

My day with Oncology Pharmacy - Iceland

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General information on Iceland and the Icelandic healthcare system

The Population of Iceland is around 370.000, of which 85% live within a 2 hour drive from Reykjavik. Landspítali, the National University Hospital is Iceland's largest hospital with 600 beds and is located in Reykjavik. In Iceland, universal health care is legally mandated. Hospitals and primary health care are government funded and administered by the Ministry of Health. Services are provided at minimal charge for users as the costs are largely covered by federal tax income (84%), service fees count for the rest (16%)^[1]. A considerable portion of total government spending is assigned to healthcare ^[1]. All cancer therapy is centralized and supervised by oncologists at Landspítali but there are 6 different outpatient treatment clinics available, located at hospitals in Reykjavik, Akureyri, Akranes, Selfoss, Vestmannaeyjar and Keflavik. Cancer patients that require hospitalization are typically admitted at Landspítali or SAK in Akureyri. Annual cancer diagnosis in Iceland are around 1700 ^[2].

1. Introduction

In a form of an ESOP survey in March and April 2022, professionals were asked about their working situation in preparation of ready-to-use cytotoxic drugs. Questions covered all relevant daily working processes as activities in prescription and validation of cytotoxic drugs and furthermore their clinical pharmaceutical support in patient care was addressed. This poster presents Iceland's evaluation.

2. Material and method

The ESOP survey was translated and localized into Icelandic and presented nationally using a web-based application. All pharmacist working with anti-cancer drugs were asked to answer. Of the 28 answers received, 50% work in hospitals, 46% (13 individuals) in community pharmacies and one answer, 4%, came from a wholesaler. Icelandic ESOP members are 11 and all of them work in hospitals so the 13 answers from community pharmacies give a new insight into the oncological pharmaceutical services provided there.

