biopsy the lesions and subsequently monitor her response to steroids with continuation of trastuzumab, since benefits of trastuzumab outweigh the risks of eczema.³

Conclusions We report the first case of trastuzumab therapy presenting with extensive infected pompholyx (dyshidrotic) eczema in a breast cancer patient. Although the patient described a history of a mild eczema five years previously, an acute flare while undergoing treatment could certainly be added to conditions at risk of flare during trastuzumab therapy until this is proven as a clear trastuzumab side effect through meta-analysis of multiple studies and a comprehensive dataset.

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3 EVALUATION OF HO-1 INVOLVEMENT IN MELANOMA RESISTANCE TO BRAF INHIBITOR VEMURAFENIB

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Introduction The point mutation of the BRAF gene (BRAFV600E) is present in more than 50% of melanoma.

This mutation determinate the continuous activation of MAPK pathway, which favours cell survival and proliferation. Vemurafenib/PLX4032 (PLX4032) is an inhibitor of BRAFV600 used for the therapy of these tumours, but, after an initial positive response, in many cases a relapse of the disease occurs. HO-1 is the inducible form of heme oxygenase and overexpression is involved in the growth and resistance to therapy of different types of tumours. In this study we have evaluated the involvement of HO-1 in chemoresistance and angiogenesis of BRAFV600E primary melanoma cells.

Materials and methods We used a primary melanoma cell line, derived from a metastasis from a patient, and exposed cells to PLX4032 (1–10 µM). The role of HO-1 was studied by gene silencing or using the pharmacological inhibitor of HO-1 tinmesoporphyrin IX (SnMP-IX), a drug used to treat hyperbilirubinemia. Angiogenic potential was evaluated by using bovine aortic endothelial cells (BAEC) isolated in our laboratory.

Results Primary melanoma cells (MeOV-1) were exposed to 1–10 µM PLX4032 for 24 hour. MTT and Trypan blue assays showed a reduction in cell viability of 45% and immunoblot and qRTPCR analyses revealed a significant upregulation of HO-1 expression. HO-1 silencing or exposure to 10 µM SnMP-IX further decreased cell viability after exposure to PLX4032. Subsequently, we evaluated the angiogenic potential of melanoma cells. Medium derived from MeOV-1 cells, exposed to 10 microlar PLX4032, was used to treat BAEC seeded on Matrigel. Tube formation, branching and density were increased in comparison to BAEC exposed to the medium from untreated MeOV-1 cells. Interestingly, when BAEC were treated with conditioned medium from MeOV-1 cells and HO-1 was silenced, 10 µM PLX4032 showed a reduced ability to form tubes.

Conclusions These Results highlight an important role of HO-1 in favouring melanoma resistance to target therapy and angiogenesis.

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4 WHICH INTENSIVE CARE ANALYTICS ARE A WORTHWHILE INVESTMENT FOR DEVELOPERS? AN EARLY HEALTH TECHNOLOGY ASSESSMENT

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Introduction In intensive care (IC), monitoring data are continuously being collected. Unfortunately, this data is often not interpretable for clinicians and therefore goes unused. While advanced analytics can process this data to support improvements in patient care, developers ideally invest in those analytics that lead to the greatest health benefits or cost reductions. We explored the potential cost-effectiveness of three IC analytics.

Subjects and methods We assessed the cost-effectiveness of three applications: the early identification of catheter-related bloodstream infection (CRBSI), improved nutrition monitoring and identification of high driving pressure (HDP) in ventilated patients. The literature was used to populate the decision trees and patient data from a Greek IC were used for the nutrition and HDP estimates. We performed univariate, multivariate, and probabilistic sensitivity analyses.

Results Early identification of CRBSI reduced mortality and length of stay, thereby increasing quality-adjusted life-years (QALYs) (6.70 vs. 6.58) and reducing costs (€8183 vs. €9,869); probability of CRBSI and the costs per IC day were key influencers of the ICER and the probability of dominance was 90%. Improved nutrition monitoring could increase nutrition adherence (0.37% vs. 0.03%) and decrease costs by reducing length of stay (€9988 vs. €10,720). For HDP, benefits were limited, resulting in higher costs as well as minimal and highly uncertain health benefits.

Conclusions Developers should study the potential impact of the analytics they wish to develop before investing time and money. We illustrate that analytics for early identification of CRBSI and improved nutrition monitoring are worth further investment while identifying HDP may not be. The other factors that influence success besides health and financial benefits such as the competition and data access should be assessed.

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5 INVESTIGATING THE EFFECT OF CATECHOLAMINES ON ISCHAEMIA-INDUCED VENTRICULAR FIBRILLATION WHEN IN THE PRESENCE OF AN INTRAVENTRICULAR BALLOON

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Introduction Sudden cardiac death (SCD) is the greatest cause of cardiovascular disease-related mortality. Lethal ventricular