



# Accuracy of Neoplasm Code Diagnosis at Surgery Hospital, Padang

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**Abstract :** Medical records are important part of hospital administration. One of medical record management activities includes assembling, coding, indexing and filing. The results of examination in the form of a diagnosis will be coded. Coding is one part of the medical record installation related to the coding of diagnoses and actions. Accuracy diagnosis code in medical record is responsible for hospital medical bills. Accurate codes are essential for hospital financial data. Neoplasma code is one of the most common cases in surgical hospitals. This study aims to determine the accuracy of neoplasm code in the Padang surgical hospital. This research was conducted in August-November 2021. This study used a descriptive method with a qualitative approach. Population is all data abstraction of medical record files for neoplasms in 2020. Samples of neoplasms were 60 cases on summary form of inpatient medical records. Data collection using simple random sampling technique. Variable was the accuracy of diagnosis code for neoplasm cases based on ICD-10. Accuracy code is accuracy code based on ICD-10 by coder in medical record document. The results showed that 54% of the neoplasm codes were accurate based on ICD-10.

**IndexTerms - Coding, ICD-10, Neoplasma.**

## I. INTRODUCTION

Medical records are an important part of hospital administration (Grabner, 2013). According to PMK No. 269 of 2008 concerning medical records, medical records are files containing notes and documents about patient identity, examination, treatment, action, and other services that have been provided to patients. Based on the Law of the Republic of Indonesia No. 36 of 2014 concerning Health Workers, that health workers in carrying out their professional duties are obliged to create and maintain medical records. Management of correct, good and quality medical records can be one of the important non-operational aspects that support the maintenance of the quality of health services in hospitals. The important thing that must be considered by medical recorders in maintaining the quality of medical record documents is the completeness of medical information related to the patient's disease history.

One of the medical record management activities includes assembling, coding, indexing and filing. The results of the examination in the form of a diagnosis will be coded (Module, et al, 2012). Coding is one part of the medical record installation related to the coding of diagnoses and actions. The accuracy of the diagnosis code in the medical record is responsible for hospital medical bills. Accurate codes are very important for hospital financial data (Korb, et al, 2016). Accurate disease diagnosis coding process is carried out based on ICD-10. ICD-10 is a reference in the coding process for various diseases with chapters divided into 22 chapters, including one chapter in ICD-10 discussing diseases related to neoplasms. Neoplasm is a disease of cell growth. Neoplasms consist of new cells that have different shapes, properties, and criteria from the original normal cells. In observing complex cases, complex actions and sequences of treatment are needed so that a more specific disease code is needed in order to describe the condition of the disease in detail/completely (Dewa Gede, 2000). Neoplasm coding must be precise to produce accurate morbidity information, while in the field there are still incomplete and inaccurate coding activities for neoplasm cases (Sukardja, 2000). Based on this, this study aims to determine the accuracy of neoplasm code at the Padang City Surgery Hospital

## II. RESEARCH METHODOLOGY

This research was conducted at the Surgical Hospital, Padang City in August-November 2021. This study used a descriptive method with a qualitative approach. The population of this study is all data abstraction of medical record files for neoplasms in 2020. The number of samples is 60 medical records of neoplasm cases on the summary form of entry and exit and data collection using simple random sampling technique. The research variable was the accuracy of the neoplasm case diagnosis code based on ICD-10 from the abstraction of inpatient data. The accuracy of the diagnosis code is the accuracy of giving a diagnosis code based on ICD-10 by the coder officer on the medical record document by examining the results of the diagnosis written by the doctor and

the treating medical personnel. Code accuracy was assessed using ICD-10 volume 3 and volume 1. The total number of accurate neoplasm diagnostic codes will be presented and compared with inaccurate codes.

