

【4-9 メタアナリシス】

| CQ | | 乳房温存手術後に腋窩リンパ節転移1~3個の患者では、領域リンパ節(鎖骨上)を照射野に含めることが勧められるか | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|------------------------------|-------------|---|-------------|-----------------------------------|-------------|--|--------|------------|--|--------|-------|--------|-------|---------------------|-----------------------------------|----------------|----|------|----|------|-------|------|--------------|-------------|---|-----|----|-----|-------|------|--------------|-----------------------|--|-------------|--|-------------|---------------|-------------|---------------------|--------------|----|--|-----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
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| C | 領域リンパ節に対する照射なし | O | 領域リンパ節再発の低下 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 研究デザイン | RCT : 2 | 文献数 | 2 | コード | Poortmans 2015 Whelan 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| モデル | ランダム効果モデル | 方法 | Mantel-Haenszel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 効果指標 | RR | 統合値 | 0.44 (0.18 - 1.08) P= 0.07 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Forest plot | <table border="1"> <thead> <tr> <th rowspan="2">Study or Subgroup</th> <th colspan="2">with RNI</th> <th colspan="2">without RNI</th> <th rowspan="2">Weight</th> <th colspan="2">Risk Ratio</th> </tr> <tr> <th>Events</th> <th>Total</th> <th>Events</th> <th>Total</th> <th>M-H, Random, 95% CI</th> <th>Risk Ratio M-H, Random, 95% CI</th> </tr> </thead> <tbody> <tr> <td>Poortmans 2015</td> <td>54</td> <td>2002</td> <td>85</td> <td>2002</td> <td>60.1%</td> <td>0.64</td> <td>[0.45, 0.89]</td> </tr> <tr> <td>Whelan 2015</td> <td>6</td> <td>916</td> <td>24</td> <td>916</td> <td>39.9%</td> <td>0.25</td> <td>[0.10, 0.61]</td> </tr> <tr> <td>Total (95% CI)</td> <td></td> <td>2918</td> <td></td> <td>2918</td> <td>100.0%</td> <td>0.44</td> <td>[0.18, 1.08]</td> </tr> <tr> <td>Total events</td> <td>60</td> <td></td> <td>109</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="8">Heterogeneity: Tau² = 0.32; Chi² = 3.72, df = 1 (P = 0.05); I² = 73%</td> </tr> <tr> <td colspan="8">Test for overall effect: Z = 1.80 (P = 0.07)</td> </tr> </tbody> </table> | | | | Study or Subgroup | with RNI | | without RNI | | Weight | Risk Ratio | | Events | Total | Events | Total | M-H, Random, 95% CI | Risk Ratio M-H, Random, 95% CI | Poortmans 2015 | 54 | 2002 | 85 | 2002 | 60.1% | 0.64 | [0.45, 0.89] | Whelan 2015 | 6 | 916 | 24 | 916 | 39.9% | 0.25 | [0.10, 0.61] | Total (95% CI) | | 2918 | | 2918 | 100.0% | 0.44 | [0.18, 1.08] | Total events | 60 | | 109 | | | | | Heterogeneity: Tau ² = 0.32; Chi ² = 3.72, df = 1 (P = 0.05); I ² = 73% | | | | | | | | Test for overall effect: Z = 1.80 (P = 0.07) | | | | | | | | <p>コメント: 所属リンパ節領域に対する照射は所属リンパ節再発を低下させる傾向にあるが、その効果は統計学的に有意ではない。</p> |
| Study or Subgroup | with RNI | | without RNI | | | Weight | Risk Ratio | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Events | Total | Events | Total | M-H, Random, 95% CI | | Risk Ratio M-H, Random, 95% CI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poortmans 2015 | 54 | 2002 | 85 | 2002 | 60.1% | 0.64 | [0.45, 0.89] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Whelan 2015 | 6 | 916 | 24 | 916 | 39.9% | 0.25 | [0.10, 0.61] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total (95% CI) | | 2918 | | 2918 | 100.0% | 0.44 | [0.18, 1.08] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total events | 60 | | 109 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heterogeneity: Tau ² = 0.32; Chi ² = 3.72, df = 1 (P = 0.05); I ² = 73% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Funnel plot | | | | | <p>コメント: 論文数は少なく公表バイアスの正確な評価は困難であるが、公表バイアスは大きくはないと判断する。