Postmastectomy Radiotherapy: Clinical Practice Guidelines of the American Society of Clinical Oncology. J Clin Oncol 2001;19:1539-1569.

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Measure #B_CM2: Use of external beam irradiation treatment to the supraclavicular field and axillary apex without full axillary radiation in patients with N1 (1-3 positive axillary nodes) disease after axillary dissection.

Type of Measure: This measure is appropriately used as a quality improvement measure.

Clinical Performance Measure
Quantifiable Measure: Percentage of patients with N1 disease that receive supraclavicular field and axillary apex external beam irradiation without full axillary radiation after axillary dissection.
Numerator: Patients with N1 disease that receive supraclavicular field and axillary apex external beam irradiation treatment without full axillary radiation after axillary dissection.
Denominator: All patients with N1 disease receiving regional nodal external beam irradiation for breast cancer after axillary dissection.
Denominator exclusions: None
Rationale for the measure: Multiple treatment guidelines, e.g., ASCO, ASTRO, and institutional reports have been published with recommendations for use of supraclavicular and axillary apex instead of full axillary radiation because of reduced toxicity.
The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure: “Following a Level I and II axillary dissection, the use of a third field to treat the axillary apex and supraclavicular area is appropriate for selected node-positive patients” (1).
QRRO Survey Form Questions: I1 – 19, 35, 81, 85, 221, 160, 269

References

1. Harris J, Halpin-Murphy P, McNeese M, et al. Consensus Statement on Postmastectomy Radiation Therapy. In J Radiat Oncol Biol Phys 1999;44(5):989-990.
2. Taylor ME, Haffty BG, Shank BM, et al. Postmastectomy Radiotherapy. American College of Radiology. ACR Appropriateness Criteria. Radiology 2000;215 Suppl:1153-70.
3. National Institutes of Health Consensus Development Panel. National Institutes of Health Consensus Development Conference Statement: Adjuvant Therapy for Breast Cancer, November 1-3, 2000. Journal of National Cancer Institute 2001;93(13):979-989.
4. Recht A, Edge S, Solin L, et al. Postmastectomy Radiotherapy: Clinical Practice Guidelines of the American Society of Clinical Oncology. J Clin Oncol 2001;19:1539-1569

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Radiation Oncology –Breast Cancer

Measure #B_CM3A: Use of external beam regional nodal irradiation in stage II-III patients with \geq N1 breast cancer post-Breast Conservation Treatment (BCT).

Type of Measure: This measure is appropriately used as a quality improvement measure.

Clinical Performance Measure
Quantifiable Measure: Percentage of stage II-III patients with \geq N1 breast cancer receiving post chemotherapy external beam nodal irradiation following breast conservation treatment.
Numerator: Stage II-III patients with \geq N1 breast cancer receiving post chemotherapy external beam regional nodal irradiation after breast conservation treatment.
Denominator: All stage II-III patients with \geq N1 breast cancer receiving post chemotherapy external beam irradiation after breast conservation treatment.
Denominator exclusions: None
Rationale for the measure: The use of regional nodal irradiation is based on the stage of disease and extent of axillary nodal involvement.
The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure: “ \geq 4 positive axillary nodes \rightarrow postchemotherapy radiation to the chestwall/breast and supraclavicular area,”and “1-3 positive axillary nodes \rightarrow strongly consider postchemotherapy radiation to the chestwall/breast and supraclavicular area” (1)
QRRO Survey Form Questions: I1 – 19, 35, 21, 85, 160, 269, 320, 321, 331

References

1. NCCN Practice Guidelines in Oncology, Invasive Breast Cancer, . v2.2008 ;10-11

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Radiation Oncology –Breast Cancer

Measure #B_CM3B: Use of external beam regional nodal irradiation in stage II-III patients with \geq N1 breast cancer post-mastectomy.

Type of Measure: This measure is appropriately used as a quality improvement measure.

Clinical Performance Measure
Quantifiable Measure: Percentage of stage II-III patients with \geq N1 breast cancer receiving post chemotherapy external beam nodal irradiation following mastectomy.
Numerator: Stage II-III patients with \geq N1 breast cancer receiving post chemotherapy external beam regional nodal irradiation after mastectomy
Denominator: All stage II-III patients with \geq N1 breast cancer receiving post chemotherapy external beam irradiation after mastectomy
Denominator exclusions: None
Rationale for the measure: The use of regional nodal irradiation is based on the stage of disease and extent of axillary nodal involvement.
The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure: “ \geq 4 positive axillary nodes \rightarrow postchemotherapy radiation to the chestwall/breast and supraclavicular area,”and “1-3 positive axillary nodes \rightarrow strongly consider postchemotherapy radiation to the chestwall/breast and supraclavicular area” (1)
QRRO Survey Form Questions: I1 – 19, 35, 21, 85,160, 269, 320, 321, 331

References

2. NCCN Practice Guidelines in Oncology, Invasive Breast Cancer, . v2.2008 ;10-11

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Radiation Oncology –Breast Cancer

Emerging Measure #B_EM1A: Use of CT volume-based treatment planning using conformal radiation methods to deliver external beam irradiation

Type of Measure: This measure is appropriately used as a quality improvement measure.

