ogy laboratory standard working days. The time required to test one sample was timed for each methodology separately and the pertaining costs were isolated. The working dimension of the two technologies and of the instruments needed was also measured. **RESULTS:** The hands-on time for SISH was 76.25% lower than the implementation of FISH and the dedicated spaces needed to carry out the SISH test was 45.27% less than FISH. Lastly, the cost of an automated SISH system was lower than FISH. **CONCLUSIONS:** As a consequence of a significant reduction of laboratory personnel working hours, medical resources used and pathology laboratory space, the use of SISH technique to identify HER2 status is a cost-saving alternative to FISH from the perspective of the pathology laboratory.

### MEDICAL DEVICE/DIAGNOSTICS - Patient-Reported Outcomes & Patient Preference Studies

**PMD100 COPD ICS/LABA TREATMENT INHALERS AND THEIR IMPACT ON ADHERENCE**

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**OBJECTIVES:** Chronic Obstructive Pulmonary Disease (COPD) is a chronic respiratory disease with a high burden of disease and a relevant Public Health problem. The active patient active involvement is crucial to yield the proper disease control. The aim of the study was to assess treatment adherence with the combination of inhaled corticosteroids (ICS) and long-acting beta-2 agonists (LABA), known as ICS/LABA combinations, at real-world background. Additionally COPD exacerbations, resources consumption, and associated costs were also measured. METHODS: An observational, retrospective study was performed. Patients aged ≥ 40 years, diagnosed with COPD, and who initiated an ICS/LABA combination during 2007–2011 were included. Adherence to treatment may be defined as: - adherence to treatment. Two treatment groups of patients were identified and assessed, depending on the inhaler device used: pMDI or DPI. The main measures were: adherence (possession drug ratio), persistence, asthma severity, ICS/LABA combinations used, exacerbations, resources use and their costs (direct and indirect costs). Multivariate methods were used for the variables correction, with a p significance degree < 0.05. RESULTS: We included 1,418 COPD patients. Mean age 72.1 years; 82.7% male; 594 (41.9%) patients received a pMDI and 824 patients (58.1%) received an DPI. Patients who used and pMDI device showed a higher treatment adherence (RPM: 83.3% vs 79.9%, p<0.05), fewer number of exacerbations (40.1% vs 48.2%, p<0.002), and a lower health cost (€5,943 vs €4,621, p<0.001). CONCLUSIONS: Despite the limitation of the study based on a review of medical registries between 2007–2012 of COPD patients (n=1,263) treated with ICS/LABA FDC, whose medical devices were either dry powder inhalers (DPI) or pressurized metered-dose inhalers (pMDI). Medication compliance included persistence outcomes through 18 months and medication possession ratios. Data on exacerbations, comorbidities, demographic characteristics and healthcare resource utilization were also included as confounders of medication compliance. **RESULTS:** The analyses revealed that COPD patients whose medication was delivered by a DPI were less likely to comply with their treatment compared to patients with pMDI, after adjusting for confounding factors, especially active ingredients. Younger groups of patients were less likely to comply with their medication compared to the oldest group. Smoker men were less likely to comply with their medication compared to women and non-smokers. Comorbidities decreased the probability of treatment compliance. Those patients that visited their GP once a month were more likely to comply with their medication regimen, however sub-optimal compliance was more likely to occur among those patients that visited more than 3 times per month their GP. We also found that worsening of COPD is negatively associated with compliance. **CONCLUSIONS:** According to this study, inhalation devices influence patients’ compliance for long-term COPD medication. We also explored the probability of asthma medication compliance in case of DPI was lower compared to pMDI, which suggest that inhaler devices condition inhalation therapies. There were additional co-factors that were associated with compliance. A worse measure of airflow obstruction (FEVI), comorbidities and visiting the GP more than once per month decreased the probability of compliance. Within comorbidities, alcoholism was positively associated with compliance. Patients of 29–39, 40–49, and 61–64 age groups or suffering from more than 2 exacerbations during the study period were more likely to comply with their medication regimen. We identified differences among DPI devices and Accuhaler® device impacted negatively on compliance compared to other DPIs. We found that GP consultations reduced the probability of medication compliance for patients treated with Formoterol/