</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| その他の解析 | | | | | コメント: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| メタリグレーション | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 感度分析 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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|---|---|--|------------------------------|-------------|-------------------------------|--------------------------|-----------------------------------|-----------------------------------|-------------|--|--------|-----------------------------------|-----------------------------------|--------|-------|--------|-------|----------------|-----|------|-----|------|-------|-------------------|--|-------------|-----|-----|-----|-----|-------|-------------------|-----------------------|--|-------------|--|-------------|---------------|--------------------------|--------------|-----|--|-----|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
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| C | 領域リンパ節に対する照射なし | O | 全生存期間の延長 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 研究デザイン | RCT : 2 | 文献数 | 2 | コード | Poortmans 2015 Whelan 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| モデル | ランダム効果モデル | 方法 | Mantel-Haenszel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 効果指標 | RR | 統合値 | 0.90 (0.81 - 1.00) P= 0.05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Forest plot | <table border="1"> <thead> <tr> <th rowspan="2">Study or Subgroup</th> <th colspan="2">with RNI</th> <th colspan="2">without RNI</th> <th rowspan="2">Weight</th> <th rowspan="2">Risk Ratio M-H, Random, 95% CI</th> <th rowspan="2">Risk Ratio M-H, Random, 95% CI</th> </tr> <tr> <th>Events</th> <th>Total</th> <th>Events</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Poortmans 2015</td> <td>382</td> <td>2002</td> <td>429</td> <td>2002</td> <td>72.1%</td> <td>0.89 [0.79, 1.01]</td> <td rowspan="2"> </td> </tr> <tr> <td>Whelan 2015</td> <td>155</td> <td>916</td> <td>168</td> <td>916</td> <td>27.9%</td> <td>0.92 [0.76, 1.12]</td> </tr> <tr> <td>Total (95% CI)</td> <td></td> <td>2918</td> <td></td> <td>2918</td> <td>100.0%</td> <td>0.90 [0.81, 1.00]</td> </tr> <tr> <td>Total events</td> <td colspan="2">537</td> <td colspan="2">597</td> <td></td> <td></td> </tr> <tr> <td colspan="8">Heterogeneity: Tau² = 0.00; Chi² = 0.09, df = 1 (P = 0.77); I² = 0%</td> </tr> <tr> <td colspan="8">Test for overall effect: Z = 1.99 (P = 0.05)</td> </tr> </tbody> </table> | | | | | Study or Subgroup | with RNI | | without RNI | | Weight | Risk Ratio M-H, Random, 95% CI | Risk Ratio M-H, Random, 95% CI | Events | Total | Events | Total | Poortmans 2015 | 382 | 2002 | 429 | 2002 | 72.1% | 0.89 [0.79, 1.01] | | Whelan 2015 | 155 | 916 | 168 | 916 | 27.9% | 0.92 [0.76, 1.12] | Total (95% CI) | | 2918 | | 2918 | 100.0% | 0.90 [0.81, 1.00] | Total events | 537 | | 597 | | | | Heterogeneity: Tau ² = 0.00; Chi ² = 0.09, df = 1 (P = 0.77); I ² = 0% | | | | | | | | Test for overall effect: Z = 1.99 (P = 0.05) | | | | | | | |
| Study or Subgroup | with RNI | | without RNI | | Weight | | Risk Ratio M-H, Random, 95% CI | Risk Ratio M-H, Random, 95% CI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Events | Total | Events | Total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poortmans 2015 | 382 | 2002 | 429 | 2002 | 72.1% | 0.89 [0.79, 1.01] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Whelan 2015 | 155 | 916 | 168 | 916 | 27.9% | 0.92 [0.76, 1.12] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total (95% CI) | | 2918 | | 2918 | 100.0% | 0.90 [0.81, 1.00] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total events | 537 | | 597 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Test for overall effect: Z = 1.99 (P = 0.05) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | コメント: 領域リンパ節に対する照射による全生存期間の延長効果は統計学的に有意ではない。 