

# POSTER PRESENTATIONS



## P1 – BREAST CANCER PATIENTS IN THE EMERGENCY DEPARTMENT – UNIVERSITY HOSPITAL CENTER SESTRE MILOSRDNICE EXPERIENCE

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**Introduction:** Breast cancer is still the most common malignancy in Croatian women. Considering new treatment options available, the number of early breast cancer survivals and metastatic breast cancer patients is increasing, as well as their overall survival. In this regard, there is also an increase in emergency department visits, mostly caused by treatment side effects in early or metastatic breast cancer, along with general cancer symptoms, especially in the later course of disease and patients in end-of-life care.

**Aim:** The aim is to determine the clinical characteristics of breast cancer patients' visits to the Emergency Medicine Department (EMD) of University Hospital Center Sestre Milosrdnice. That included patients' demographics, common reasons for EMD visits, stage of disease, current treatment modality as well as overall number of visits and final treatment outcome of patients who were admitted to hospital.

**Methods:** Medical records of all EMD visits from December 1st, 2023 until February 1st, 2024 were reviewed and descriptive retrospective research was performed regarding breast cancer patients.

**Results:** There were overall 4630 EMD visits, with 250 cancer patients visits and 50 of those were patients with breast cancer. Out of all cancer patients, most of them were patients with breast cancer (20%), which makes breast cancer the most common cancer site. Overall 49 female and 1 male breast cancer patient were examined, with the median age of 69 years (range from 35 to 89 years). Most visits to EMD were caused by dyspnea (34%) and abdominal pain (22%). At the same time, other symptoms appeared less frequently (edema, fever, and fatigue in 8% of the patients for each symptom, rash in 6% of the patients, and finally chest pain and bleeding in 2% of the patients, respectively). Considering dyspnea was the leading symptom, an additional analysis was performed to explore the cause of dyspnea. In 52,9% of patients, the cause wasn't determined during an EMD visit, in 17,6% of patients the cause was pleural effusion, and in three cases causes were pulmonary embolism, pneumonia, and heart failure (in one patient with known toxic cardiomyopathy), respectively.

Regarding the second leading symptom, the cause of abdominal pain was not found in 72,7% of patients and in 18,1% of them, the cause was diarrhea. Out of all patients examined, 80% of them are in active cancer treatment, 12% of them are in palliative care and 8% of patients haven't yet started active treatment for various reasons. There were 62% of patients with early-stage disease and 38% of metastatic cancer patients. Out of all patients, 30% were treated with chemotherapy (32,2% of patients with early-stage disease and 26,3% of metastatic cancer patients). The most common chemotherapy regimens were docetaxel plus cyclophosphamide, dose-dense doxorubicin plus cyclophosphamide, weekly paclitaxel, paclitaxel plus carboplatin, and docetaxel plus carboplatin along with dual HER2 blockade in early breast cancer setting, and docetaxel plus dual HER2 blockade as well as liposomal doxorubicin in metastatic disease setting. Out of all patients, there were 58% of them taking endocrine treatment (72,4% patients with early breast cancer and 27,5% with metastatic disease). Of patients taking endocrine treatment, 58,6%

take aromatase inhibitors (anastrozole in 94,1% of cases). Overall six patients were in treatment with CDK 4/6 inhibitors combined with endocrine therapy, four patients with metastatic disease, and one patient in adjuvant treatment. Luminal HER2-negative breast cancer represented 70% of patients, and triple-negative breast cancer and HER2-positive breast cancer represented 14% and 12%, respectively. In a total of 4% of patients, breast cancer subtype data was not available. Out of all patients examined in EMD, 32% of them were admitted to hospital, and 12,5% of them died in hospital.

**Conclusions:** Continuous education of other medical specialties should be performed to raise consciousness about new therapeutic strategies in breast cancer treatment. Accurate recognition of cancer-related symptoms and treatment side effects, as well as adequate supportive and palliative treatment, could improve cancer patients' quality of life and reduce ED visits.

