

most patients (n = 133; 69%). Seven patients (4%) developed ILD and one of them died of it. Among these seven patients, six were affected by lung cancer and the other breast cancer. However multivariate analysis showed disease site was not significantly correlated with ILD (p = 1.00); while the presence of mediastinal lymphadenopathy was significantly correlated with ILD (odds ratio 6.96, p = 0.037).

**Conclusion:** Mediastinal lymphadenopathy was significantly correlated with developing paclitaxel-related ILD. Further investigation is warranted to validate this findings.

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POSTER

# **How Much is the Likelihood of Being Helped or Harmed (LHH) When Adopting Oral Targeted Agents (OTA) in the Treatment of Advanced Solid Tumours (AST) – Comprehensive Assessment of Their Clinical Overall Impact According to FDA/EMA Regulatory Approvals**

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**Background:** The number needed to treat or to harm (NNT/NNH) represents a practical tool to quantify the clinical impact of TA for the treatment of AST. LHH, a quality-adjusted ratio between NNT and NNH, is an Evidence-Based-Medicine patient-centered measure. With a purely speculative intent for trial design, the aim of this analysis was to have a general overview upon the LHH provided by OTA in AST.

**Methods:** Randomized clinical trials (RCTs) providing registration of OTA by FDA/EMA were eligible if data for efficacy (PFS, OS), activity (ORR) and safety (Grade 3–4 specific toxicities) were available. PFS and OS rates were extracted/derived from curves; absolute differences were determined and NNT or NNH (derived according to the worst drug-specific toxicity) were calculated. LHH was calculated for PFS, and additionally for OS whereas that OTA was registered for a significant survival advantage.

**Results:** Ten RCTs and settings were gathered (see table); 3 trials compared the OTA versus active treatment, 2 RCTs as add-on to chemo versus the same chemo, and 5 versus placebo. 6 and 3 OTA were registered for a significant PFS and OS advantage, respectively.

Comparator	Setting	Specific Toxicity	LHH	
			PFS	OS
Chemo	Gefitinib [EGFR-MT-NSCLC]	Rash	14.9	–
	Sunitinib [RCC]	Hypertension	6.4	–
	Sorafenib [RCC]	Hand-Foot Syndrome	3.4	–
Chemo + OTA	Lapatinib [HER2+MBC]	Diarrhea	2.7	–
	Erlotinib [PDAC]	Rash	2	0.1
Placebo	Sunitinib [GIST]	Hypertension	4.9	–
	Pazopanib [RCC]	High-transaminase	3.2	–
	Sorafenib [HCC]	Diarrhea	2.2	0.1
	Erlotinib [NSCLC]	Rash	1.8	0.8
	Everolimus [RCC]	High-glycemia	1.5	–

FDA/EMA registered OTA exert a potential LHH in the range of 1.5–6.5 (these are 1.5–6.5 times more likely to benefit than to provide drug-specific toxicities); the exception is Gefitinib for patients with EGFR mutation, specific target of an oncogene-addicted disease.

**Conclusions:** Although the limitations of a derived-by-curve determination at various time-points weighted with an arbitrary-chosen drug-toxicity, and the unreliability of a formal comparison between OTA-LHH based on different drug-toxicities, the benefit obtained by OTA seems related to the identification of the tumour-driven target. Three scenarios appear: 1) drugs targeting a target-dependent malignancy (LHH > 10); 2) drugs targeting 1 among multiple tumour-driving pathways (LHH 2–7); 3) drugs definitively requiring a biomarker-driven development (LHH < 2). A cost analysis is mandatory to put these data in context with the general health care system.

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POSTER

# **Adequacy of Prognostic Markers Reporting Based on NCI-EORTC REMARK Guideline – a Comparison Between Pre- and Post-REMARK Eras**

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**Background:** Lack of data reporting is a well-known issue and an obstacle to the applicability of prognostic biomarker studies (PBS) in clinical practice. REMARK guideline (J Clin Oncol, Vol 23, No 36, 2005: pp 9067–72) was developed in order to standardize information in such trials. We sought to

compare the fairness of PBS regarding REMARK recommendations pre- and post-guideline publication.