### III. RESULTS AND DISCUSSION

#### 3.1 Analysis of the accuracy of the diagnostic code in cases of fracture based on ICD-10

In this study, the coding accuracy was observed based on the ICD-10. The International Classification of Diseases (ICD) has become the standard diagnostic classification for epidemiological and health management purposes, and has been subjected to continuous update and revision. The current version, ICD-10, was introduced in 19934.

Table 3.1: Analysis of the accuracy of Neoplasma code based on ICD-10

| No | Diagnosis                            | Code from medical record | ICD-10 code | Accuracy review |
|----|--------------------------------------|--------------------------|-------------|-----------------|
| 1  | Adeno cancer prostat                 | C61                      | C61         | Accurate        |
| 2  | benign neoplasma of breast dextra    | D24                      | D24         | Accurate        |
| 3  | benign neoplasma of breast dextra    | D24                      | D24         | Accurate        |
| 4  | benign neoplasma of breast dextra    | D24                      | D24         | Accurate        |
| 5  | benign neoplasma of breast sinistra  | -                        | D24         | Not accurate    |
| 6  | benign neoplasma of breast sinistra  | D24                      | D24         | Accurate        |
| 7  | benign neoplasma of breath (d)       | D24                      | D24         | Accurate        |
| 8  | benign neoplasma of breath (d)       | D24                      | D24         | Accurate        |
| 9  | benign neoplasma of breath (d)       | D24                      | D24         | Accurate        |
| 10 | benign neoplasma of breath (d)       | -                        | D24         | Not accurate    |
| 11 | benign neoplasma of breath (d)       | D24                      | D24         | Accurate        |
| 12 | Cancer mammae dextra                 | C50.1                    | C50.9       | Not accurate    |
| 13 | Cancer mammae dextra std III B       | C50.1                    | C50.9       | Not accurate    |
| 14 | Cancer mammae dextra std III B       | C50.1                    | C50.9       | Not accurate    |
| 15 | Cancer mammae dextra std III B       | C50.1                    | C50.9       | Not accurate    |
| 16 | Cancer mammae sinistra std II B      | C50.2                    | C50.9       | Not accurate    |
| 17 | Cancer mammae sinistra std III B     | C50.1                    | C50.9       | Not accurate    |
| 18 | Cancer mammae sinistra std III B     | C50.1                    | C50.9       | Not accurate    |
| 19 | Cancer mammae sinistra std III B     | C50.1                    | C50.9       | Not accurate    |
| 20 | Cancer mammae sinistra std IV        | Z51.5                    | C50.9       | Not accurate    |
| 21 | Cancer mammae bilateral              | C50.9                    | C50.9       | Not accurate    |
| 22 | Cancer mammae bilateral (metastasis) | C78.0                    | C50.9       | Not accurate    |
| 23 | Cancer mammae stadium IIIB           | C50.1                    | C50.9       | Not accurate    |
| 24 | Cancer mammae stadium IIIB           | C50.1                    | C50.9       | Not accurate    |
| 25 | Cancer mammae sinistra stadium II    | C50.2                    | C50.9       | Not accurate    |
| 26 | Cancer mammae sinistra stadium II    | C50.5                    | C50.9       | Not accurate    |
| 27 | Cancer mammae sinistra stadium III B | -                        | C50.9       | Not accurate    |
| 28 | Cancer mammae sinistra stadium IIIB  | C50.1                    | C50.9       | Not accurate    |
| 29 | Cancer mammae sinistra std IIB       | C50.4                    | C50.9       | Not accurate    |
| 30 | Cancer of thyroid gland              | C73                      | C73         | Accurate        |
| 31 | Cancer of rectum                     | K62.1                    | C20         | Tidak Akurat    |
| 32 | Cancer of rectum                     | C20                      | C20         | Accurate        |
| 33 | Cancer of rectum                     | C20                      | C20         | Accurate        |
| 34 | Cancer of rectum                     | C20                      | C20         | Accurate        |
| 35 | Cancer skin of lower limb            | C44.7                    | C44.7       | Accurate        |
| 36 | carcinoma of tongue                  | C02.9                    | C02.9       | Accurate        |
| 37 | Cyst lobular auricula (D)            | D23.2                    | D23.2       | Accurate        |
| 38 | neoplasma of pedis                   | -                        | D36.7       | Not accurate    |