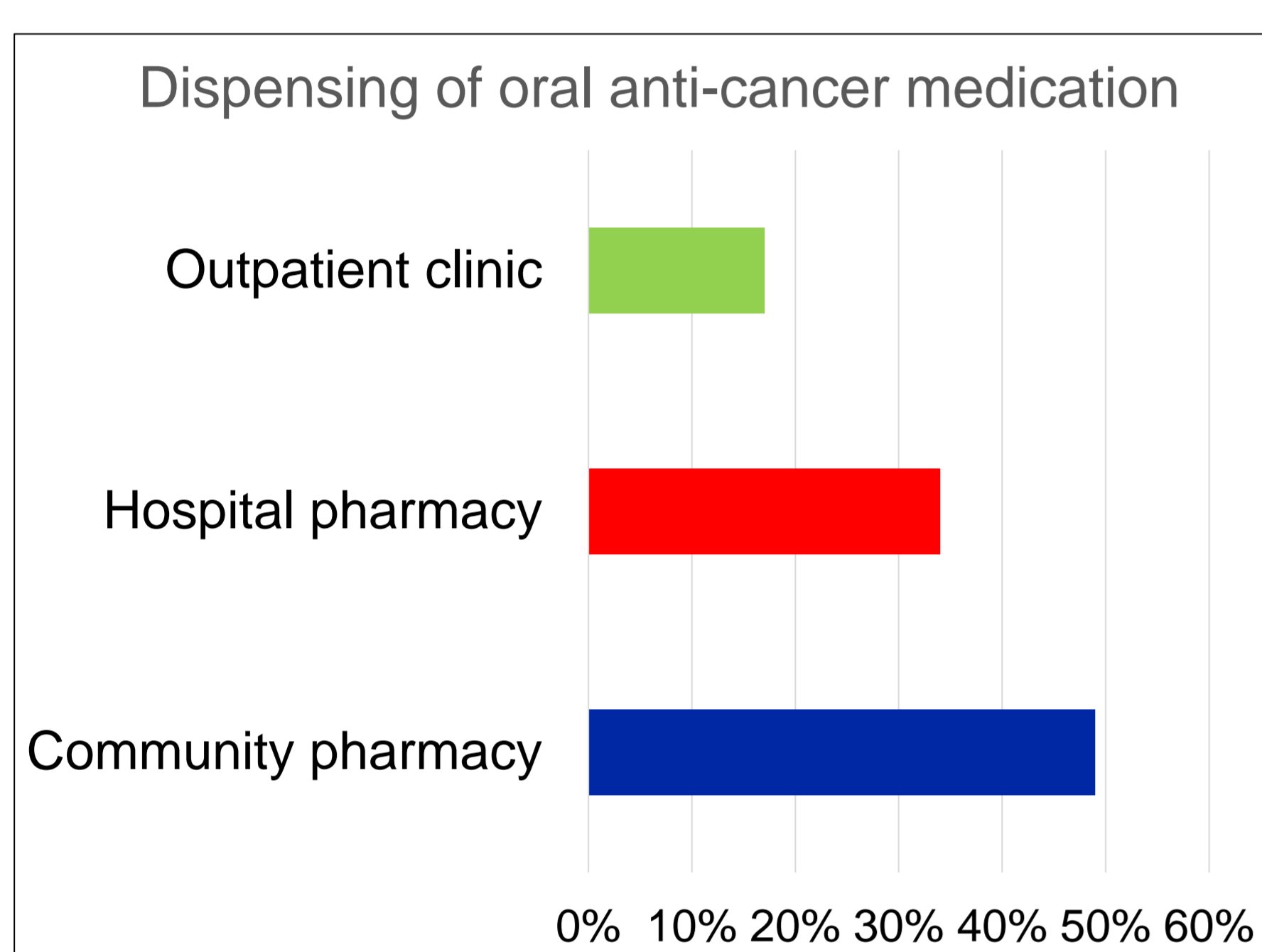


Fig.1: The survey points out that about 50% of all oral anti-cancer medication in Iceland is dispensed in community pharmacies..