Clinical Performance Measure
Quantifiable Measure: Percentage of patients receiving external beam irradiation delivered with CT volume-based treatment planning using conformal radiation methods.
Numerator: Patients receiving external beam irradiation delivered with CT volume-based treatment planning using conformal radiation methods.
Denominator: All patients receiving external beam irradiation
Denominator exclusions: None
Rationale for the measure: Emerging data that less toxicity is achievable for breast cancer when radiotherapy delivered with more conformal methods.
The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure: Guidelines pending
QRRO Survey Form Questions: I1 - 121, 123, 160

References

1. Pignol, JP, Olivotto, I, Rakovitch, E, et al. A Multicenter Trial of Breast Intensity Modulated Radiation Therapy to Reduce Acute Radiation Dermatitis, *J. Clin Onc* 26 (13):2085-2092, 2008
2. Donovan, E, Bleakley N, Denholm, E, et al. Randomized trial of standard 2D radiotherapy versus intensity modulated radiotherapy in patients prescribed breast radiotherapy. *Radiotherapy and Oncology* 82 :254-264, 2007.

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Radiation Oncology –Breast Cancer

Emerging Measure #B_EM1B: Use of dose volume histograms for target organs and dose limiting normal tissues when CT volume-based treatment planning using conformal radiation methods is used to deliver external beam irradiation.

Type of Measure: This measure is appropriately used as a quality improvement measure.

Clinical Performance Measure
Quantifiable Measure: Percentage of patients with dose volume histograms for target organs and dose limiting normal tissues when CT volume-based treatment planning using conformal radiation methods is used to deliver external beam irradiation.
Numerator: Patients with dose volume histograms for target organs and dose limiting normal tissues when CT volume-based treatment planning using conformal radiation methods is used to deliver external beam irradiation.
Denominator: All patients with external beam irradiation delivered using CT volume-based treatment planning using conformal radiation methods.
Denominator exclusions: None
Rationale for the measure: Emerging data that less toxicity is achievable for breast cancer when radiotherapy delivered with more conformal methods.
The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure: Guidelines pending
QRRO Survey Form Questions: I1 - 121, 123, 126, 127, 128, 138, 139, 141, 142

References

1. Pignol, JP, Olivetto, I, Rakovitch, E, et al. A Multicenter Trial of Breast Intensity Modulated Radiation Therapy to Reduce Acute Radiation Dermatitis, *J. Clin Onc* 26 (13):2085-2092, 2008
2. Donovan, E, Bleakley N, Denholm, E, et al. Randomized trial of standard 2D radiotherapy versus intensity modulated radiotherapy in patients prescribed breast radiotherapy. *Radiotherapy and Oncology* 82 :254-264, 2007.

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Emerging Measure #B_EM2A: Use of CT based treatment planning for all three PBI methods.

Type of Measure: This measure is appropriately used as a quality improvement measure.

Clinical Performance Measure
Quantifiable Measure: Percentage of patients with PBI delivered with CT volume-based treatment planning.
Numerator: Patients with PBI delivered with CT volume-based treatment planning.
Denominator: All patients with PBI Radiation delivered.
Denominator exclusions: None
Rationale for the measure: Emerging data that less toxicity is achievable for breast cancer when PBI is delivered using CT based planning and normal tissue constraints are met based on generating dose-volume -histograms
The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure: Guidelines pending
QRRO Survey Form Questions: I1 - 160, 300, 301, 310

References

1. Wazer, D, Kaufmanm S, Cuttino L, et al, Accelerated Partial Breast Irradiation: An analysis of variables associated with late toxicity and long-term cosmetic outcome after high-dose-rate interstitial brachytherapy. 64: 489095, 2006
2. Chen, P, Vicini, F, Bentiz, P, et al, Long-Term cosmetic results and toxicity after accelerated partial-breast irradiation. Cancer 106: 991-9, 2006
3. Vicini, F, Chen P, Wallace M, et al, Interim cosmetic results and toxicity using 3d Conformal external beam radiotherapy to delver accelerated partial breast irradiation in patients with early-stage breast cancer treated with breast –conserving therapy

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Emerging Measure #B_EM2B: Use of a Dose Volume Histogram (DVH), documentation of the planning target volume (PTV) and documentation that the PTV is covered by minimally 90% of the prescription dose when PBI is delivered with CT volume-based treatment planning.