**Keywords:** breast cancer; emergency department; cancer related symptoms

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## P2 – LUNG CANCER PATIENT IN EMERGENCY DEPARTMENT – EXPERIENCE FROM UNIVERSITY HOSPITAL CENTER SESTRE MILOSRDNICE, ZAGREB

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**Introduction:** Lung cancer is the second most common cancer in men and third in women. It is the leading cause of death in both men and women. Cancer patients often seek help in emergency departments due to the symptoms of cancer or the side effects of various cancer-related treatments. Approximately 4% of overall visits to the emergency department were cancer patients and one third of those were lung cancer patients.

**Aim:** The aim was to investigate the characteristics of lung cancer patients examined in our Emergency department from 01st of December 2023 to 01st of February 2024.

**Methods:** Retrospectively, medical records of all Emergency department visits from 1st of the December 2023 to 1st of the February 2024 were investigated and a descriptive data analysis was performed.

Patients' demographics, stage of the disease, therapy modality, main symptoms, reasons for admission, outcomes of visits and number of hospitalized patients were investigated.

**Results:** There were overall 4630 visits to the Emergency department in the reviewed period and 250 of those were cancer patients, i.e. 5,3%. Of all cancer patients 16,4% were lung cancer patients. Lung cancer patients were the second most common cancer population in our Emergency department, right after the breast cancer patients. Of all lung cancer patients 51% were male (21 patient) and 49% (20 patients) female. Median age was 70 years (range 47 to 88 years).

Out of all visits, 78,1% were patients with metastatic disease, followed by locally advanced disease patients at 14,6% and 7,3% patients with early stage disease. There were 80,5% patients in active treatment, 7,3% were treated with palliative therapy and for 12,2% patients active treatment had not yet been started at the time of data analysis. Of those who were given active treatment, 39,4% (13 patients) received chemotherapy, 27,2% (9 patients) immunotherapy, 21,2% (7 patients) chemoimmunotherapy and 12,2% other specific therapy.

The most common symptoms of lung cancer patients examined in the Emergency department were: dyspnea (41,5% of cases, 17 patients), fever (22%, 9 patients) and bleeding (12,2%, 5 patients). Other reasons were abdominal pain (7,3%), chest pain (4,9%) and pain in the extremities (4,9%); 2,4% patients came to the Emergency department due to an endocrinological disorder, nausea and weakness.

Diagnostic workup revealed that 29,4% patients admitted due to dyspnea were experiencing lung cancer progression, 23,5% had pulmonary embolism, 17,6% pneumonia and 11,8% COPD exacerbation. Other causes of dyspnea were pleural effusion progression, COVID19 and thoracic drainage dysfunction.

Hospitalization rate was 41,4%, and 17,6% of hospitalised patients died.

**Conclusions:** Prolonged survival of cancer patients and advancement of newer therapeutic options increases the need for cancer patient visits to the Emergency department. Education of medical personnel may improve initial care and outcomes of cancer patients in the Emergency department.

**Keywords:** lung cancer, cancer patients in the emergency department

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### **P3 – TREATMENT OF METASTATIC MELANOMA: TWO-YEAR EXPERIENCE AT THE CLINIC FOR TUMORS, UHC SESTRE MILOSRDNICE**

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**Introduction:** Metastatic melanoma is characterized by a significant increase in incidence worldwide. Treatment options were limited, but therapy has advanced significantly in recent years. Significant progress has been achieved with the use of PD-1 checkpoint inhibitors, new immunotherapies, and BRAF/MEK-targeted therapies, which is evident in the significant increase in overall survival (OS) in recent years. Early data from clinical trials of targeted and combination immunotherapy show 5-year survival rates in the range of 34-52% for this group of patients.

**Methods:** Data of patients (n=41) with stage IV melanoma in the first line of treatment who were treated at the Tumor Clinic, UHC Sister of Mercy in 2022 and 2023 were collected retrospectively. Data was gathered about the therapy that was administered, the BRAF mutation, the location of metastases and patient's performance status.