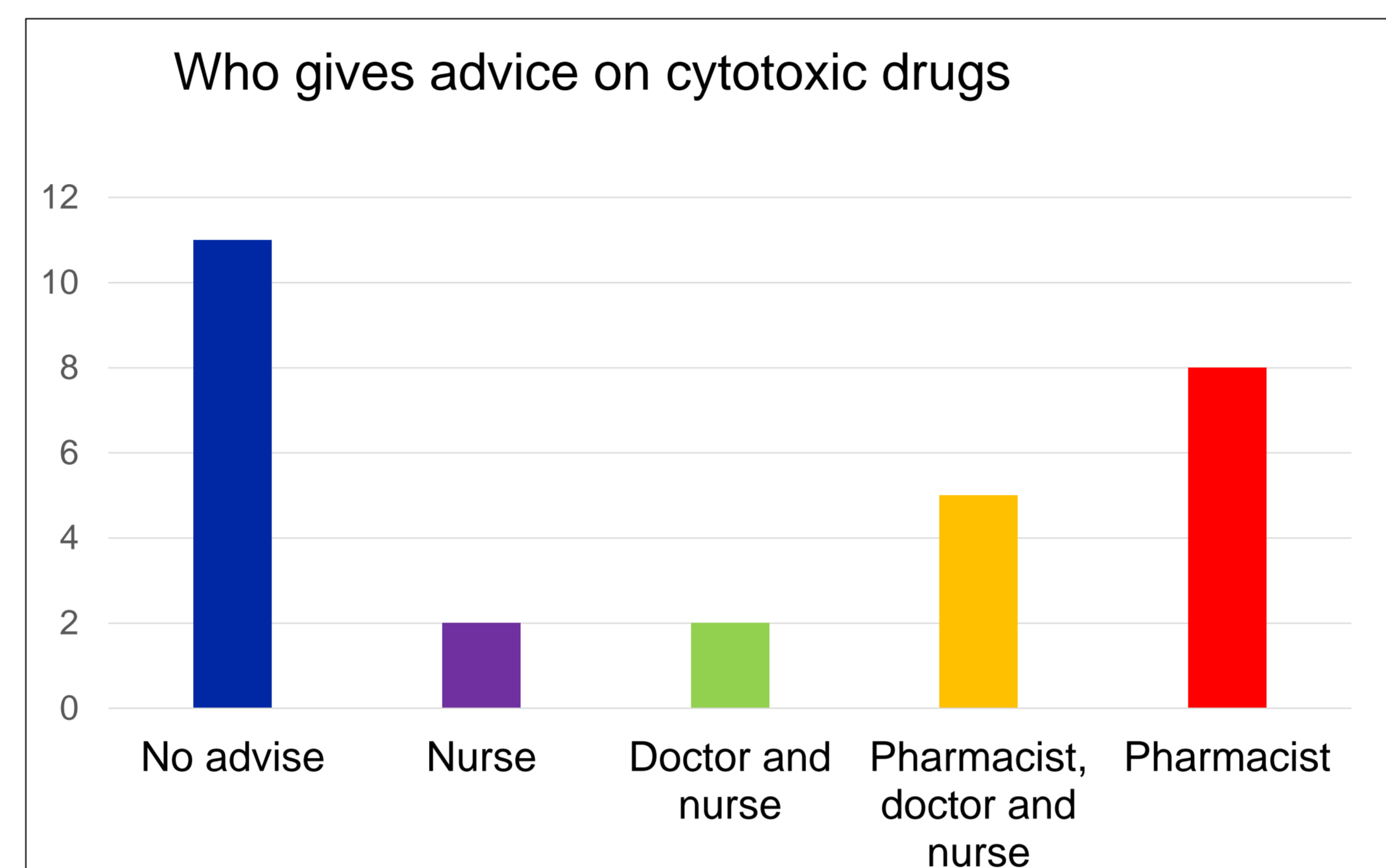


Fig.2: According to the survey only 61% of pharmacists give advice to patients on cancer medications.