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Funnel plot | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| その他の解析 | 2つのRCTの全症例におけるMantel-Haenszel(変量効果モデル)によるMAにおいても領域リンパ節照射による全生存期間延長効果は示せなかった (RR : 0.90 [0.81-1.00], p=0.77) | | | | コメント: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| メタリグレーション | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 感度分析 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| C | 領域リンパ節に対する照射なし | O | 遠隔再発の低下 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 研究デザイン | RCT : 2 | 文献数 | 2 | コード | Poortmans 2015 Whelan 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| モデル | ランダム効果モデル | 方法 | Mantel-Haenszel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 効果指標 | RR | 統合値 | 0.81 (0.72 - 0.90) P= 0.0002 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Forest plot | <table border="1"> <thead> <tr> <th rowspan="2">Study or Subgroup</th> <th colspan="2">with RNI</th> <th colspan="2">without RNI</th> <th rowspan="2">Weight</th> <th rowspan="2">Risk Ratio M-H, Random, 95% CI</th> </tr> <tr> <th>Events</th> <th>Total</th> <th>Events</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Poortmans 2015</td> <td>319</td> <td>2002</td> <td>392</td> <td>2002</td> <td>73.4%</td> <td>0.81 [0.71, 0.93]</td> </tr> <tr> <td>Whelan 2015</td> <td>118</td> <td>916</td> <td>151</td> <td>916</td> <td>26.6%</td> <td>0.78 [0.63, 0.98]</td> </tr> <tr> <td>Total (95% CI)</td> <td></td> <td>2918</td> <td></td> <td>2918</td> <td>100.0%</td> <td>0.81 [0.72, 0.90]</td> </tr> <tr> <td>Total events</td> <td>437</td> <td></td> <td>543</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Heterogeneity: Tau² = 0.00; Chi² = 0.09, df = 1 (P = 0.76); I² = 0% Test for overall effect: Z = 3.70 (P = 0.0002)</p> | | | | | Study or Subgroup | with RNI | | without RNI | | Weight | Risk Ratio M-H, Random, 95% CI | Events | Total | Events | Total | Poortmans 2015 | 319 | 2002 | 392 | 2002 | 73.4% | 0.81 [0.71, 0.93] | Whelan 2015 | 118 | 916 | 151 | 916 | 26.6% | 0.78 [0.63, 0.98] | Total (95% CI) | | 2918 | | 2918 | 100.0% | 0.81 [0.72, 0.90] | Total events | 437 | | 543 | | | |
| Study or Subgroup | with RNI | | without RNI | | Weight | | Risk Ratio M-H, Random, 95% CI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Events | Total | Events | Total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poortmans 2015 | 319 | 2002 | 392 | 2002 | 73.4% | 0.81 [0.71, 0.93] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Whelan 2015 | 118 | 916 | 151 | 916 | 26.6% | 0.78 [0.63, 0.98] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total (95% CI) | | 2918 | | 2918 | 100.0% | 0.81 [0.72, 0.90] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total events | 437 | | 543 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Funnel plot | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| その他の解析 | | | | | コメント: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| メタリグレーション | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 感度分析 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| CQ | | 乳房温存手術後に腋窩リンパ節転移1~3個の患者では、領域リンパ節(鎖骨上)を照射野に含めることが勧められるか | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|---------------------------------|--------------|---|--------------------------|-----------------------------------|-------------|--|--------|-----------------------------------|--------|-------|--------|-------|----------------|-----|------|-----|------|-------|-------------------|-------------|----|-----|----|-----|-------|-------------------|----------------------|----|-----|---|-----|------|--------------------|------------|-----|-----|-----|------|-------|-------------------|---------------|----|-----|---|-----|------|-------------------|----------|----|-----|----|-----|-------|-------------------|----------------|----|-----|----|-----|-------|-------------------|-------------|----|-----|----|------|-------|--------------------|-----------------------|--|-------------|--|-------------|---------------|--------------------------|--------------|-----|--|-----|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| P | 乳房温存手術後に腋窩リンパ節転移1~3個の患者 | I | 領域リンパ節に対する照射あり | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | 領域リンパ節に対する照射なし | O | 晩期障害の増加(リンパ浮腫) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 研究デザイン | RCT : 2 後方視的解析 : 6 | 文献数 | 8 | コード | Poortmans 2015 Whelan 2015 Coen and Powell 2003 Hayes 2008 Johansen 2000 Kim 2013 Lundstedt 2012 Warren 2014 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| モデル | ランダム効果モデル | 方法 | Mantel-Haenszel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 効果指標 | RR | 統合値 | 2.60 (1.64 - 4.10) P= <0.0001 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Forest plot | <table border="1"> <thead> <tr> <th rowspan="2">Study or Subgroup</th> <th colspan="2">with RNI</th> <th colspan="2">without RNI</th> <th rowspan="2">Weight</th> <th rowspan="2">Risk Ratio M-H, Random, 95% CI</th> </tr> <tr> <th>Events</th> <th>Total</th> <th>Events</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Poortmans 2015</td> <td>231</td> <td>1922</td> <td>204</td> <td>1944</td> <td>14.1%</td> <td>1.15 [0.96, 1.37]</td> </tr> <tr> <td>Whelan 2015</td> <td>75</td> <td>893</td> <td>42</td> <td>927</td> <td>13.2%</td> <td>1.85 [1.29, 2.67]</td> </tr> <tr> <td>Coen and Powell 2003</td> <td>15</td> <td>234</td> <td>6</td> <td>493</td> <td>9.0%</td> <td>5.27 [2.07, 13.40]</td> </tr> <tr> <td>Hayes 2008</td> <td>109</td> <td>410</td> <td>355</td> <td>2169</td> <td>14.1%</td> <td>1.62 [1.35, 1.96]</td> </tr> <tr> <td>Johansen 2000</td> <td>21</td> <td>121</td> <td>7</td> <td>145</td> <td>9.8%</td> <td>3.60 [1.58, 8.17]</td> </tr> <tr> <td>Kim 2013</td> <td>90</td> <td>274</td> <td>35</td> <td>498</td> <td>13.2%</td> <td>4.67 [3.26, 6.71]</td> </tr> <tr> <td>Lundstedt 2012</td> <td>43</td> <td>192</td> <td>78</td> <td>507</td> <td>13.4%</td> <td>1.46 [1.04, 2.03]</td> </tr> <tr> <td>Warren 2014</td> <td>67</td> <td>309</td> <td>37</td> <td>1192</td> <td>13.1%</td> <td>6.99 [4.77, 10.23]</td> </tr> <tr> <td>Total (95% CI)</td> <td></td> <td>4355</td> <td></td> <td>7875</td> <td>100.0%</td> <td>2.60 [1.64, 4.10]</td> </tr> <tr> <td>Total events</td> <td>651</td> <td></td> <td>764</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="7">Heterogeneity: Tau² = 0.38; Chi² = 110.86, df = 7 (P < 0.00001); I² = 94%</td> </tr> <tr> <td colspan="7">Test for overall effect: Z = 4.09 (P < 0.0001)</td> </tr> </tbody> </table> | | | | Study or Subgroup | with RNI | | without RNI | | Weight | Risk Ratio M-H, Random, 95% CI | Events | Total | Events | Total | Poortmans 2015 | 231 | 1922 | 204 | 1944 | 14.1% | 1.15 [0.96, 1.37] | Whelan 2015 | 75 | 893 | 42 | 927 | 13.2% | 1.85 [1.29, 2.67] | Coen and Powell 2003 | 15 | 234 | 6 | 493 | 9.0% | 5.27 [2.07, 13.40] | Hayes 2008 | 109 | 410 | 355 | 2169 | 14.1% | 1.62 [1.35, 1.96] | Johansen 2000 | 21 | 121 | 7 | 145 | 9.8% | 3.60 [1.58, 8.17] | Kim 2013 | 90 | 274 | 35 | 498 | 13.2% | 4.67 [3.26, 6.71] | Lundstedt 2012 | 43 | 192 | 78 | 507 | 13.4% | 1.46 [1.04, 2.03] | Warren 2014 | 67 | 309 | 37 | 1192 | 13.1% | 6.99 [4.77, 10.23] | Total (95% CI) | | 4355 | | 7875 | 100.0% | 2.60 [1.64, 4.10] | Total events | 651 | | 764 | | | | Heterogeneity: Tau ² = 0.38; Chi ² = 110.86, df = 7 (P < 0.00001); I ² = 94% | | | | | | | Test for overall effect: Z = 4.09 (P < 0.0001) | | | | | | | コメント: 所属リンパ節領域に対する照射は上肢リンパ浮腫を統計学的に有意に増加させる。 |
