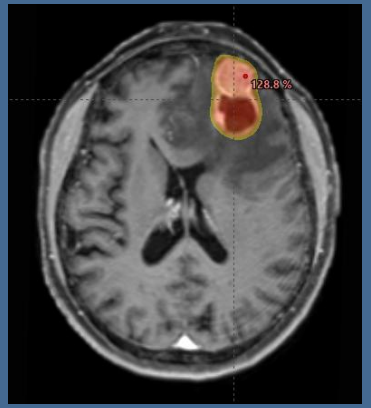
KSA
Radio-Onkologie-Zentrum
Mittelland

DEGRO
ARBEITSGRUPPE RADIOCHIRURGIE/
STEREOTAXIE

DKG
KREBSGESELLSCHAFT

KSA Kantonsspital
Aarau



UPDATE: PREOP-2 Studie
Präoperative Radiochirurgie für Hirnmetastasen

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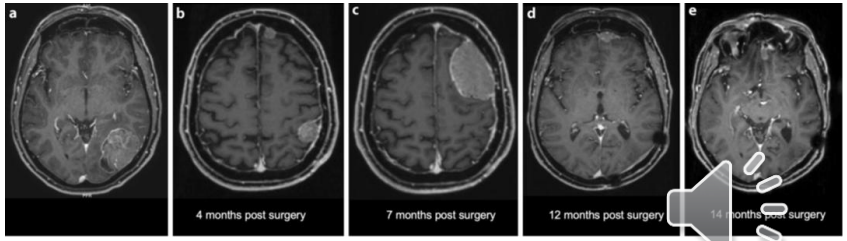
Kantonsspital Aarau

DEGRO AG Radiochirurgie & Stereotaxie, Graz, 07.02.26

Rationale for preoperative radiosurgery

Reduction in the incidence of leptomeningeal recurrence

- ✓ sterilisation of disseminated tumour cells
- ✓ more accurate target definition
- ✓ smaller clinical and planning target margins
- ✓ irradiated tissue subsequently resected
- ✓ less delay to systemic therapy
- ✓ patient convenience



Lee *et al*, Strahlentherapie und Onkologie 2021

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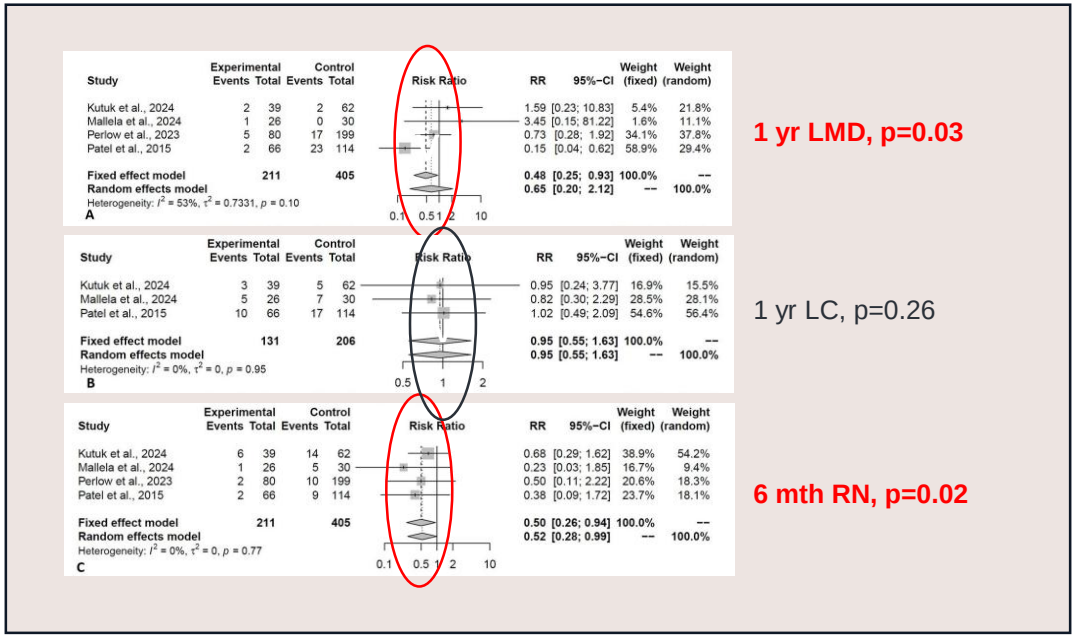
2 meta-analyses

- 4 comparative studies, n=221 preop patients, n= 405 postop patients



- 6 preop SRS vs 33 postop SRS studies, 3004 patients

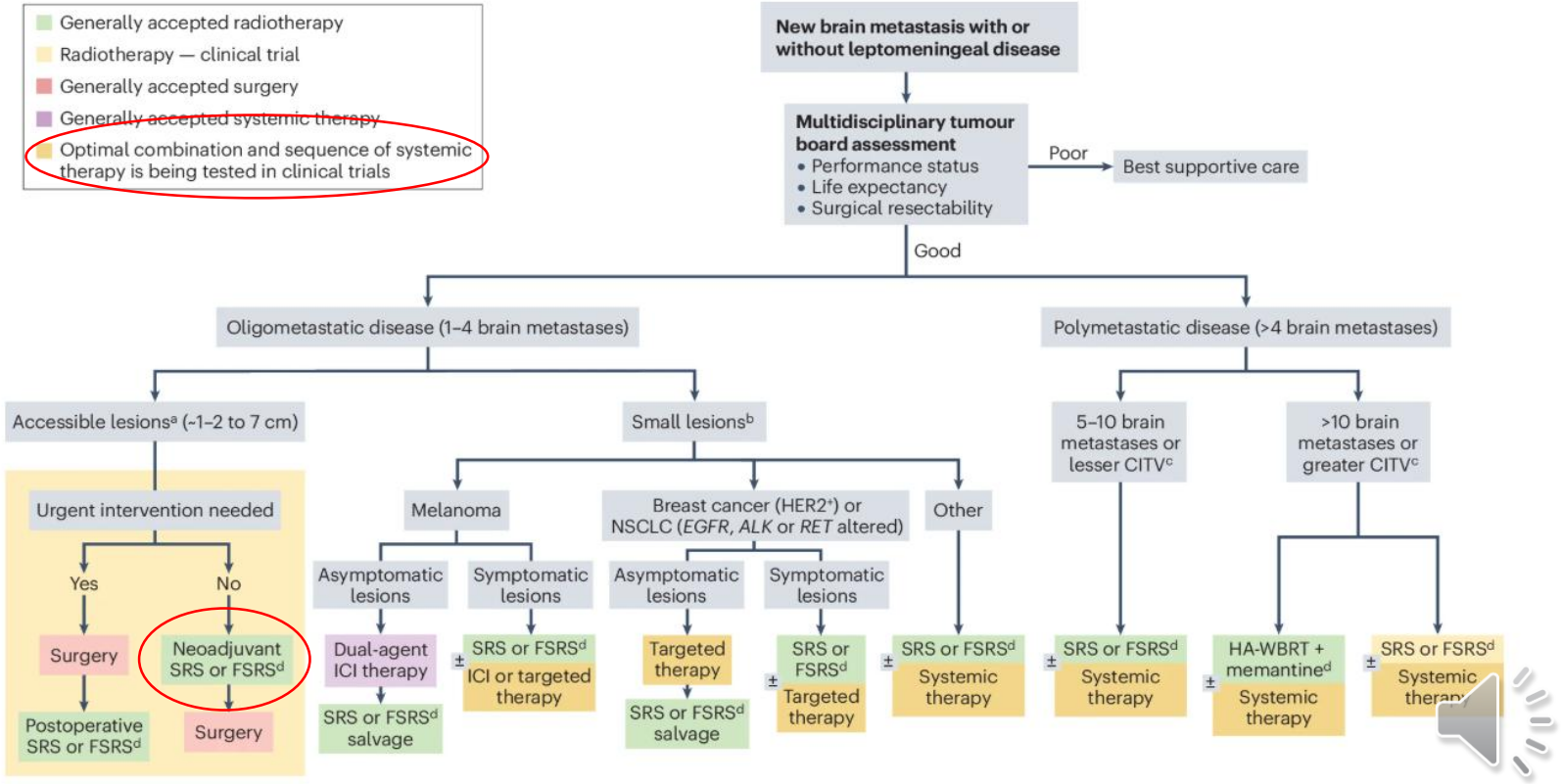
Table 3. Proportional Meta-Analysis Primary Outcomes

	Preoperative *N*	Postoperative *N*	Neoadjuvant Mean [95 CI%]	Adjuvant Mean [95%]	Moderator Effect Preoperative vs. Postoperative SRS Q	d.f.	*P* Value
Local recurrence	517	2847	11.0% [8.3–13.7]	17.5% [15.1–19.9]	6.015	1	0.014*
Overall survival	476	2527	60.2% [55.8–64.6]	60.5% [56.9–64.0]	0.001	1	0.9742
Radiation necrosis	471	2523	6.4% [3.1–9.6]	8.9% [6.4–11.6]	0.729	1	0.3931
Leptomeningeal disease	495	2204	4.4% [2.6–6.2]	12.3% [8.9–15.7]	5.45	1	0.019*

CI, confidence interval; SRS, stereotactic radiosurgery.
*indicates $P < 0.05$ significance.

Dharnipragada *et al* World Neurosurg. 2024

We still need prospective data



Mansouri *et al*, Nature Reviews Clinical Oncology 2025

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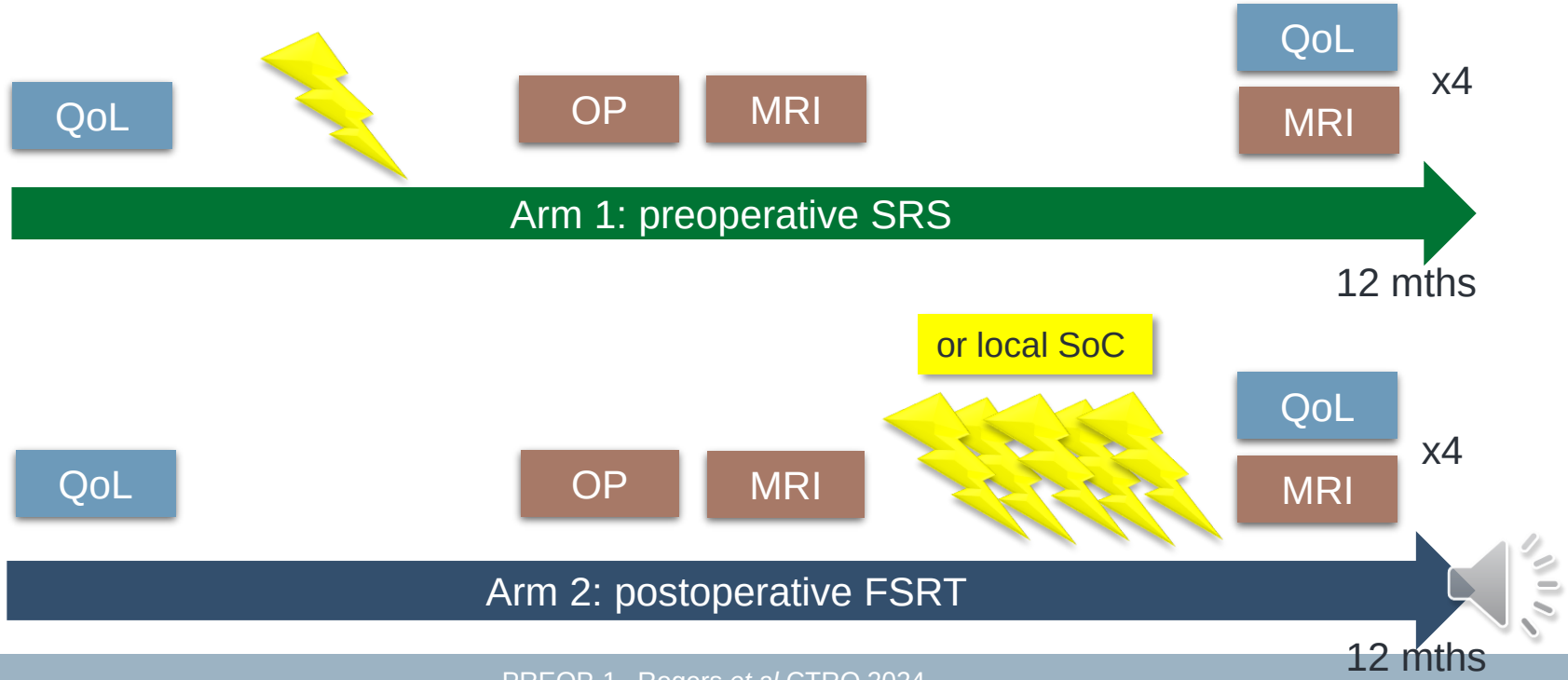
PREOP-2

- Eligibility: BM ≤ 4 cm, predicted GTR, ≤3 BM for SRS, cancer diagnosis
- Primary endpoint: Time to leptomeningeal disease



PREOP-1 Rogers *et al* CTRO 2024

INTERNEO Udovicich *et al* Radiother Oncol 2025

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Planned Interim Analysis: Multicentre Feasibility

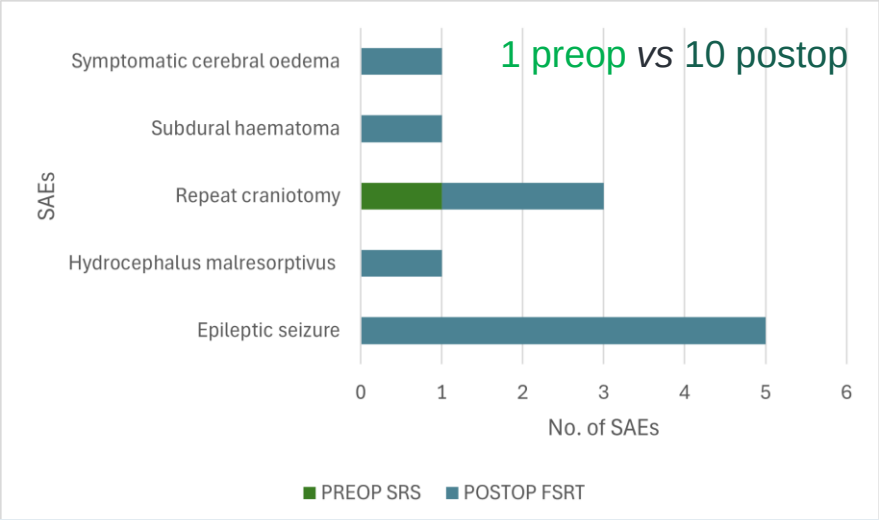
- Preoperative SRS was performed in **100%** (21/21) patients in Arm 1
  - The mean interval between preoperative SRS and resection of the brain metastasis was 1.9 (± s.d. 1.94) days, which was well within the maximum of 1 week interval recommended in the protocol.

- Postoperative FSRT was delivered to **100%** (19/19) patients in Arm 2
  - The mean interval to start of postoperative FSRT was 21.9 (± s.d 11.6) days, within the recommended 30 days.

Planned Interim Analysis: Low Toxicity

ESTRO 2025
Top 5% Abstract

- 11/19 SAEs were neurological (all grade 3)
- 9/11 possibly and 2/11 probably related to either SRS/FSRT/neurosurgery



- Update Sept. 2025: 10/14 possible, 4/14 probable: 2 preop vs 12 postop

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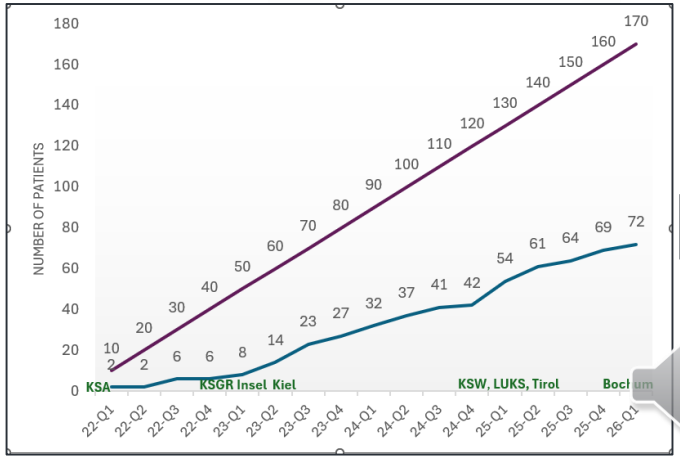
PREOP-2 Participation

New centres welcome!



73/200

Requirements:

1) Quality-assured single fraction radiosurgery
2) Close co-operation radiosurgery/ neurosurgery

krebsliga aargau

Forschungsrat KSA

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Vielen Dank für Ihre Aufmerksamkeit

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