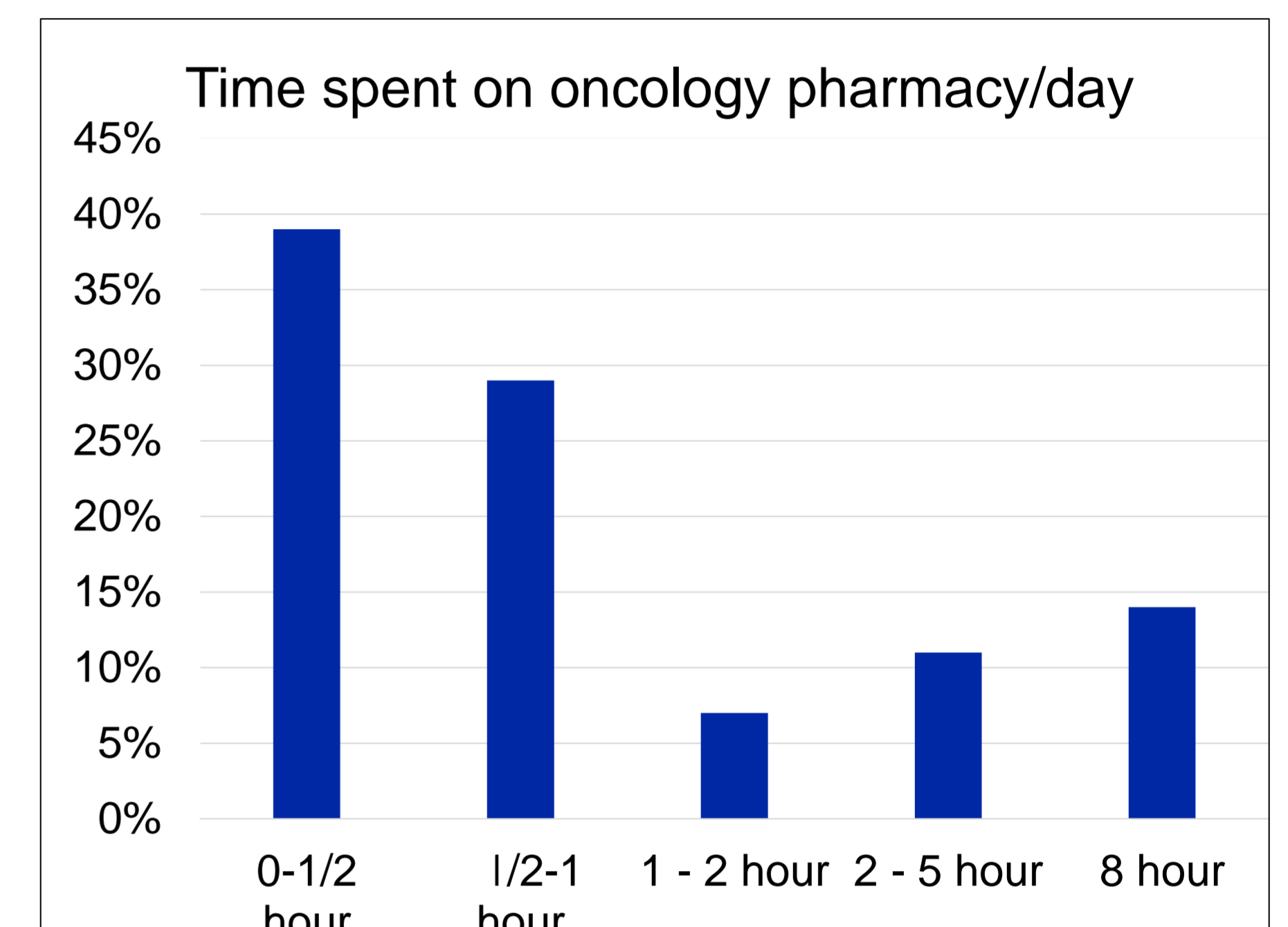


Fig.3: Vast majority of the participants spent less than 2 hours per day on oncology pharmacy. Only 6 answers came from pharmacists working 2 hours or more with oncology pharmacy.

3. Results and discussion

420 pharmacist work in Iceland, one third is employed by the pharmaceutical industry and one third, in community pharmacies. The remaining third is mainly in the public sector divided between administration, university, hospitals and primary health care. 54 pharmacist are working in Icelandic hospitals ^[3]. 24 work as clinical pharmacists but only 2 in oncology pharmacy. 8 pharmacist work in compounding at hospitals in Iceland and 6 of them are partly or fully occupied with oncology pharmacy. The number of compounded preparations at Landspítali was 22.000 and at Akureyri 2.000. The annual increase in the last 10 years is around 6%.

The proportion of pharmacist giving advice is high in the survey, that conforms to high portion of answers from community pharmacies, where pharmacist are the only healthcare professional suited to the task. On the other hand are hospitals and outpatient clinics where nurses, doctors and as well as clinical pharmacists are in close contact with the patient and therefore are all a part of a team providing information on cancer drugs.

50% of oral anti-cancer medication is dispensed in community pharmacies. 14 of 159 (9%) of the pharmacist working in community pharmacies answered the survey, in 6 of the answers no advice was given to cancer patients about their cancer medication. All the pharmacist in community pharmacies spend less than 1 hour with oncology pharmacy daily which might impact confidence levels in providing patients with relevant information. Thus, making the scarcity of the service further decrease the number of patients advised due to inexperience of personnel. There were no questions regarding dispensing and advising on co-medications, e.g., analgesics, antiemetics and laxatives. Those type of drugs are commonly dispensed in community pharmacies and one can speculate that advice is more readily given on those occasions compared to anti-cancer medications as the knowledge and experience are more prevalent.



Fig.4
50 % of oral and subcutaneous cancer medications are dispensed in community pharmacies and a vast majority of the co-medication.



Fig.5:
At Landspítali clinical oncology pharmacists are a part of the multidisciplinary team discussing the patient's medical treatment.

Conclusion

At Landspítali two pharmacist work as oncology clinical pharmacist and advice patients as well as health care professional regarding cancer therapies and supportive medication at corresponding wards. However no clinical pharmacists work this field in primary health care or community pharmacies.

The number of oral and subcutaneous anti-cancer medications are increasing every year. Those medications do not have to be administered in a hospital setting or at an outpatient clinic and are largely dispensed at community pharmacies. The survey indicates that there is room for improvement in educating and informing outpatients about their anti-cancer medications and their effects as only 6 out of 14 answers from pharmacist in community pharmacies report that any advice is given on the matter. It is therefore an opportunity and challenge for pharmacists, not least in traditional pharmacies, to provide information to cancer patients about the medicines they take in connection with their disease.

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References

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2. [Icelandic Cancer Society: Annual report 2022](#)
3. [Icelandic Pharmacist Society. Annual report 2022](#)