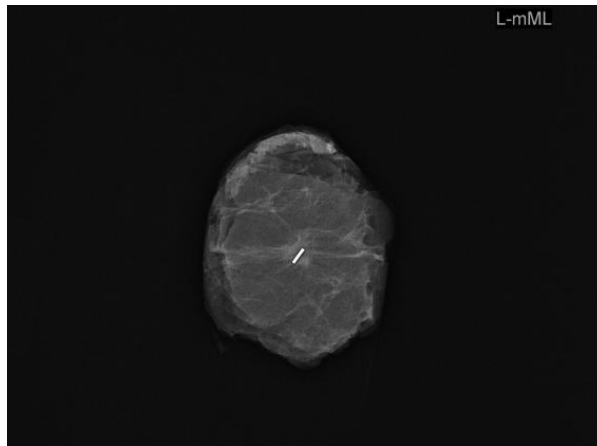


Radioactive Seed Localization vs. Wire Guided Localization of Nonpalpable Invasive and In Situ Breast Cancer: A Danish Multicenter Randomized Controlled Trial

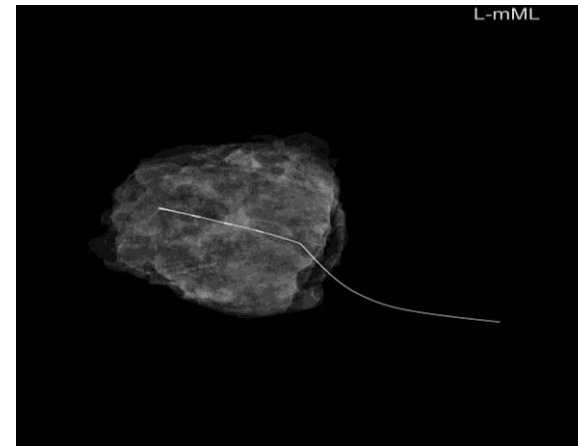
Langhans L, Tvedskov TF, Klausen TL, Jensen MB, Talman ML, Vejborg I, Benian C, Roslind A, Hermansen J, Oturai PS, Bentzon N, Kroman N

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Preoperative lesion localization



**Radioactive seed
localization (RSL)**



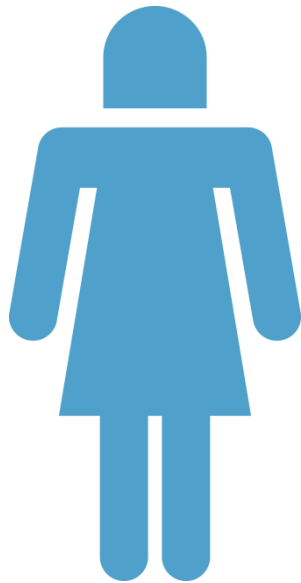
**Wire guided
localization (WGL)**

Aim

To compare RSL and WGL in a randomized controlled trial

- Danish setting
- Multicenter trial
- Margin status after breast conserving surgery

Patients



Nonpalpable lesions

Invasive breast cancer (IBC) or ductal carcinoma in situ (DCIS)