**Results:** Of the 41 patients with stage IV melanoma who were treated at the Tumor Clinic over a period of two years, about 25% were treated with dabrafenib+trametinib (n=11), approximately the same percentage of patients were treated with nivolumab (n=10), while almost 45% of patients treated with pembrolizumab (n=18). Two patients were treated in the first line with a combination of vemurafenib and cobimetinib. The majority of patients (85%) had an ECOG performance status of 0-1. BRAF mutation was tested in all patients with advanced disease, and was verified in approximately 60% of patients (n=24). In 6 patients, second-line treatment was started due to disease progression. The most common sites of metastases were the lungs and liver, and 11 patients had central dissemination of the disease.

**Conclusions:** First-line treatment for stage IV melanoma has evolved significantly in recent years with clear improvements in treatment outcomes and survival rates. Currently approved first-line treatment options include PD-1 inhibitors and combination of BRAF/MEK inhibitors. The choice of first-line systemic therapy in patients with metastatic melanoma has become a complicated decision for oncologists and patients. The toxicity of therapy and maximizing the chance of long-term survival are the most crucial factors.

Future research into biomarkers for treatment selection and tools such as ctDNA to monitor therapy efficacy will aid in treatment selection/treatment decision making.

**Keywords:** melanoma, BRAF mutation, immunotherapy, targeted therapy

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## **P4 – TRIFLURIDINE/TIPIRACIL TREATMENT IN THIRD LINE FOR METASTATIC COLORECTAL CANCER – CLINICAL PRACTICE EXPERIENCE**

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**Introduction:** Trifluridine/tipiracil is approved as the third-line treatment for metastatic colorectal cancer (mCRC). RECURSE study results proved significant benefit in overall survival (OS) when compared to placebo. SUNLIGHT study proved benefit of bevacizumab addition in OS of 3 months compared to trifluridine/tipiracil monotherapy and more than double progression-free survival (PFS) benefit. In 2021 in Croatia the drug was approved for use as a third-line treatment in mCRC and metastatic gastric cancer.

**Methods:** 29 patients who started trifluridine/tipiracil treatment in mCRC were analysed. Bevacizumab was added to the therapy regimen in 12 patients. The most common reason for treatment discontinuation was disease progression, with worsening of clinical state that did not allow systemic treatment the second most common reason. Number of cycles median without disease progression was 3, or 12 weeks. Overall treatment duration in patients who received bevacizumab was 3.5 months, while those who didn't receive bevacizumab had overall treatment duration of 4.1 months. In patients who were treated longer than median number of cycles, prior first and second-line treatment lasted 23.2 months overall, while in those below median number of cycles prior treatment lasted 27 months.

**Results:** 29 patients who started trifluridine/tipiracil treatment in mCRC were analysed. Bevacizumab was added to the therapy regimen in 12 patients. The most common reason for treatment discontinuation was disease progression, with worsening of clinical state that did not allow systemic treatment the second most common reason. Number of cycles median without disease progression was 3, or 12 weeks. Overall treatment duration in patients who received bevacizumab was 3.5 months, while those who didn't receive bevacizumab had overall treatment duration of 4.1 months. In patients who were treated longer than median number of cycles, prior first and second-line treatment lasted 23.2 months overall, while in those below median number of cycles prior treatment lasted 27 months.

**Conclusions:** In patients treated with trifluridine/tipiracil longer prior first and second-line treatment was associated with worse outcomes in third-line treatment, according to our data. Bevacizumab addition was not associated with longer treatment duration. Despite its relatively short treatment duration, trifluridine/tipiracil proved as useful treatment option in patients who progressed quickly on treatment based on fluoropyrimidines, irinotecan and oxaliplatin.