| Study or Subgroup | with RNI | | without RNI | | | Weight | Risk Ratio M-H, Random, 95% CI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Events | Total | Events | Total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poortmans 2015 | 231 | 1922 | 204 | 1944 | 14.1% | 1.15 [0.96, 1.37] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Whelan 2015 | 75 | 893 | 42 | 927 | 13.2% | 1.85 [1.29, 2.67] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Coen and Powell 2003 | 15 | 234 | 6 | 493 | 9.0% | 5.27 [2.07, 13.40] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hayes 2008 | 109 | 410 | 355 | 2169 | 14.1% | 1.62 [1.35, 1.96] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Johansen 2000 | 21 | 121 | 7 | 145 | 9.8% | 3.60 [1.58, 8.17] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kim 2013 | 90 | 274 | 35 | 498 | 13.2% | 4.67 [3.26, 6.71] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lundstedt 2012 | 43 | 192 | 78 | 507 | 13.4% | 1.46 [1.04, 2.03] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Warren 2014 | 67 | 309 | 37 | 1192 | 13.1% | 6.99 [4.77, 10.23] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total (95% CI) | | 4355 | | 7875 | 100.0% | 2.60 [1.64, 4.10] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total events | 651 | | 764 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heterogeneity: Tau ² = 0.38; Chi ² = 110.86, df = 7 (P < 0.00001); I ² = 94% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Test for overall effect: Z = 4.09 (P < 0.0001) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Funnel plot | | | | | コメント: 公表バイアスは認めるが大きくはない。 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| その他の解析 | 2つのRCT(Poortmans 2015, Whelan 2015)によるMA解析(Mantel-Haenszel, 変動効果モデル)においても領域リンパ節照射は上肢浮腫を統計学的に有意に増加させる(RR : 1.42[0.89-2.27], p=0.15)。 | | | コメント: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| メタリグレッション | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 感度分析 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

【4-9 メタアナリシス】

| CQ | | 乳房温存手術後に腋窩リンパ節転移1~3個の患者では、領域リンパ節(鎖骨上)を照射野に含めることが勧められるか | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|------------------------------|--------------|--|---------------------|---------------------|--|-------------|--|--------|------------|--|--------|-------|--------|-------|---------------------|---------------------|----------------|-----|------|-----|------|-------|------|--------------|-------------|----|-----|----|-----|-------|------|--------------|---------------|-----|------|-----|-------|-------|------|--------------|-----------------------|--|-------------|--|--------------|---------------|-------------|---------------------|--------------|-----|--|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| P | 乳房温存手術後に腋窩リンパ節転移1~3個の患者 | I | 領域リンパ節に対する照射あり | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | 領域リンパ節に対する照射なし | O | 晩期障害の増加(二次発がん) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 研究デザイン | RCT : 2 後方視的解析 : 1 | 文献数 | 3 | コード | Poortmans 2015 Whelan 2015 Hamilton 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| モデル | ランダム効果モデル | 方法 | Mantel-Haenszel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 効果指標 | RR | 統合値 | 0.84 (0.64 - 1.11) P= 0.21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Forest plot | <table border="1"> <thead> <tr> <th rowspan="2">Study or Subgroup</th> <th