Visible on ultrasound

Eligible for breast conserving surgery

Methods



Radiology – Patients' pain perception



Surgery – Duration of surgical procedure & Weight of excised specimen



Pathology – **Margin status**

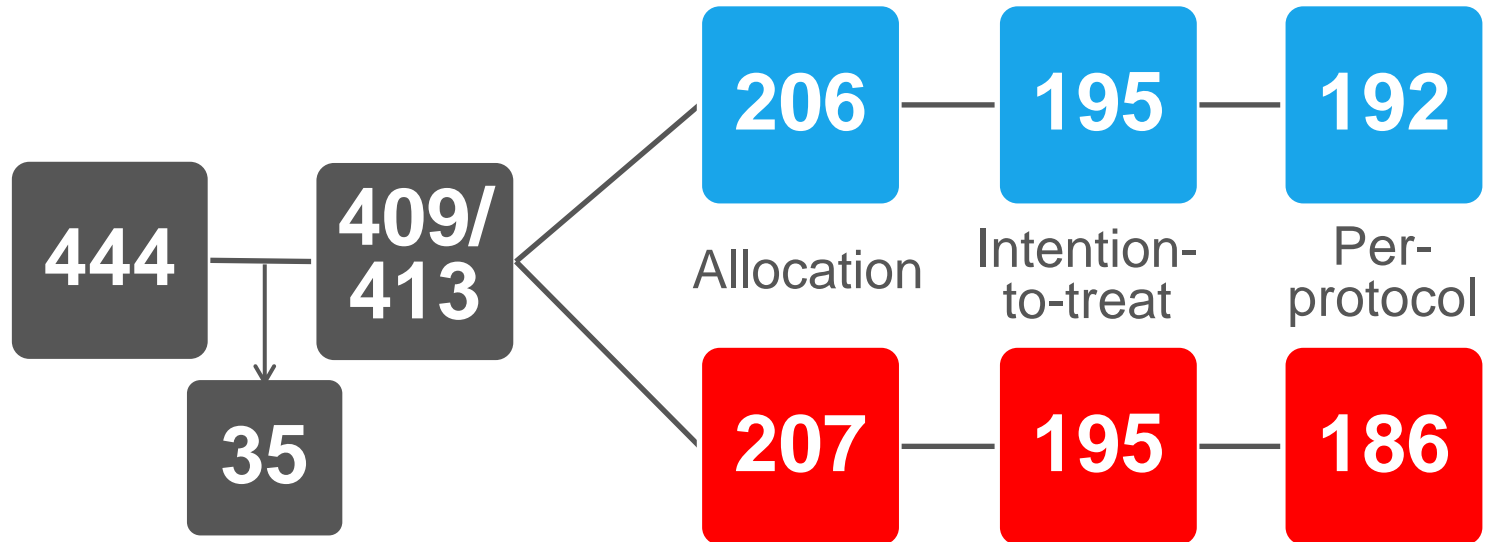
Trial profile



RSL



WGL



Results

- Inclusion period was Jan 1, 2014 to Feb 4, 2016
- Baseline characteristics were alike
- Significantly more patients with DCIS in the WGL group (p=0.006)

Margin status

	RSL n (%)	WGL n (%)	P-value	OR (95%CI)
Intention-to-treat			0.65	1.15 (0.63-2.10)
Negative	172 (88.2%)	169 (86.7%)		
Positive	23 (11.8%)	26 (13.3%)		
Per-protocol			0.62	1.17 (0.64-2.14)
Negative	164 (88.2%)	166 (86.5%)		
Positive	22 (11.8%)	26 (13.5%)		
IBC			0.997	1.0 (0.53-1.89)
Negative	172 (88.7%)	164 (88.6%)		
Positive	22 (11.3%)	21 (11.4%)		

Secondary outcomes

	RSL	WGL	P-value
Weight total (g)	29 (18.5-43.0)	26 (18.0-40.0)	0.54
Duration (min)	10 (7-12)	10 (7-15)	0.12
Pain Perception			0.28
No	13 (7.9%)	4 (2.9%)	
Mild	88 (53.3%)	76 (55.1%)	
Moderate	48 (29.1%)	41 (29.7%)	
Severe	16 (9.7%)	17 (12.3%)	

Results

- Complication rate ($p=0.89$)
- Sentinel node identification rate ($p=1.0$)

Conclusion

No significant difference in:

- **Margin status**
- Duration of the surgical procedure
- Weight of the excised specimen
- Patients' pain perception

Perspectives

- RSL offers a major logistic advantage
- Two previous randomized trials with similar results on margin status
- Can we implement RSL as standard procedure ?

Acknowledgement

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