**Keywords:** mCRC; trifluridine/tipiracil treatment; bevacizumab

## P5 – ADJUVANT THERAPY OF BREAST CANCER WITH ABEMACICLIB: SINGLE INSTITUTION EXPERIENCE

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**Introduction:** In recent years, the introduction of CDK4/6 inhibitors has revolutionized the treatment landscape for hormone receptor-positive, HER2-negative breast cancer. Abemaciclib, a potent and selective inhibitor of CDK4 and CDK6, has shown promising efficacy in advanced and adjuvant settings. The MonarchE trial, a landmark study in this field, investigated the use of abemaciclib as adjuvant therapy in high-risk early breast cancer patients.

**Aim:** This thesis focuses on assessing the real-world utilization of abemaciclib as adjuvant therapy, drawing parallels with findings from the MonarchE trial.

**Method:** The study analyzes electronic medical records of patients who received abemaciclib as part of their adjuvant treatment regimen, evaluating dose reduction and treatment discontinuations.

**Results:** We analyzed data for 69 female patients in period 11/2023 – 3/2024 who were eligible for adjuvant treatment with abemaciclib in combination with endocrine therapy. Two of them did not start treatment yet due to the beginning of radiotherapy, and two patients because of other reasons. For further assessment were eligible 65 of them, in active treatment is 55. Median number of abemaciclib cycles is four. Dose reductions occurred in 31% of patients, and in 10 of them abemaciclib was discontinued due to adverse events.

**Conclusion:** By synthesizing real-world evidence with insights from the MonarchE trial, this study provides valuable perspectives on the practical implementation of abemaciclib in adjuvant therapy for hormone receptor-positive, HER2-negative breast cancer. These findings contribute to the ongoing refinement of treatment strategies and enhance our understanding of the broader implications of CDK4/6 inhibition in early breast cancer management.

**Keywords:** breast cancer, adjuvant treatment, abemaciclib, dose reduction, interruption of treatment

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## P6 – INTRAOPERATIVE ANAPHYLAXIS TO PATENT BLUE V DYE DURING BREAST CANCER SURGERY

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**Introduction:** The Patent Blue V (PBV) dye is widely used in the identification of sentinel lymph nodes in breast cancer surgery, and may induce anaphylactic reactions. Very often these are mild reactions in the form of blue-colored urticaria, erythema or angio-oedema and transient hypotension, tachycardia or bronchospasm (grade 1 i 2), but sometimes can cause severe life-threatening anaphylactic reaction (grade 3) or cardiac arrest (grade 4). There are no cases of death described due to an anaphylaxis to the PBV. Most patients have no past medical history of allergy. These reactions occur few minutes to several hours after injection of the PBV dye, and onset is faster for more serious reactions. Immediate anaphylaxis is uncommon.

**Results:** In the retrospective analysis from January 2020 to December 2023 at the University Hospital for Tumors, including all patients who had an intraoperative anaphylaxis to PBV dye injection, 11 patients had an anaphylactic reaction to PBV used in the identification of sentinel lymph nodes during breast cancer surgery. All patients were female, and 64 % of patients had no past medical history of allergy. Most of the patients were young women, 73% of patients were under 55 years old, 9% of patients were 55–70 years and 18% of patients were over 70 years old. Most of the patients, about 82%, had a mild allergic reaction (grade 1 i 2). One patient had an anaphylactic shock, about 10 minutes after PBV injection. One patient had cardiac arrest with cardiopulmonal reanimation and prolonged refractory hypotension without signs of skin rash, immediately after PBV injection. Both of this patients had medical history of allergies to medications. In all patients there was a lack of previous exposure to PBV dye injection. None of the patients received preventive anti-allergic medication before the PBV dye injection.

**Conclusions:** Awareness of potential life-threatening allergic reactions to PBV should be raised to lymphatic surgeons. The higher incidence in young women is probably due to enormous exposure to PBV today, as it is commonly used as food additive (E131), in textiles and cosmetics industries. Anti-allergic medications as premedication, continues to be routinely recommended by many providers before PBV dye injection.

**Keywords:** Patent Blue V, anaphylaxis, breast cancer