lead to early detection of MBTs. It also informs the patient and their families about multiple modality therapy options for patients with BM including surgery, radiation, radiosurgery and chemotherapy so that they may get more tailored treatment. B-Aware[SM] patient brochures have been circulated throughout Cleveland Clinic cancer centers to help improve patient education. A dedicated webpage (www.clevelandclinic.org/b-aware) has been created to further this endeavor and information may be obtained through the American Cancer Society. There is also a dedicated patient hotline that answers the questions that patient or their families may have regarding MBTs.
Conclusion: B-Aware[SM] is a unique program that has stemmed from a partnership between a tertiary care center (Cleveland Clinic) and the American Cancer Society that endeavors to improve the outcomes of patients with MBTs by improving the awareness of potential patients regarding the risks, signs and symptoms of MBTs and the therapy options for such patients.

8759 POSTER

A Brain Cancer Pathway − 2 Years Experience in Clinical Practice

E.L. Laursen[1], B.K. Rasmussen[1]. *[1]Hilleroed Hospital, Department of Neurology, Hilleroed, Denmark*

Background: The Danish Health Care Sector seeks to improve cancer survival through better diagnostics, faster treatment and increased focus on cancer prevention and early help-seeking. In neuro-oncology this has resulted in the National Integrated Brain Cancer Pathway (NIBCP). We analyze how the pathway works in the initial phase in a clinical setting with emphasis on referral manner and pathway criteria.
Materials and Method: All patients admitted during the first 2-year period to a regional neurology department in Denmark and fulfilling the NIBCP inclusion criteria were included. The clinical inclusion criteria encompass recent onset of focal neurological symptoms or epileptic seizures, changes in personality or behavior or cognitive deterioration or marked changed in headache pattern and in all cases symptoms progressing over time without any other likely cause.
Data regarding referral, symptoms, diagnosis and time for work-up was obtained and supplemented by retrospective review of patient charts. Sensitivities, specificities and positive predictive values of the inclusion criteria were calculated with MRI scan of the cerebrum as index of validity.
Results: The strength of the pathway inclusion criteria is found to be determined largely by the number of criteria fulfilled and by which symptoms predominate at the time of admission. The criteria are found to pick up on the majority of patients with symptomatic brain malignancy but are also found to be highly sensitive of general structural brain lesions.
Conclusion: The pathway is a major step forward in the effort of optimizing the illness trajectory for brain cancer patients. More patients suspected of brain cancer are expected to go through expedient work-up as general practitioners become increasingly familiar with the pathway.

8760 POSTER

Should the Management of Brain Metastases Be Influenced by the Age of the Patient?

P. Hanssens[1], G. Beute[1], B. Karlsson[2]. *[1]St. Elisabeth Ziekenhuis, Tilburg, The Netherlands; [2]National University Hospital, Division of Neurosurgery, Singapore, Singapore*

Objectives: The radiation Therapy Oncology Group (RTOG) defined age as one of the key factors predicting survival time in patients with brain metastases treated with whole brain radiation therapy (WBRT). As most patients with BM succumb from the intracerebral manifestation of their disease we hypothesized that the likelihood of distant recurrences should be higher in elderly patients.
Method: All visible brain metastases were treated with Gamma Knife® surgery (GKS) in 1397 patients treated in St. Elisabeth Hospital, Tilburg, The Netherlands and West Virginia University, Morgantown, WV, USA, All patients were followed prospectively with MR imaging every 3rd months as long as deemed clinically meaningful. The time at risk for distant recurrences was defined as the time between GKS and the first of the following event: the diagnosis of a distant recurrence, the time to death, the time to the last information of the patient or treatment with WBRT without evidence of distant recurrences.
Results: There was no significant relation between the risk of developing distant recurrences and age ($P = 0.033$) comparing $<$ to $\geqslant$ 65 years of age. However, the difference became significant when 75 years was used as age limit ($P = 0.0074$).
Conclusions: Age has a predictive value not only for predicting survival but also for intracranial tumour control following GKS. However, a relavant age limit should probably be older than the 65 years set by RTOG.

