longer than TTR for non-oncological NAS. TTR progressively decreased for oncological NAS between 2014 (632 days) and 2017 (371), with a slight change in trend for drugs reimbursed in 2017. Among oncological orphan drugs (ODs), only 3 didn’t achieve reimbursement and, out of that, 2 are undergoing a negotiation. Median TTR for ODs was 2 months shorter than TTR for non-ODs (471 vs 528 days). 20/43 reimbursed drugs were assessed by SFM as “innovative”, showing a median TTR (372 days) significantly shorter than “non-innovative drugs” (508 days). All oncological NAS were reimbursed with specific negotiating conditions: the majority (84%) with a hidden discount, 17/43 (40%) with a Managed Entry Agreement (MEA), one with a cap. TTR was similar for drugs reimbursed with and without a MEA (302 vs. 494 days). Approvals: Even if with a longer TTR than non-oncological ODs, the majority of oncological NAS – and almost all oncological ODs – obtain the reimbursement in Italy. The innovation status is the main driver of TTR reduction.

PCN209
THE ACQUISITION COST AND EFFICIENCY OF CAR T CELL THERAPIES: CAN THEY BE IMPROVED BY DECENTRALIZED MANUFACTURING?
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Objectives: Chimeric Antigen Receptor (CAR) T cell therapies represent a novelepromising approach in oncological immunotherapy. So far, these drugs have been licensed for the treatment of rare late stage blood cancers. The pricing of commercially available products at approximately 300,000 euros per patient treated (in Germany, 2020) has raised concerns about affordability and sustainability. Further, the centralized production of high-volume long-distance transport in Europe has increased the cost of decentralized T cell production in the non-profit setting of an academic cancer research center (DKFZ) in Germany. Methods: We identified work steps and main activities in the local production process, and determined the associated fixed costs and variable costs (in 2018 Euros). We used scenario analyses to estimate (1) the impact of production upscaling and (2) the impact of likely technological improvements. Results: Main cost components were personnel and technician salaries, expenditure on equipment, a clean room facility, and production materials. For the clean room facility with one automated cell manufacturing platform, annual fixed costs were €438,098. The variable cost per production was estimated at €34,798. At maximum capacity of one machine, total cost per product was close to €60,000. (1) If three machines were installed in one clean room facility, per production total cost could be as low as €45,000. (2) If plasmaid-based vectors were used as a substitute for currently applied lentiviral vectors, per production total cost could be further reduced to €33,000. Conclusions: Abstracting from potential issues related to intellectual property rights, decentralized T cell production might be a more efficient alternative to the commercially available centralized production mode. We anticipate production costs to further decrease in the future with increased standardization of processes, economies of scale and scope, and learning curve effects. This expectation is commensurate with the early life cycle stage of this new technology.

PCN210
ESTIMATING THE IMPACT OF DELAYED ACCESS TO ONCOLOGY DRUGS ON PATIENT OUTCOMES IN CANADA
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Introduction: The Canadian reimbursement process for therapies is lengthy and each step can cause delay. With the introduction of new requirements in PMPRB there may be additional delays and so it is important to understand how reimbursement review times ultimately impact patient outcomes. Objectives: To compare the number, duration, and outcome of reimbursement reviews for lung cancer drugs in Canada versus other comparable countries; and to estimate the effect on patients, of delays in access to the lung cancer therapies nivolumab, atezolizumab and pembrolizumab (NAP). Methods: Submissions for lung cancer drugs to CADTH/pCODR, NICE, HAS, and SMC were reviewed, and the number, duration and outcome of reviews were recorded and assessed for time trends. To define delays, the duration of reviews for NAP by CADTH/pCODR and Canadian provinces were assessed using internal benchmarks. The Southern Alberta Lung Cancer database was used to estimate the number of lung cancer patients that could be affected by delayed access to NAP. Data from phase III clinical trials and the literature were used to estimate the economic impact, for up to 5 years of life lost (PYLL) and quality-adjusted life years (QALYs) attributable to a one-day delay in access to NAP. Results: 101 applications for new lung cancer drugs were made to CADTH/pCODR, NICE, SMC, and HAS between 2012 and 2019. Median rejection rates/days of review were 265/213, 63/325, 178/502, and 178/502 at CADTH/pCODR, NICE, SMC, and HAS, respectively. The median time in days in reviews ranged from 17-182 days and 0-797 days at CADTH/pCODR, and Canadian provinces respectively. Delay in access to NAP by one day could affect 6530 Canadian patients and may lead to 1681 PYLL and 1082 QALYs lost (valued at $108.2million CAD). Conclusions: Avoidable delays exist in the Canadian reimbursement process, and these could have significant impacts on the lives of lung cancer patients.