Type of Measure: This measure is appropriately used as a quality improvement measure.

Clinical Performance Measure
Quantifiable Measure: Percentage of patients with a Dose Volume Histogram (DVH), documentation of the planning target volume (PTV) and documentation that the PTV is covered by minimally 90% of the prescription dose when PBI is delivered with CT volume-based treatment planning.
Numerator: Patients with a Dose Volume Histogram (DVH), documentation of the planning target volume (PTV) and documentation that the PTV is covered by minimally 90% of the prescription dose when PBI is delivered with CT volume-based treatment planning.
Denominator: All patients with PBI delivered with CT volume-based treatment planning.
Denominator exclusions: None
Rationale for the measure: Emerging data that less toxicity is achievable for breast cancer when PBI is delivered using CT based planning and normal tissue constraints are met based on generating dose-volume -histograms
The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure: Guidelines pending
QRRO Survey Form Questions: I1 - 160, 300, 301, 302, 305, 308, 310, 312

References

1. Wazer, D, Kaufmanm S, Cuttino L, et al, Accelerated Partial Breast Irradiation: An analysis of variables associated with late toxicity and long-term cosmetic outcome after high-dose-rate interstitial brachytherapy. 64: 489095, 2006
2. Chen, P, Vicini, F, Bentiz, P, et al, Long-Term cosmetic results and toxicity after accelerated partial-breast irradiation. Cancer 106: 991-9, 2006
3. Vicini, F, Chen P, Wallace M, et al, Interim cosmetic results and toxicity using 3d Conformal external beam radiotherapy to delver accelerated partial breast irradiation in patients with early-stage breast cancer treated with breast –conserving therapy

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Emerging #B_EM3: Use of accelerated partial breast irradiation (PBI) as the sole radiation modality in patients with breast conservation who are ≥ 50 years of age, have unifocal invasive ductal carcinoma ≤ 3 cm. in size, have negative microscopic surgical margins of excision and are axillary node negative by dissection or sentinel node biopsy.

Type of Measure: This measure is appropriately used as a quality improvement measure.

Clinical Performance Measure
Quantifiable Measure: Percentage of patients who are ≥ 50 years of age, have unifocal invasive ductal carcinoma ≤ 3 cm. in size, have negative microscopic surgical margins of excision and are axillary node negative by dissection or sentinel node biopsy undergoing breast conservation who receive PBI as sole radiation modality.
Numerator: Patients who are ≥ 50 years of age, have unifocal invasive ductal carcinoma ≤ 3 cm. in size, have negative microscopic surgical margins of excision and are axillary node negative by dissection or sentinel node biopsy undergoing breast conservation who receive PBI as the sole radiation modality.
Denominator: All patients receiving PBI after lumpectomy as the sole radiation modality.
Denominator exclusions: None
Rationale for the measure: PBI after lumpectomy has demonstrated good local control and cosmetic outcomes in certain subsets of patients undergoing breast conservation therapy for early stage breast cancer.
<p>The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure: Results from previously reported Phase I – II clinical trials indicate the sole use of PBI after lumpectomy in defined subsets of patients. “Conservative patient selection criteria and the essential details of quality assurance are listed below:</p> <ol style="list-style-type: none"> 1. All patients should be appropriate candidates for standard BCT. 2. ≥ 50 years old. 3. Unifocal, invasive ductal carcinoma. 4. ≤ 3 cm in size. 5. Negative microscopic surgical margins of excision. 6. Axillary node negative by dissection or sentinel node biopsy” (1)
QRRO Survey Form Questions: A5 – 4; I1 – 21, 32, 33, 34, 40, 42, 58, 82, 160, 300

References

1. Arthur, D., Vicini, F, Kukse, R et. al. Accelerated partial breast irradiation: an updated report from the American Brachytherapy Society, Brachytherapy 1:184-90, 2002.



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2. Arthur, DW, Winter, K, Kuske, R, et al. A phase II trial of brachytherapy (PBI) alone after lumpectomy for select breast cancer: Tumor control and survival outcomes of RTOG -95-15. IJROBP 2008
3. Benitez, P, Keisch, M, Vicini, F, et al. Five year results: the initial clinical trial of MammoSite balloon brachytherapy for partial breast irradiation in early-stage breast cancer. Am J Surg, 194:456-462, 2007
4. Vicini, F, Winter K, Struabe W, et al. A phase I/II trial to evaluate 3-dimensional conformal radiation therapy confined to the region of the lumpectomy cavity for stage I/II breast carcinomas: initial report of feasibility and reproducibility of RTOG Study 0319. IJROBP 63, 1531-37, 2005.