Oral Presentations (Sat, 24 Sep, 11:15−13:35)
Lung Cancer − Metastatic

9000 ORAL

Epidermal Growth Factor Receptor (EGFR) Expression as a Predictive Biomarker of Survival in Patients With Advanced Non-Small Cell Lung Cancer (NSCLC) Receiving First-Line Therapy With Cetuximab Combined With Chemotherapy in the FLEX Trial

K. O'Byrne[1], L. Paz-Ares[2], J.R. Pereira[3], J. von Pawel[4], R. Ramlau[5], S. Störkel[6], K.M. Schumacher[7], A. von Heydebreck[8], I. Celik[7], R. Pirker[9]. *[1]St James's Hospital, Oncology Department, Dublin, Ireland; [2]Hospital Universitario Virgen del Rocio, Oncology Department, Seville, Spain; [3]Arnaldo Vieira de Carvalho Cancer Institute, Pulmonary Medicine, São Paulo, Brazil; [4]Asklepios Fachkliniken, Oncology Department, München-Gauting, Germany; [5]Poznan University of Medical Sciences, Wielkopolskie Centrum Pulmonologii i Torakochirurgii, Poznan, Poland; [6]HELIOS Hospital Wuppertal, Institute of Pathology, Wuppertal, [7]Merck KGaA, Global Clinical Development Unit − Oncology, Darmstadt, [8]Merck KGaA, Global Biostatistics, Darmstadt, Germany; [9]Medical University of Vienna, Department of Medicine I, Vienna, Austria*

Background: The phase III FLEX study showed that the addition of cetuximab to first-line chemotherapy (CT) statistically significantly improved overall survival (OS) in patients with EGFR-expressing, advanced NSCLC. Prospectively collected tumour immunohistochemistry (IHC) data were analyzed to investigate whether EGFR expression was predictive of outcome in FLEX study patients.
Material and Methods: Tumour EGFR expression was assessed in 1121 (99.6%) of 1125 FLEX study patients according to the proportion of positive cells and intensity of membrane staining on a continuous IHC scale of 0–300. A discriminating threshold IHC score of 200 was selected and used to define groups with low (IHC score <200) and high (IHC score $\geqslant$200) EGFR expression, as previously described. The OS benefit in each group was further analyzed for the overall population and for subgroups defined by tumour histology.
Results: High tumour EGFR expression was scored for 345 (30.8%) of 1121 patients. Baseline characteristics were comparable between treatment arms in both high and low EGFR expression groups. OS time was prolonged in the high EGFR expression group in the CT plus cetuximab compared with CT arm (median 12.0 vs 9.6 months; hazard ratio, HR, 0.73; $p = 0.011$). No corresponding OS benefit was observed in the low EGFR expression group (median 9.8 vs 10.3 months; HR 0.99; $p = 0.88$). A treatment interaction test assessing the difference in HRs between the EGFR expression groups yielded a p-value of 0.044. A multivariable analysis of OS in the EGFR expression groups with adjustment for prognostically relevant baseline factors confirmed the results of the unadjusted analysis. The OS benefit in the high EGFR expression group was observed across tumour histologies: squamous cell carcinoma (median 11.2 vs 8.9 months; HR 0.62); adenocarcinoma (median 20.2 vs 13.6 months; HR 0.74); other histologies (median 8.0 vs 7.6 months; HR 0.75). The safety profile for CT plus cetuximab in the high EGFR expression group was similar to that seen in the overall safety population, with no unexpected adverse events.
Conclusions: The addition of cetuximab to first-line CT substantially prolonged OS in patients with advanced NSCLC and high tumour EGFR expression regardless of histological subtype. The selection of those patients most likely to benefit from first-line treatment with CT plus cetuximab should be based primarily on whether tumours express high or low levels of EGFR, as defined in the current analysis.

9001 ORAL

A Retrospective Subgroup Analysis of EGFR Immunohistochemistry (IHC) Expression by Histo-Score Correlated to Outcomes From the BMS099 1st Line Phase III NSCLC Trial of Cetuximab (Cet) Plus Carboplatin/Taxane

T. Lynch[1], P. Bhagavatheeswaran[2], P. Mukhopadhyay[2], S. Khambata-Ford[3], C.T. Harbison[3]. *[1]Yale School of Medicine, Smilow Cancer Hospital at Yale-New Haven, New Haven CT, [2]Bristol-Myers Squibb, Global Biometric Sciences, Wallingford CT, [3]Bristol-Myers Squibb, Clinical Biomarkers, Princeton NJ, USA*

Background: The phase III FLEX study showed that the addition of Cet to first-line chemotherapy (CT) significantly improved overall survival (OS) in patients (pts) with EGFR-expressing, advanced NSCLC. The phase III BMS099 trial investigated Cet plus first-line CT in advanced NSCLC pts regardless of EGFR expression. In BMS099, the primary end point, progression-free survival (PFS), did not differ significantly between