PCN211
DIRECT COSTS RELATED TO MEDICAL MANAGEMENT OF MALIGNANT CUTANEOUS MELANOMA THROUGH THE PATIENT PATHWAY
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Objectives: To synthesize published evidence on the direct costs of cutaneous melanoma in Europe and to explore the costs during the disease course by cost type and phase of treatment. Methods: A full literature review on studies reporting original estimates of direct medical and non-medical costs of melanoma in Europe was conducted. Four databases were searched systematically: the Cochrane Database of Systematic Reviews, MEDLINE (via PubMed), Web of Science, and the CRD databases. Additional searches were conducted in EconPapers and Google Scholar. Articles published until April 24th 2020 were included. References of systematic reviews and data sources of economic evaluations were screened to identify additional articles. Results: One hundred eight studies were reviewed in full text, 38 were eligible for data extraction. The most significant components of direct medical cost were inpatient and outpatient care with an annual cost of hospitalization per patient between €607 in Sweden and €8,244 in Denmark (2018 Euros). Advanced stages showed substantially higher costs. The total cost of an inpatient episode was €1,722 in the general melanoma population in France and €82,428 in unresectable stage IIIb IV in Italy. Total per patient costs associated with diagnostics and imaging, surgical therapy, or radiotherapy were all below 2,000 Euros. Total per patient cost of active systemic therapy for advanced stages range between €14,482 in France and €75,552 in the Netherlands. Total cost of follow-up in Germany was €1,604 and €11,993 per patient in early and advanced stages, respectively. The highest annual out-of-pocket payment was €1,086 in the UK. Conclusions: Melanoma impose a significant economic burden on the healthcare systems in Europe. Melanoma related costs vary substantially by phase of management, treatment, and stage at diagnosis. Results of this review are suitable to support modeling the potential savings in melanoma related costs by primary prevention and early diagnosis.

PCN212
ONCOLOGY DISEASES PRIORITISATION LIST FOR INFORMING NATIONAL CANCER CONTROL PLAN IN UKRAINE
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Objectives: The UN’s Sustainable Development Goals for 2030 call for reducing premature mortality from non-communicable diseases by a third through prevention and treatment. Accelerated reductions in cancer mortality are essential to meeting that goal while cancer is a major cause of death in low-income and particularly in low- and middle-income countries. According to the WHO, establishment of National Cancer Control Plans (NCCP) offers the most rational means of achieving substantial degree of cancer control, even where resources are severely limited, by identifying and implementing priorities for action and research. The study aim was to analyze the oncology diseases based on disability adjusted life years (DALYs) criteria - for informing the decision of resource allocation in Ukraine. Methods: The WHO priority setting recommendations include use of DALY criteria. The Global Health Data Exchange IHME information (2017) was used for analysis of the structure of cancer burden in Ukraine and presenting positions in the ranked row by defined indicators. The information was generated for all ages with further categorization into five constituent age groups (under 5, 5-14, 15-49, 50-69 and over 70 years). Results: Taking into account all age groups, amongst 30 cancer pathologies in Ukraine, ‘tracheal, bronchus, and lung cancer’ was on the first place, followed by ‘colon and rectum cancer’ and then ‘stomach cancer’. How-ever each of five age groups has different top priority diseases by burden. The DALY ranked row of oncology diseases is perspective to be used as a priority setting tool for disease management and for the development of National Cancer Control Strategy until 2030 in Ukraine. Conclusions: The DALY metric can be used as a measure of disease burden, alongside the other epidemiological metrics. Nationwide epidemiological data of a better quality is required to estimate the morbidity and mortality burden of cancer disease in Ukraine.