colspan="2">with RNI</th> <th colspan="2">without RNI</th> <th rowspan="2">Weight</th> <th colspan="2">Risk Ratio</th> </tr> <tr> <th>Events</th> <th>Total</th> <th>Events</th> <th>Total</th> <th>M-H, Random, 95% CI</th> <th>M-H, Random, 95% CI</th> </tr> </thead> <tbody> <tr> <td>Poortmans 2015</td> <td>191</td> <td>2002</td> <td>222</td> <td>2002</td> <td>34.8%</td> <td>0.86</td> <td>[0.72, 1.03]</td> </tr> <tr> <td>Whelan 2015</td> <td>98</td> <td>893</td> <td>93</td> <td>927</td> <td>29.7%</td> <td>1.09</td> <td>[0.84, 1.43]</td> </tr> <tr> <td>Hamilton 2015</td> <td>138</td> <td>2272</td> <td>981</td> <td>10564</td> <td>35.5%</td> <td>0.65</td> <td>[0.55, 0.78]</td> </tr> <tr> <td>Total (95% CI)</td> <td></td> <td>5167</td> <td></td> <td>13493</td> <td>100.0%</td> <td>0.84</td> <td>[0.64, 1.11]</td> </tr> <tr> <td>Total events</td> <td>427</td> <td></td> <td>1296</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="8">Heterogeneity: Tau² = 0.05; Chi² = 11.15, df = 2 (P = 0.004); I² = 82%</td> </tr> <tr> <td colspan="8">Test for overall effect: Z = 1.24 (P = 0.21)</td> </tr> </tbody> </table> <p>コメント: 所属リンパ節領域に対する照射は二次発がんを統計学的に有意に増加させることはない。</p> | | | | | Study or Subgroup | with RNI | | without RNI | | Weight | Risk Ratio | | Events | Total | Events | Total | M-H, Random, 95% CI | M-H, Random, 95% CI | Poortmans 2015 | 191 | 2002 | 222 | 2002 | 34.8% | 0.86 | [0.72, 1.03] | Whelan 2015 | 98 | 893 | 93 | 927 | 29.7% | 1.09 | [0.84, 1.43] | Hamilton 2015 | 138 | 2272 | 981 | 10564 | 35.5% | 0.65 | [0.55, 0.78] | Total (95% CI) | | 5167 | | 13493 | 100.0% | 0.84 | [0.64, 1.11] | Total events | 427 | | 1296 | | | | | Heterogeneity: Tau ² = 0.05; Chi ² = 11.15, df = 2 (P = 0.004); I ² = 82% | | | | | | | | Test for overall effect: Z = 1.24 (P = 0.21) | | | | | | | |
| Study or Subgroup | with RNI | | without RNI | | Weight | | Risk Ratio | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Events | Total | Events | Total | | M-H, Random, 95% CI | M-H, Random, 95% CI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poortmans 2015 | 191 | 2002 | 222 | 2002 | 34.8% | 0.86 | [0.72, 1.03] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Whelan 2015 | 98 | 893 | 93 | 927 | 29.7% | 1.09 | [0.84, 1.43] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hamilton 2015 | 138 | 2272 | 981 | 10564 | 35.5% | 0.65 | [0.55, 0.78] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total (95% CI) | | 5167 | | 13493 | 100.0% | 0.84 | [0.64, 1.11] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total events | 427 | | 1296 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heterogeneity: Tau ² = 0.05; Chi ² = 11.15, df = 2 (P = 0.004); I ² = 82% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Test for overall effect: Z = 1.24 (P = 0.21) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Funnel plot | <p>コメント: 論文数は少なく正確な評価は困難であるが、公表バイアスは小さいと考える。</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| その他の解析 | 2つのRCT(Poortmans 2015, Whelan 2015)によるMA解析(Mantel-Haenszel, 変動効果モデル)においても領域リンパ節照射は二次発癌を統計学的に有意に増加させることはない(RR : 0.95[0.75-1.20], p=0.67)。 | | | | コメント: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| メタリグレーション | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 感度分析 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

【4-9 メタアナリシス】

