OBJECTIVES: Population-based estimates are required for health technology assessments. SLRs with MAs based on published literature can be used to support descriptive epidemiology calculations. We describe challenges encountered while using SLR to estimate the NTRK gene fusion frequency among solid tumor patients. Methods: Using predefined guidelines and predefined criteria, EMBASE, MEDLINE, and Cochrane databases were searched to identify non-interventional studies from database inception to 01/02/2020 reporting NTRK gene fusion status within patients with solid tumors. Relevant congresses were searched (2016-2019). Additional inclusion/exclusion criteria for MA were established upon review of SLR publications to ensure evidence quality. MA of selected studies by tumor histology was conducted, and frequency was reported as a point estimate with confidence intervals using random or fixed effect models. Results: 222 full-text articles and conference abstracts met SLR inclusion criteria. For different studies originating from the same databases, only the most recent study with the largest dataset was selected. The following studies were excluded from MA: reports of samples rather than patients; studies with <20 patients (except rare histology); publication before 2010; unspecified NTRK testing methodology. These criteria yielded 107 publications across 98 histologies, excluding 51.8% of studies. Challenges in study evaluation include: diverse and limited details on methodology. These criteria yielded 107 publications across 98 histologies, excluding 51.8% of studies. Challenges in study evaluation include: diverse and limited details on methodology.

Conclusions: For accurate, quality, and epidemiology estimates in rare cancers, rigorous review of study characteristics and methods, application of additional inclusion/exclusion criteria, and selection of appropriate MA methods are required.

RESULTS: As the MM treatment paradigm evolves with the availability of new disease diagnosis that may reduce patients' survival. Methodology: An electronic survey (50 questions) was developed. Portuguese physicians were invited to participate in the online (Feb-Apr 2020). Descriptive statistical analyses were performed, with categorical variables reported as absolute and relative frequencies, and continuous variables with non-normal distribution as median and interquartile range (IQR). Chi-square test was used to compare categorical variables (SPSSv24) (p-value<0.05 significant). Results: Response rate was 63.74% (58/91; 43 pulmonologists and 15 oncologists). Most experts work in public healthcare services (63.9%), especially in large cities. Only 63.2% of Portuguese. Oncologists and pulmonologists performed a median of 102 (IQR 85-165) and 80 (IQR 55-125) diagnosis of lung cancer in the past six months, respectively. The median time since GP or emergency referral until specialty consultation was 2 weeks (IQR 1-4). Factors preventing faster referral to the pulmonary specialties included poor articulation between health services (58.6%) and patients low economic/cultural level (44.8%). The median times from hospital admission until histopathological diagnosis and staging were 3 (IQR 2-4) and 5 weeks (IQR 4-6), respectively. Lack of technical and human resources were limiting factors for diagnosis. Authority from INMAD (National Drugs Authorization) was reported as the main reason (75.9%) for therapy initiation delay. The most time-consuming step for biomarkers analysis was histology/molecular evaluation (63.8%). Most physicians (n=52/58; 89.7%) initiated therapy before biomarkers results motivated by performance status deterioration (65.6%) or high tumor burden (53.8%). However, experts usually wait for the results to start treatment. Half of physicians believe that delays in diagnosis impact on therapeutic decisions. No significant differences among oncologists and pulmonologists perceptions were found (p>0.05). Conclusions: Physicians believe that is possible to reduce delays in all stages of lung cancer diagnosis with further efforts from multidisciplinary teams and hospital administration.

OBJECTIVES: To evaluate the population-based prognosis, survival, and risk factors associated with cancers that occur as first and second primary cancer (SPC) on Burkitt lymphoma/leukemia (BL/L). Methodology: A retrospective cohort study using the Surveillance, Epidemiology, and End Results (SEER) Program (2008-2016) was performed. Descriptive statistical, Kaplan-Meier, time-dependent covariates Cox regression, and Poisson regression models analyses were conducted. Overall survival (OS) and disease-free survival (DFS) were primary and secondary outcomes, respectively, reported with 95% confidence interval (CI) (p < 0.05 was statistically significant). Results: A total of 3,094 patients with BL/L were included (median, 45 years; IQR, 22-62). Estimated OS and DFS were 65.4 months (95% CI, 63.6-67.3) and 75.2% (95% CI, 73.9-77.2), respectively. Overall, 77.7% of patients were identified for older patients, black race, disease at advanced stage, patients with no chemotherapy/surgery, and patients who underwent radiotherapy. Interrelated cancer risk demonstrated primary cancers as Hodgkin lymphoma (nodal) [RR 7.6 (3.9-15.9; p < 0.001)], Kaposi sarcoma [3.4 (1.6-8.9; p < 0.001)], liver tumor (3.4 (1.2-9.3; p = 0.020)], trachea, mediastinum and other respiratory cancers [15.8 (2.2-113.9; p = 0.006)] behaving as risk factors for BL/L. On the other hand, BL/L behaved as a risk factor for the occurrence of SPCs as acute myeloid leukemia [4.6 (2.1-10.4; p < 0.001)], Hodgkin lymphoma [extra-nodal] [743 (90.5-948.9; p < 0.001)], and Kaposi sarcoma [35.1 (12.1-101.4; p < 0.001)]. However, BL/L acted as protective factor for breast cancer [0.1 (0.0-0.8; p = 0.032)]. Conclusions: Despite BL/L has a low incidence in the USA, the SEER Program enabled the identification of several, which allowed the conduction of survival and risk factors analyses. The results may assist the development of diagnostic and clinical recommendations for BL/L and guide the conduction of further studies on risk factors for hematological malignancies.

RESULTS: Among the 14,791/15,904, considering the whole clinical and demographic picture. Conclusion: Physicians believe that is possible to reduce delays in all stages of lung cancer diagnosis with further efforts from multidisciplinary teams and hospital administration.