Primary and metastatic brain tumors are a heterogeneous group of neoplasms with varied outcomes and management strategies. These NCCN Guidelines Insights summarize the NCCN Central Nervous System Cancers Panel’s discussion and highlight notable changes in the 2015 update. This article outlines the data and provides insight into panel decisions regarding adjuvant radiation and chemotherapy treatment options for high-risk newly diagnosed low-grade gliomas and glioblastomas. Additionally, it describes the panel’s assessment of new data and the ongoing debate regarding the use of alternating electric field therapy for high-grade gliomas.

Identification of acute lymphoblastic leukemia (ALL) subtypes based on immunophenotyping and cytogenetic and molecular markers has resulted in the inclusion of Philadelphia-like ALL and early T-cell precursor ALL as subtypes that affect prognosis. Identification of Ikaros mutations has also emerged as a prognostic factor in patients with ALL. In addition to improved prognostication, treatment options for patients with ALL have expanded, particularly with regard to the treatment of relapsed/refractory ALL. This portion of the NCCN Guidelines focuses on the sections of the ALL guidelines that are specific to clinical presentation and diagnosis, treatment of relapsed/refractory ALL and incorporation of minimal residual disease monitoring.

The eradication of cancer and other life-threatening diseases is an ambitious goal, one that demands tenacity, scientific excellence, collaboration and breakthrough creativity. Under the leadership of internationally renowned specialists, including prevention researchers and physician-scientists, we continue to make breakthroughs: creating immunotherapies that use the body’s own immune system to defeat cancer without the harsh side effects of traditional cancer treatments; discovering cancer’s link to the HPV virus, which led to the highly effective “flashlight” known as Tumor Paint that safely and effectively distinguishes cancer cells from the normal tissue around them.

Fred Hutchinson Cancer Research Center/Seattle Cancer Care Alliance

Since opening its doors in 1975, Fred Hutchinson Cancer Research Center (fredhutch.org) has developed an international reputation for innovative research that yields lifesaving breakthroughs in the prevention, detection and treatment of cancer, HIV/AIDS, and other devastating illnesses. Our interdisciplinary teams of world-renowned scientists—which include three Nobel laureates—bring a relentless pursuit of knowledge and hope to their work and to the world.

Together with our treatment arm, Seattle Cancer Care Alliance (seattlecancer.org), our researchers and physician-scientists are discovering new ways to detect cancers earlier when care rates are highest, developing effective treatments with fewer side effects, and learning how to prevent cancers from appearing in the first place.

For 40 years, our patients have received outstanding personalized care from world-renowned specialists, including prevention clinics for individuals at high risk of developing cancer. Our groundbreaking discoveries began in the 1970s with Dr. E. Donnell Thomas’ (first small photo on cover) pioneering work in bone marrow transplantation, which led to his 1990 Nobel Prize in physiology or medicine. Thanks to this innovation, leukemias that were once considered a death sentence now have cure rates of up to 90 percent.

Over the years, Hutch researchers have continued to make breakthroughs: creating immunotherapies that use the body’s own immune system to defeat cancer without the harsh side effects of traditional cancer treatments; discovering cancer’s link to the HPV virus, which led to the highly effective HPV vaccine; and developing a molecular “flashlight” known as Tumor Paint that safely and effectively distinguishes cancer cells from the normal tissue around them.

Fred Hutch also understands that disease research means more than searching for new cures. When cure rates are highest, developing effective treatments with fewer side effects, and learning how to prevent cancers from appearing in the first place. For 40 years, our patients have received outstanding personalized care from world-renowned specialists, including prevention clinics for individuals at high risk of developing cancer.
### ORIGINAL RESEARCH

#### 1203 Making Sense of Variations in Prevalence Estimates of Depression in Cancer: A Co-Calibration of Commonly Used Depression Scales Using Rasch Analysis

Sylvie D. Lambert, RN, PhD; Kerrie Clover, PhD, MPsychClin, MAPS; Julie F. Pallant, PhD; Benjamin Britton, DPsych; Madeleine T. King, PhD; Alex J. Mitchell, MBBS, MSc, MD, MRCPsych; and Gregory Carter, PhD, MBBS, FRANZCP

The use of different depression self-report scales warrants co-calibration studies to establish relationships between scores from 2 or more scales. The goal of this study was to examine variations in measurement across 5 commonly used scales to measure depression among patients with cancer: Hospital Anxiety and Depression Scale-Depression subscale (HADS-D), Centre for Epidemiologic Studies Depression Scale (CES-D), Patient Health Questionnaire-9 (PHQ-9), Beck Depression Inventory-II (BDI-II), and Depression Anxiety Stress Scales-Depression subscale (DASS-D).

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#### 1216 Adoption of Gene Expression Profiling for Breast Cancer in US Oncology Practice for Women Younger Than 65 Years

Suzanne C. O'Neill, PhD; Claudine Isaacs, MD; Calvin Chao, MD; Huei-Ting Tsai, PhD, MPH; Chunfu Liu, ScD; Bola F. Ekezue, PhD; et al

A number of practice guidelines incorporate the use of gene expression profiling (GEP) tests for early-stage, hormone receptor–positive, HER2-negative breast tumors. Few studies describe factors associated with GEP testing in US oncology practice. This article assessed the relationship between clinical, demographic, and group-level socioeconomic variables and test use in women younger than 65 years.

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#### 1225 Survival in Patients With Severe Lymphopenia Following Treatment With Radiation and Chemotherapy for Newly Diagnosed Solid Tumors

Stuart A. Grossman, MD; Susannah Ellsworth, MD; Jian Campian, MD, PhD; Aaron T. Wild, MD; Joseph M. Herman, MD; Dan Laheru, MD; et al

The immune system plays an important role in cancer surveillance and therapy. Chemoradiation can cause severe treatment-related lymphopenia (TRL) (<500 cells/mm³), which is associated with reduced survival. This study analyzes the association between TRL and survival using data from 4 studies involving 297 patients with newly diagnosed solid tumors.

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#### 1233 Anemia and Functional Disability in Older Adults With Cancer

Cynthia Owusu, MD, MS; Harvey Jay Cohen, MD; Tao Feng, PhD; William Tew, MD; Supriya G. Mohile, MD; Heidi D. Klepin, MD; et al

Anemia is associated with functional disability among older adults in general. However, the relationship between anemia and functional disability has not been well characterized among older adults with cancer. This study examined the association between anemia and functional disability in patients with cancer aged 65 years or older.

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### REVIEW

#### 1281 Second-Line Treatment of Advanced Gastric Cancer: Where Do We Stand?

Amit Mahipal, MD, MPH; Minsig Choi, MD; and Richard Kim, MD

Gastric cancer is a leading cause of cancer death and is associated with poor prognosis. The treatment of advanced gastric cancer is changing with the development of novel agents. Until recently, no standard treatment was available for patients with advanced gastric cancer in the second-line setting. This article assesses the current armamentarium of approved and emerging agents in the second-line treatment of advanced gastric cancer.
Metastatic melanoma is a devastating disease that has been increasing in incidence and until relatively recently had few effective treatment options. With the approval in 2011 of ipilimumab, a monoclonal antibody against cytotoxic T-lymphocyte–associated protein 4 (CTLA-4), however, that has begun to change. Use of this and similar agents can lead to characteristic and varied immune-related adverse events (irAEs); however, experience has shown that these can be managed with patient education, early recognition, and judicious use of systemic steroids. This case report highlights the full spectrum of clinical responses that are possible with the new generation of immunotherapies in metastatic melanoma—from rapidly developing and unpredictable irAEs to impressive and durable disease regressions.