PCN213
HEALTH IMPACT OF OPTIMIZING THE TIME TO PATIENT ACCESS
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**PCN215**

**VIRTUAL MODIFIED DELPHI RESEARCH INTO CURRENT AND FUTURE USE OF TREATMENT APPROACHES OF MULTIPLE MYELOMA IN SWEDEN**

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**Objectives:** The objective of this study was to gain insights into the objectives of treatment, patient preferences and patient type. The study covered all the ongoing treatment strategies in multiple myeloma in Sweden and test the need for panobinostat (Farydak®) as a treatment option. **Methods:** The modified Delphi panel was divided into three distinct iterative phases, consisting of individual discussion, group discussion and a clinician consensus and feedback session. All meetings were conducted virtually. Using questionnaires for each phase, the Delphi was thoughtfully prepared to reduce the range of responses, to ultimately achieve consensus. Three Swedish key opinion leaders participated. The questionnaires covered the patient journey and profile, treatment regimens and unmet need in multiple myeloma. Responses from the first phase were then distributed to the physicians, to be discussed in phase 2. The second phase of the process explored place in therapy of the novel drug, Panobinostat (Farydak®). **Results:** There are approximately 3,500 myeloma patients in Sweden currently, a number which is increasing due to increased survival. Most patients fall under the ‘relapsed’ category. Age is the most important factor when deciding a treatment. The limitation of most treatments is cost. First line treatment is based on guidelines, whilst patient responses guide choice of later therapy. Oral treatments are the most convenient. While uncommon, home care treatments do happen in some areas. Current treatments are continuous: discontinuation only occurs when the side effects become intolerable. Some patients (approximately 20%), are not administered bortezomib past the first line of treatment due to neuropathy. Clinicians noted that panobinostat (Farydak®), with new clinical data would appear to have a place in treatment for patients in Sweden. **Conclusions:** Panobinostat (Farydak®) could be beneficial for the future management of multiple myeloma. There is a place in therapy for a drug which provides a prolonged patient response, if proven cost-effective.

**PCN216**

**AN INNOVATIVE ORGANIZATION MODEL TO FACE RISKS REDUCTION CHALLENGES IN AN ITALIAN CANCER CENTER DURING THE COVID-19 PANDEMIC: A RISK REDUCTION ESTIMATION STUDY**


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**Objectives:** Prolonged time between marketing authorization and reimbursement leads to missed health gains, raising the question: what could be gained by ensuring earlier reimbursement? **Methods:** A health impact model was developed for two selected oncological drugs to calculate the impact of earlier reimbursement on the number of patients that could have been treated and accompanying health gains. Health impact outcome measures were obtained from national assessment dossiers and could differ per drug and country. Time to reimbursement was optimized in three hypothetical scenarios: 1) timing of reimbursement coinciding with EC marketing authorization (as is the case in Germany; ambitious scenario), 2) as fast as the fastest country (best practice), and 3) assessments within 180 days after the EC marketing authorization (as is the case in Germany; ambitious scenario), 2) as fast as the fastest country (best practice), and 3) assessments within 180 days after the EC marketing authorization (as is the case in Germany; ambitious scenario). The number of new patients per month (uptake data) were retrieved from the respective companies marketing these drugs. Only countries with recorded uptake data for at least 1 year after reimbursement were used in the analysis. **Results:** In the ambitious scenario, 1,689,218 patients could have been treated in England, Netherlands, and Sweden, accounting for 82,920 life years in those countries. **Conclusions:** Reimbursement optimization models can be used to calculate the impact of earlier reimbursement on the number of patients that could have been treated and accompanying health gains. Health impact outcome measures were obtained from national assessment dossiers and could differ per drug and country. Time to reimbursement was optimized in three hypothetical scenarios: 1) timing of reimbursement coinciding with EC marketing authorization (as is the case in Germany; ambitious scenario), 2) as fast as the fastest country (best practice), and 3) assessments within 180 days after the EC marketing authorization (as is the case in Germany; ambitious scenario). The number of new patients per month (uptake data) were retrieved from the respective companies marketing these drugs. Only countries with recorded uptake data for at least 1 year after reimbursement were used in the analysis. In the ambitious scenario, 1,689,218 patients could have been treated in England, Netherlands, and Sweden, accounting for 82,920 life years in those countries.