

DURING AND AFTER TREATMENT

Cognitive Dysfunction: Common Side Effect

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For cognitive dysfunction, standards of care are based on established evidence-based practice.

Definition

- Cognitive dysfunction is the decline in function in one or more cognitive domains, including attention and concentration, executive function, information processing speed, language, visuospatial skill, psychomotor ability, and/or learning and memory.

Incidence

- Cognitive dysfunction occurs in 80% of patients with brain tumors, 40% of patients with acute myeloid leukemia, and as many as 75% of patients with breast cancer.

Assessment Tools

- No evidence-based screening tool is available (National Comprehensive Cancer Network [NCCN], 2021).
- Patients who report cognitive impairment should be screened and offered treatment for potentially reversible conditions, such as anxiety, depression, or sleep deprivation.

Prevention Measures

- Encourage 30 minutes of physical exercise daily.
- Recommend yoga and use mind–body practices and relaxation therapy to decrease stress.
- Consider cognitive training with brain games and puzzles.

Evidence-Based Interventions and Management

- Cognitive training can improve, maintain, or restore mental function through repeated and structured practice. Cognitive training can be delivered in group, individual, or online settings.
- Recommend memory aids, reminders, and technology.
- Encourage 30 minutes of physical exercise daily.
- Suggest yoga, mind–body practices, and relaxation therapy.
- Consider modafinil, armodafinil, or donepezil in patients who have significant issues with cognition.

Agents and Interventions to Avoid

- Discourage ginkgo biloba as its effectiveness is not likely.
- Avoid erythropoiesis-stimulating factors, which may lead to tumor growth and cardiovascular toxicity.

- Recommend avoiding alcohol because it can impair cognition.

Evidence-Based Resources for Providers

- Oncology Nursing Society Putting Evidence Into Practice: Cognitive impairment (www.ons.org/pep/cognitive-impairment)
- *NCCN Clinical Practice Guidelines in Oncology: Survivorship* (v.3.2021) (www.nccn.org/professionals/physician_gls/pdf/survivorship.pdf)

Evidence-Based Resources for Patients and Family

- *NCCN Guidelines for Patients: Survivorship Care for Cancer-Related Late and Long-Term Effects* (www.nccn.org/patients/guidelines/content/PDF/survivorship-crl-patient.pdf)

REFERENCES

- National Comprehensive Cancer Network. (2021). *NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®): Survivorship* [v.3.2021]. https://www.nccn.org/professionals/physician_gls/pdf/survivorship.pdf
- Oncology Nursing Society. (2019). *Cognitive impairment*. <https://www.ons.org/pep/cognitive-impairment>
- Spitzer, R.L., Kroenke, K., Williams, J.B.W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine*, 166(10), 1092–1097. <https://doi.org/10.1001/archinte.166.10.1092>
- Stout, N.L., Santa Mina, D., Lyons, K.D., Robb, K., & Silver, J.K. (2021). A systematic review of rehabilitation and exercise recommendations in oncology guidelines. *CA: A Cancer Journal for Clinicians*, 71(2), 149–175. <https://doi.org/10.3322/caac.21639>

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