**Material and Methods:** We systematically searched PubMed for PBS from Jan 1, 2004 to Dec 31, 2005 (pre-REMARK), and from Jan 1, 2009 to Oct 31, 2010 (post-REMARK). Inclusion criteria: 1) one biomarker per study; 2) validation in a multivariate model; 3) correlation between biomarker and overall, disease-free, or progression-free survival. Exclusion criteria: 1) gene expression arrays; 2) proteomic analysis; 3) biophysical features; and 4) predictive biomarkers. Fifty-two REMARK recommendations were assessed. The rate of reported recommendations (RRR) was compared between the periods (chi-square test) and correlated with journal impact factor of publications (Spearman's test).

**Results:** 1,208 articles were retrieved, 110 of which met the eligibility criteria (52 and 58, pre- and post-REMARK, respectively). A total of 82 biomarkers were investigated in 19 types of cancers. The median number of studied patients size was 135 (range 21–1984). The overall RRR was 61.8% and 62.7% for the pre- and post-REMARK periods, respectively. Low reporting was found in the following REMARK recommendations: exclusion criteria [25% (pre-), 32.8% (post-); p = 0.371]; preservation of biological material [19.2% (pre-), 25.9% (post-); p = 0.407]; blinded analysis of the biomarker [34.6% (pre-), 34.5% (post-); p = 0.988]; overall [59.6% (pre-), 63.8% (post-); p = 0.653] and subgroup number of events [32.7% (pre-), 25.9% (post-); p = 0.431]; discussion about study limitations [55.8% (pre-), 58.6% (post-); p = 0.763]; and future research implications [57.7% (pre-), 58.6% (post-); p = 0.921]. There was a correlation between the overall RRR and the probability to be published in a higher impact factor journal (p = 0.001).

**Conclusions:** Reporting of key information in PBS remains poor. More efforts from authors and editors in using REMARK recommendations should be considered to improve the quality of studies on prognostic markers.

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POSTER

# **Written Information for Research Participants in Randomized Cancer Clinical Trials – a Study of Compliance With Good Clinical Practice Regulations**

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**Background:** Development of oncology treatments requires patients' participation in clinical trials. Informed consent from participants is mandatory according to guidelines and laws. Before signing the consent form, potential participants should get oral and written information and have the opportunity to get unclear points resolved. According to Good Clinical Practice (GCP) important aspects should be described in the written information. Studies have revealed deficient understanding of clinical trials among participants. Therefore, consent forms were studied regarding the level of compliance with GCP.

**Material and Methods:** All consent forms for phase III trials open for inclusion in May 2009 at the Department of Oncology were included. Consent forms (n = 30) were evaluated regarding GCP § 4.8.10 that demands written information to include explanations of 20 items, e.g. that the trial involves research, the purpose of the trial, treatments and the probability for random assignment to each treatment, procedures to be followed and subject's responsibilities. In addition, 5 clarifying items were reviewed, e.g. clarification of randomization and that the study have been approved by the Regional Ethical Review Board (RERB). Explanation of the items were scored in the following way; clearly explained = 5, explained to a high degree = 4, partly explained = 3, mentioned but not explained = 2, the item is not included = 0. The scores for all 25 items were summarized for each consent form making a maximum score of 125 if all items were clearly explained.

**Results:** Three consent forms got scores over 100 and 4 consent forms scored between 91–100, 12 forms scored between 71–90 and 11 forms got scores of 70 or below. In 2 consent forms 15 items were clearly explained and 5 forms showed compliance with all 25 items in varying degrees. The form with the highest score (107), explaining all 25 items of which 15 items were clearly explained, used 10 pages. The consent form with the highest score within the limitations to 5 pages, as recommended by the RERB, reached a score of 90 and explained 24 items out of which 12 were clearly explained.

**Conclusions:** In terms of written information, a great variation in compliance to GCP was found. Efforts are needed to clarify the randomisation procedure and expectations on research participants. The results show that it might be possible to produce condensed clearly written information to patients considering participation in a phase III cancer clinical trial.