

**4<sup>th</sup> HEPATITIS C**  
TECHNICAL ADVISORY  
GROUP  
**TAG Meeting**

**HCV-ATTRIBUTABLE HEPATOCELLULAR  
CARCINOMA AMONG PERSONS WITH  
HEPATOBIILIARY CANCER DIAGNOSES IN  
GEORGIA: 2015-2016**

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# Hepatocellular Carcinoma (HCC)

- 782,000 Cases in 2012 (9% of all global cancer cases)
- 5<sup>th</sup> most-frequent cancer in males, 9<sup>th</sup> in females
- 2<sup>nd</sup> leading cause of global cancer deaths
- Almost all cases die within 12 months
- >80% of cases occur in *low-resource countries*

# Georgian Cancer Registry (GCR)

- Since 2015
- Monthly, case-based reporting of cancers of all locations

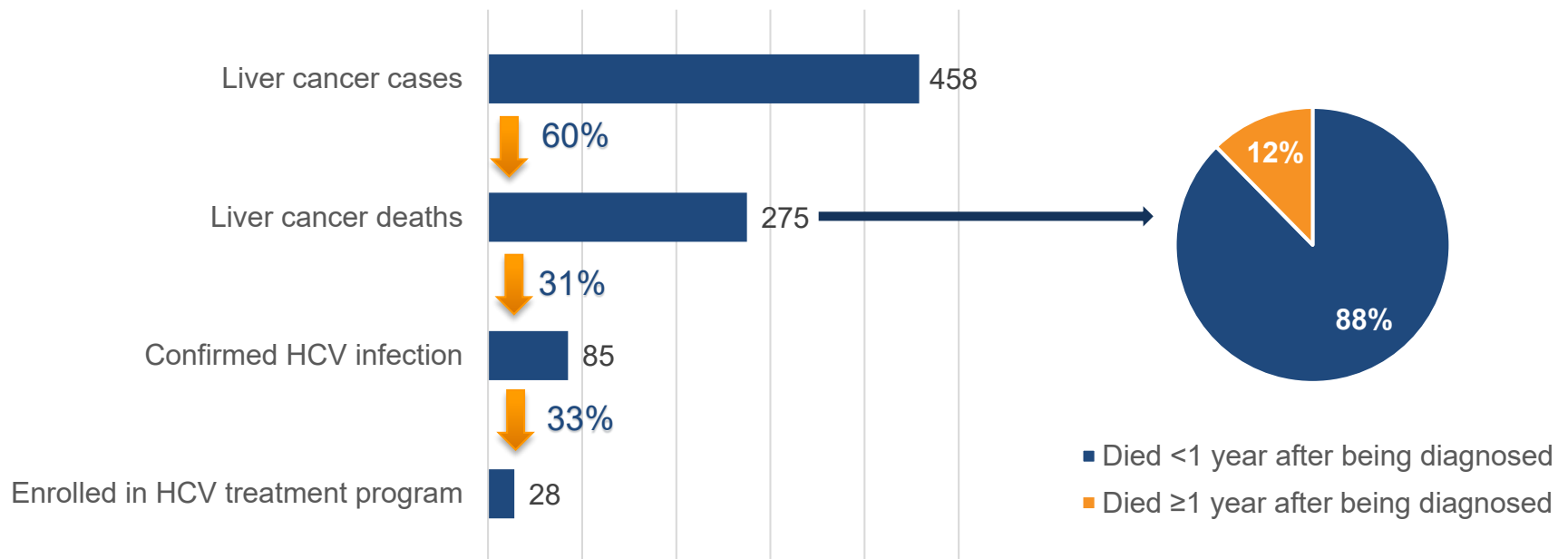
## Clinical form

- Name of the facility/doctor
- Demographic information
- Diagnosis
- Date of diagnosis
- How the diagnosis was confirmed
- Treatment
- Patient's status

## Laboratory form

- Name of the facility/doctor
- Demographic information
- Facility where the operation/manipulation was performed
- Morphologic diagnosis
- Degree of differentiation

# Liver cancer cases in Georgian Cancer Registry 2015-2017



# 2016 TAG recommendations for HCV surveillance

## 8. *Improve HCV Surveillance*

- 8.1. Target high-risk subjects including PWIDs, and dialysis patients for case surveillance and /or serologic surveys to identify trends in disease burden, new infections, and response to treatment.
- 8.2. Create uniform electronic database to include all HCV surveillance data.
- 8.3. Repeat national seroprevalence study in 2021.
- 8.4. Evaluate the quality of HCV associated deaths in national registries to determine if the data can be used for baseline mortality assessment, and for periodic monitoring to assess the impact of the Elimination Program on trends in HCV mortality. If deficits in quality are found but are feasible to correct, develop a plan to improve data quality or develop an analysis plan that takes into account the limitations of the data.
- 8.5. Consider collecting data on hepatocellular carcinoma and cirrhosis and association with HCV infection

# Primary objectives

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Estimate the recent incidence of HCV-attributable hepatocellular carcinoma (HCC) in Georgia, and the demographic and clinical characteristics of recent (2015-2016) cases of primary liver cancer