| No | Diagnosis  | Code from medical record | ICD-10 code | Accuracy review |
|----|--|--------------------------|-------------|-----------------|
| 39 | neoplasm of thyroid gland susp malignat                  | D34                      | D34         | Accurate        |
| 40 | neoplasma of thyroid gland                               | -                        | D34         | Not accurate    |
| 41 | neoplasma of thyroid gland                               | D34                      | D34         | Accurate        |
| 42 | neoplasma of thyroid sinistra                            | D34                      | D34         | Accurate        |
| 43 | skin tumor susp fibrolipoma at lingual sinistra          | -                        | D23.9       | Not accurate    |
| 44 | Soft tissue tumor femur dextra                           | D21.2                    | D21.2       | Accurate        |
| 45 | soft tissue tumor regio femur                            | D21.0                    | D21.2       | Accurate        |
| 46 | STT extra cranial  | -                        | D21.0       | Not accurate    |
| 47 | stt Regio cruris dextra                                  | D21.2                    | D21.2       | Accurate        |
| 48 | stt regio dextra auricula                                | -                        | D21.0       | Not accurate    |
| 49 | stt regio gluteal  | D21.5                    | D21.5       | Accurate        |
| 50 | STT regio back susp limfoma                              | D21.6                    | D21.6       | Accurate        |
| 51 | stt ear (s)  | D21.0                    | D21.0       | Accurate        |
| 52 | STT pada paha kanan susp fibrolifoma                     | D21.2                    | D21.2       | Accurate        |
| 53 | susp cancer hyroid                                       | C73                      | C73         | Accurate        |
| 54 | Benign neoplasma of skin mamae sinistra with haemorrhage | D23.5                    | D23.5       | Accurate        |
| 55 | Benign neoplasma of mamae dextra                         | D24                      | D24         | Accurate        |
| 56 | Benign neoplasma of mamae sinistra                       | -                        | D24         | Not accurate    |
| 57 | Benign neoplasma of mamame bilateral                     | -                        | D24         | Not accurate    |
| 58 | Benign neoplasma of parotis (d)                          | D11.0                    | D11.0       | Accurate        |
| 59 | Benign neoplasma of parotis dextra                       | D11.0                    | D11.0       | Accurate        |
| 60 | Benign neoplasma of skin breast                          | D24                      | D24         | Accurate        |

Table 3.1 shows the results of the accuracy of the neoplasm code at surgery hospital, Padang from 60 medical records, 32 codes (54%) of neoplasm codes were accurate according to the coding on ICD-10, while 28 (46%) codes were inaccurate. Of the 32 inaccurate codes, 10 neoplasm codes were not filled in the medical record entry-exit summary form.

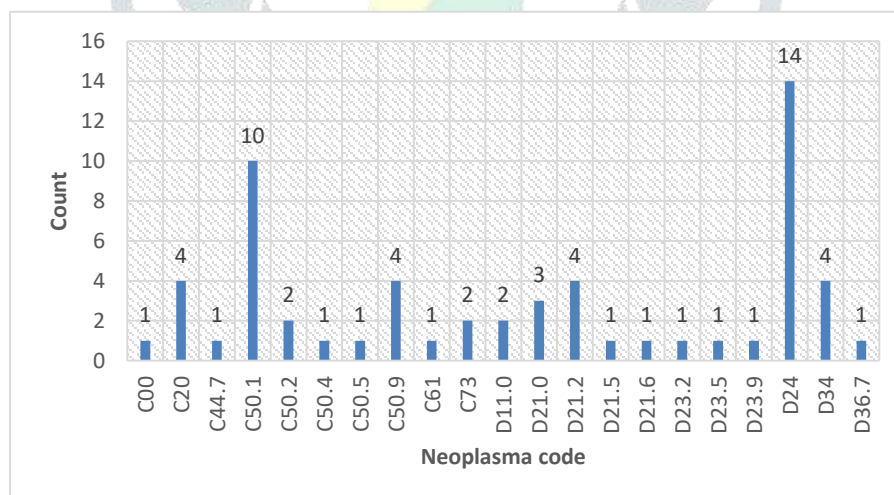


Figure 3.1. Distribution of neoplasm code based on ICD-10

The distribution of the most cases (Figure 3.1) was coded D24 (Benign neoplasm of breast) as many as 14 cases, followed by code C50.1 (Malignant neoplasm of Central portion of breast) with 10 cases of neoplasm. Based on the nature of the division, the neoplasm code consisted of 27 cases of malignant neoplasm and 33 cases of benign neoplasm.

## Discussion

The results of the accuracy of the neoplasm code at the surgical hospital, Padang, from 60 medical records, 32 codes (54%) of neoplasm codes were accurate according to the coding on ICD-10, while 28 (46%) codes were inaccurate. Of the 32 inaccurate codes, 10 neoplasm codes were not filled in the medical record entry-exit summary form. The breast cancer coding did not explain the position of the cancer based on the anatomy, while the breast cancer code or malignant neoplasm of breast (C50.-) was coded based on the mammary anatomy (Table 3.1).

While the provisions in classifying diseases using the ICD are determining the diagnosis code for neoplasms, there are 2 codes, namely topographic codes and morphological codes. These two codes are very important, because the topographic code is a code that indicates the location of the neoplasm, while the morphological code is a code that indicates the nature of the neoplasm (Setyorini, et al 2013). According to Johanna Christy, et al (2019), the factors that affect the accuracy of the neoplasm code are the understanding of different coders in determining the code and due to the absence of anatomical pathology examination results, it is difficult for the coder to know the nature of the neoplasm in question. According to Anita Maharani, et al (2020) the factors that affect the accuracy of the neoplasm code are unclear or unreadable writing and the lack of accuracy of the coder in coding the neoplasm diagnosis.

According to Irmawan, et al (2014) the completeness of filling in information related to the diagnosis of neoplasms also affects the accuracy of the code, so if the information is incomplete the code will also not be accurate. Meanwhile, according to Hatta (2013) determining the diagnosis of a patient is the obligations, rights, and responsibilities of the doctor (medical personnel) involved, so that the diagnosis contained in the medical record is filled out completely and clearly according to the directions in the ICD-10 book. The absence of anatomical pathology lab results also affects the accuracy of the neoplasm code as described by Johanna Christy, et al (2019) where it is known that to code morphology in neoplasms, information is needed that supports knowledge about the nature of the neoplasm experienced by the patient. Morphological code will not be accurate. The accuracy of the neoplasm code is also influenced by the quality of the coder, each officer has different abilities in interpreting the diagnosis, differences in accuracy and workload that will affect the coding results later. According to the Ministry of Health (2006) the main key to the implementation of coding is the coder or coding officer. Coding accuracy (determination of codes) is the responsibility of medical records personnel, especially coding personnel. Knowledge of coding procedures and provisions in ICD-9 CM and ICD-10 will enable coders to determine codes more precisely.

#### IV. CONCLUSION

There are 54% of the neoplasm codes were accurate based on ICD-10

#### Acknowledgment

1. The author would like to thank Apikes Iris for funding this research in the 2021 Apikes Iris Lecturer Research Grant program (Hibah Penelitian Dosen Apikes Iris);
2. The author would like to thank LPPM Apikes Iris for facilitating and assisting the implementation process of this research;
3. The author would like to thank Yastori, M.Si and Muhammad Rifki Ilmi who helped in data retrieval and processing and the team of this research;
4. The author would like to thank Eni Mahyuni, A.Md.RM, S K M who helped to coding and data analysis.

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