respectively; $p = 0.04$, Exact Wilcoxon rank-sum test). There were no differences in histological type, tumour size, grade and lymph node status between the groups.
Conclusions: Our data show that Pakistani women with early-onset triple negative breast cancer are candidates for genetic *BRCA1* testing, even in the absence of a family history of breast/ovarian cancer.

3529 POSTER

Effect of Sample Type and Turnaround Time (TAT) on the Feasibility of Non-Small Cell Lung Cancer (NSCLC) Epidermal Growth Factor Receptor (EGFR) Mutation Testing in Routine Clinical Practice: Results From the Spanish REASON Study

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Background: The presence of EGFR mutations guides treatment selection in NSCLC. Albeit Biopsy samples (s) are a gold standard for mutational analysis, they are difficult to obtain in many cases, and mutational analysis must be performed on cytologies (cyt) s instead. One of the purposes of the Spanish REASON epidemiological study was to gain insight into variables that affect the feasibility and implementation of EGFR mutation testing (tissue vs cyt and TAT) in routine clinical practice.
Material and Methods: All newly diagnosed advanced NSCLC patients in 39 Spanish centres nationwide were included prospectively for a 6-month period. Mutation testing was performed mainly through a centralized diagnostic platform that employed two central laboratories (787 s), or on-site (222 s) where EGFR mutation testing was customary (7 laboratories). Methodologies used for EGFR mutation testing were Qiagen's Therascreen EGFR PCR Kit™ (452 s), direct sequencing (89 s), fluorescent PCR fragment analysis for exon 19 deletions (del) (480 s), and allelic discrimination using fluorescence probes (450 s) or PCR enzymatic restriction (26 s) for exon 21 L858R mutation.
Results: 1009 p with available s were included in the analysis (800 tissue and 209 cyt). 15.2% of s were from non-smoking patients. 23.9% of tissue s were of squamous histology vs 16.3% of cyt. 68 s (6.7%) were inadequate for mutation analysis (6.1% tissue, 9.1% cyt). Median overall TAT was 9.7 days (9.7 days tissue, 9.5 days cyt). Median TAT for a centralized diagnostic platform was almost 7 days lower than on-site testing (8.5 days vs. 15.3 days). 941s were screened for major mutations, 504 of which were additionally analyzed for the presence of minor mutations. Mutation rates according to s type and exons analyzed are presented in Table 1.

Table 1

	Mutation rates, n (%)		
	Tissue	Cyt	Total
Major mutation rates	**N = 751**	**N = 190**	**N = 941**
Del 19 or L858R	89 (11.9)	19 (10)	108 (11.5)
Del 19	72 (80.9)	17 (89.5)	89 (82.4)
Exon 21 L858R	17 (19.1)	2 (10.5)	19 (17.6)
Minor mutation rates	**N = 394**	**N = 110**	**N = 504**
Minor mutations	15 (3.8)	7 (6.4)	22 (4.4)
Exon 18	5 (33.3)	3 (42.9)	8 (36.4)
Exon 20	6 (40)	1 (14.3)	7 (31.8)
Exon 21 (except L858R)	4 (26.7)	3 (42.9)	7 (31.8)

Conclusions: Given the similar adequacy for molecular analysis and mutation rates observed in cytological vs. tissue s, cyt seem to be amenable to mutation analysis. Moreover, mutation testing through a diagnostic platform warrants a centralized diagnostics model for implementation in routine clinical practice.

3530 POSTER

The Impact of Early Thromboembolic Event on Overall Survival in Cancer Patients

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Background: Thromboembolic events (TE) are common complication of cancer, may lead to mortality and detoriate quality of life. "Initial period", (first 3 months) after the diagnosis of cancer holds the highest risk for development of cancer-associated TE.
Material and Method: Between October 2007 to March 2011, we retrospectively evaluated the occurence of TE in patients with histologically confirmed solid tumours. The diagnosis of TE is confirmed by radiology and patients were treated accordingly. One hundred seven of 1838 patients (5.8%) were diagnosed as TE. Twenty nine of 107 patients (%27) had TE at initial period and 78 (%73) had TE at delayed (later than three months) period.
Results: There was no statistical significant relationship for age and gender between TE and non-TE groups. Forty three (41%) had distal lower extremity (DLE)deep venous thrombosis (DVT), 33 (31%) had PE and the rest includes 15 central/proximal DVT (14%), 8 PE with DLE DVT (7%), 6 central venous catheter-related DVT (5%) and 2 upper extremity DVT(2%). Frequencies for TE according to histopathology were; Non Hodgkin's lymphoma (6/36 = 16.7%), pancreatic cancer (13/79 = 16.5%), gastric cancer (18 /152 =11.8%), NSCL (adenocarcinoma) (9/82 = 11%), GBM (4/53 = 7.5%) and colorectal cancer (22/312 = 7%). Median survival was 30.5 months for TE group and 127 months for non-TE group (log-rank, p = 0.0001). Median time from diagnosis to TE was 7.25 months. Median overall survival was 15 months and 34.25 months for patients with TE at initial period and with delayed TE (log-rank, p = 0.011), respectively. The diagnosis of TE were more frequent in advanced stage (stage I-II vs stage III-IV, 13/107 = 12% vs 94/107 = 88% respectively, p = 0.0001) and with histology of adenocarcinoma (86/107 = 80% vs 21/107 = 20% respectively, p = 0.01). Odds ratio (OR) for TE in patients with adenocarcinoma histology was 1.9 [95% confidence interval (CI):1.2−3], and with advanced stage, OR was 4.35[95% CI:2.42–7.84]. OR for TE in patients with adenocarcinoma at advanced stage was 2.54[95% CI:1.44–4.49].
Conclusions: In our patient cohort, having TE at initial period, histology of adenocarcinoma and advanced stage emerged as independent prognostic factors for poor survival in cancer patients.

3531 POSTER

Urinary Bladder Cancer and Potential Risk Factors in Lebanon − a Case-control Study

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Background: Given the strikingly high bladder cancer incidence in Lebanon, estimated to be the second most common malignancy among Lebanese men, coupled with the potential effect of Phase I and Phase II drug-metabolizing enzymes on bladder cancer risk, a case control study was conducted in Lebanon to investigate the potential risk factors for bladder cancer.
Study design:159 male cases and controls (54 cases and 105 controls) were selected from two tertiary care centers in Lebanon: St. George Hospital and Bahman Hospital. Cases were men, 50 years and older, with primary confirmed bladder carcinoma. They were randomly selected as per year of reporting. Controls were hospital based, 50 years and older, with no present or previous history of cancer or any systemic illnesses. Informed consent was obtained on all cases and controls and the study gained IRB approval from the respective hospitals. Data were collected using a structured face to face interview questionnaire gathering information on history of known urinary bladder cancer risk factors such as age, family history, smoking habits, drinking, dietary habits, chronic diseases and urinary infections, use of hair dyes, and occupation. Laboratory blood testing was performed to determine N- Acetyltransferase1 (NAT1) genotype. Univariate, bivariate and multivariate logistic regression analyses were used to analyze the data, check for effect modification and control for confounders.
Study results: Results highlighted the importance of smoking, occupational exposure to fumes and vapors, prostate related diseases, as well as NAT1*14A allele as independently significant risk factors for bladder cancer. The odds of having bladder cancer among smokers was 1.02 times higher in cases than controls. The odds of occupational fumes/vapors exposure was 4.34 times higher in cases than controls. The odds of prostate related diseases was 7.8 times higher in cases than controls.