| CQ | | 乳房温存手術後に腋窩リンパ節転移1~3個の患者では、領域リンパ節(鎖骨上)を照射野に含めることが勧められるか | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|------------------------------|-------------|-------------------------------|--------------------------|---------------------|--|-------------|--|--------|------------|--|--------|-------|--------|-------|---------------------|---------------------|----------------|-----|------|-----|------|-------|-------------------|--|-------------|---|-----|---|-----|------|-------------------|-----------------------|--|-------------|--|-------------|---------------|--------------------------|--------------|-----|--|-----|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| P | 乳房温存手術後に腋窩リンパ節転移1~3個の患者 | I | 領域リンパ節に対する照射あり | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | 領域リンパ節に対する照射なし | O | 晩期障害の増加(心毒性) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 研究デザイン | RCT : 2 | 文献数 | 2 | コード | Poortmans 2015 Whelan 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| モデル | ランダム効果モデル | 方法 | Mantel-Haenszel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 効果指標 | RR | 統合値 | 1.19 (0.93 - 1.52) P= 0.17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Forest plot | <table border="1"> <thead> <tr> <th rowspan="2">Study or Subgroup</th> <th colspan="2">with RNI</th> <th colspan="2">without RNI</th> <th rowspan="2">Weight</th> <th colspan="2">Risk Ratio</th> </tr> <tr> <th>Events</th> <th>Total</th> <th>Events</th> <th>Total</th> <th>M-H, Random, 95% CI</th> <th>M-H, Random, 95% CI</th> </tr> </thead> <tbody> <tr> <td>Poortmans 2015</td> <td>125</td> <td>1922</td> <td>109</td> <td>1944</td> <td>95.9%</td> <td>1.16 [0.90, 1.49]</td> <td rowspan="2"> </td> </tr> <tr> <td>Whelan 2015</td> <td>8</td> <td>893</td> <td>4</td> <td>927</td> <td>4.1%</td> <td>2.08 [0.63, 6.87]</td> </tr> <tr> <td>Total (95% CI)</td> <td></td> <td>2815</td> <td></td> <td>2871</td> <td>100.0%</td> <td>1.19 [0.93, 1.52]</td> </tr> <tr> <td>Total events</td> <td>133</td> <td></td> <td>113</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="8">Heterogeneity: Tau² = 0.00; Chi² = 0.87, df = 1 (P = 0.35); I² = 0%</td> </tr> <tr> <td colspan="8">Test for overall effect: Z = 1.39 (P = 0.17)</td> </tr> </tbody> </table> <p>コメント: 領域リンパ節に対する照射は心毒性を統計学的に有意に増加させることはない。</p> | | | | | Study or Subgroup | with RNI | | without RNI | | Weight | Risk Ratio | | Events | Total | Events | Total | M-H, Random, 95% CI | M-H, Random, 95% CI | Poortmans 2015 | 125 | 1922 | 109 | 1944 | 95.9% | 1.16 [0.90, 1.49] | | Whelan 2015 | 8 | 893 | 4 | 927 | 4.1% | 2.08 [0.63, 6.87] | Total (95% CI) | | 2815 | | 2871 | 100.0% | 1.19 [0.93, 1.52] | Total events | 133 | | 113 | | | | Heterogeneity: Tau ² = 0.00; Chi ² = 0.87, df = 1 (P = 0.35); I ² = 0% | | | | | | | | Test for overall effect: Z = 1.39 (P = 0.17) | | | | | | | |
| Study or Subgroup | with RNI | | without RNI | | Weight | | Risk Ratio | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Events | Total | Events | Total | | M-H, Random, 95% CI | M-H, Random, 95% CI | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Poortmans 2015 | 125 | 1922 | 109 | 1944 | 95.9% | 1.16 [0.90, 1.49] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Whelan 2015 | 8 | 893 | 4 | 927 | 4.1% | 2.08 [0.63, 6.87] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total (95% CI) | | 2815 | | 2871 | 100.0% | 1.19 [0.93, 1.52] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total events | 133 | | 113 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heterogeneity: Tau ² = 0.00; Chi ² = 0.87, df = 1 (P = 0.35); I ² = 0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Test for overall effect: Z = 1.39 (P = 0.17) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Funnel plot | <p>コメント: 論文数は少なく正確な評価は困難であるが、公表バイアスは小さいと考える。</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| その他の解析 | | | | | コメント: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| メタリグレーション | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 感度分析 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |