Board Review Q1

A 64-year-old woman with limited-stage SCLC achieves a complete response after concurrent chemoradiation. Brain MRI is negative. The meta-analysis that established PCI in this setting reported an absolute 3-year overall survival benefit of approximately:

A. 1%

B. 5%

C. 15%

D. 25%

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Q1 Answer

B. Approximately 5%

Why: In patients with a complete response, PCI improved 3-year OS from 15.3% to 20.7%, an absolute gain of 5.4%.

The catch: Those trials came largely from the pre-MRI era, so part of the "prevention" was likely treatment of occult brain metastases.

Where it stands now: SWOG S1827 (MAVERICK, presented 2026) found MRI surveillance alone improved cognitive failure-free survival, with no OS difference on preliminary analysis. Mature OS and EORTC PRIMALung results are still pending for LS-SCLC.

Aupérin A, et al. N Engl J Med. 1999;341:476-84. Rusthoven CG, et al. SWOG S1827/MAVERICK. ASTRO 2026, LBA03 (not yet peer-reviewed).

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How did you do?

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Board Review Q2

A 72-year-old man with limited-stage SCLC completed concurrent chemoradiation with good extracranial response and did not receive PCI. Surveillance brain MRI shows a new, asymptomatic 1.2 cm cerebellar metastasis without edema or mass effect. ECOG PS is 1. Which is the MOST appropriate next step?

A. SRS alone with close MRI surveillance

B. Whole-brain RT (30 Gy in 10 fractions)

C. HA-WBRT + memantine (30 Gy in 10 fractions)

D. Systemic therapy alone with continued MRI surveillance

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Q2 Answer

A. SRS alone with close MRI surveillance

Why: In the FIRE-SCLC cohort (710 patients), first-line SRS did not compromise overall survival compared with WBRT. Median OS was 11.0 months for a single lesion. A multicenter phase II trial also supports SRS for 1–10 metastases with close MRI follow-up. The randomized phase III NRG-CC009 (SRS vs HA-WBRT + memantine) found no difference in time to neurocognitive failure, and median OS was 17.4 vs 8.6 months favoring SRS.

Why not WBRT: WBRT was historically standard only because SCLC was excluded from the randomized trials that established SRS. Older review keys still pick WBRT here.

Trade-off: More new brain metastases after SRS, so MRI every 2–3 months is essential.

Caveat: CC009 was presented at ASTRO 2026 (LBA 2) and is not yet peer-reviewed; its primary endpoint was negative and OS was not the primary endpoint. FIRE-SCLC is retrospective.

Rusthoven CG, et al. JAMA Oncol. 2020;6(7):1028-37 (FIRE-SCLC). Aizer AA, et al., multicenter phase II trial of SRS for SCLC brain metastases. Rusthoven CG, et al. NRG-CC009. ASTRO 2026, LBA 2 (not yet peer-reviewed).

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How did you do?

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Board Review Q3

A 68-year-old woman with ES-SCLC has completed first-line chemoimmunotherapy with stable extracranial disease. Brain MRI shows 20 new metastases (3–11 mm) without significant edema or mass effect. ECOG PS is 1. Her team plans HA-WBRT + memantine, citing NRG CC001. Which statement about that evidence is MOST accurate?

A. CC001 excluded patients with SCLC

B. CC001 delivered 25 Gy in 10 fractions

C. CC001's primary endpoint was overall survival

D. Hippocampal avoidance in CC001 increased intracranial progression

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Q3 Answer

A. CC001 excluded small cell carcinoma

Why: NRG CC001 excluded brain metastases from small cell carcinoma, germ cell tumors, unknown primary, and lymphoma. Using HA-WBRT + memantine in SCLC is a reasonable extrapolation, not direct evidence.

B is wrong: Both arms received 30 Gy in 10 fractions plus 24 weeks of memantine. 25 Gy in 10 fractions is the PCI dose.

C and D are wrong: The primary endpoint was time to cognitive failure, and hippocampal avoidance did not significantly worsen intracranial progression.

Teaching point: Always check a trial's eligibility before applying it to a histology that behaves differently.

Brown PD, et al. J Clin Oncol. 2020;38(10):1019-29 (NRG CC001).

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Board Review Q4

A 58-year-old man with ES-SCLC has completed first-line chemoimmunotherapy with stable extracranial disease. Brain MRI is negative. He asks about PCI vs MRI surveillance. Based on SWOG S1827 (MAVERICK), which statement is MOST accurate?

A. PCI improved overall survival compared with MRI surveillance

B. PCI and MRI surveillance had similar grade 3–5 toxicity rates

C. MRI surveillance alone improved cognitive failure-free survival

D. The PCI dose used was 30 Gy in 10 fractions

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Q4 Answer

C. MRI surveillance improved cognitive failure-free survival

Why: Cognitive failure-free survival (time to cognitive decline or death) favored MRI alone: HR 0.60, p=0.0005. The benefit was similar in limited- and extensive-stage disease.

A is wrong: Preliminary OS (128 deaths) showed no significant difference, HR 0.90.

B is wrong: Grade 3–5 adverse events were 0.8% with MRI alone vs 7.9% with MRI + PCI.

D is wrong: PCI was 25 Gy in 10 fractions.

Caveat: Presented at WCLC and ASTRO 2026; not yet peer-reviewed, and final OS is pending.

Rusthoven CG, et al. SWOG S1827/MAVERICK. WCLC 2026 Presidential Symposium; ASTRO 2026, LBA03.

How did you do?

Tell us in the comments

Board Review Q5

In EORTC 08993-22993 (Slotman, NEJM 2007), PCI after response to chemotherapy in ES-SCLC improved 1-year overall survival. Which design feature MOST limits applying this result in the modern era?

A. Brain imaging was not required before randomization

B. Patients were randomized before starting chemotherapy

C. PCI was delivered with hippocampal avoidance

D. Only patients with a complete response were eligible

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Q5 Answer

A. No baseline brain imaging was required

Why: Brain CT or MRI was done only if symptoms suggested metastases, so the PCI arm likely included patients with occult brain disease being treated, not prevented.

The results: 1-year symptomatic brain metastases 14.6% vs 40.4%; 1-year OS 27.1% vs 13.3%.

The MRI-era contrast: Takahashi required MRI before enrollment and during follow-up. Median OS was 11.6 months with PCI vs 13.7 months with observation (HR 1.27, p=0.094).

B, C, D are wrong: Patients were randomized after responding to 4–6 cycles, PCI was conventional whole-brain, and any response qualified.

Slotman B, et al. N Engl J Med. 2007;357:664-72. Takahashi T, et al. Lancet Oncol. 2017;18:663-71.

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How did you do?

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