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Estimate the numbers and proportion of persons with incident hepatocellular carcinoma (confirmed and probable) who were tested for hepatitis C virus (HCV) infection and the numbers and proportion of those tested who had serological evidence of past or current HCV infection (HCV RNA+ and/or anti-HCV+)

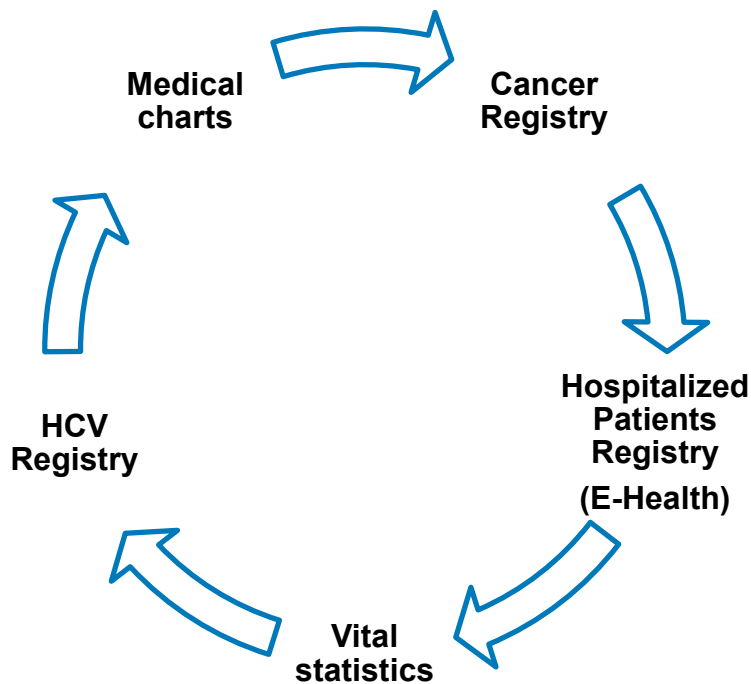
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Assess the impact of limitations in technological capacity, health care resources and/or clinical practices, on the underascertainment of hepatocellular carcinoma among persons with presumptive diagnoses of liver cancer in Georgia

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Inform strategies to enhance ongoing surveillance for the burden of HCV-attributable hepatocellular carcinoma through analyses using the Georgian Cancer Registry (GCR), the Georgia E-Health Database (EHDB), the GeoStat Mortality Register, and HCV testing and treatment databases

# Methods



2015-2016 years

## ICD-10-CM: C22.0 – C22.9

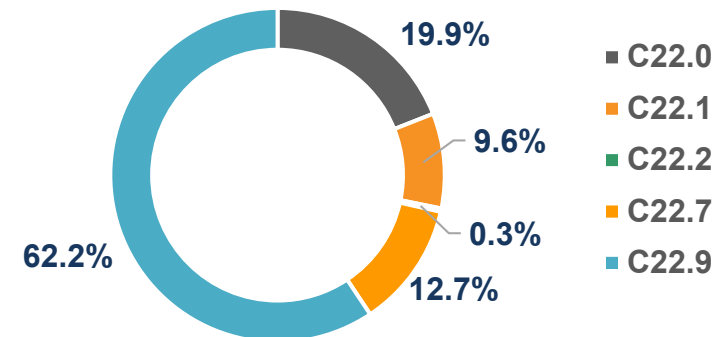
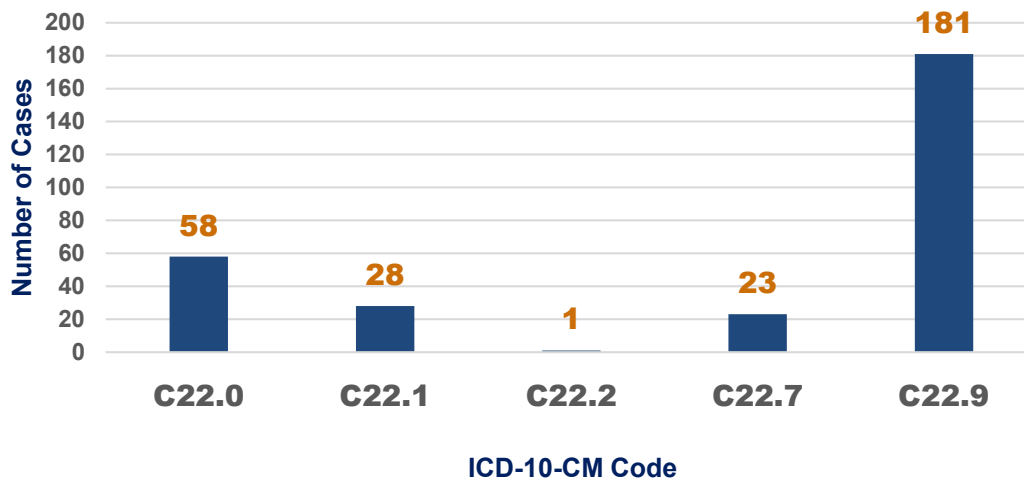
- ***C22.0: Hepatocellular Carcinoma***
- ***C22.1: Cholangiocarcinoma***
- ***C22.2: Hepatoblastoma***
- ***C22.3: Angiosarcoma***
- ***C22.4: Other Sarcomas***
- ***C22.7: Other specific carcinomas of the liver***
- ***C22.8: Primary malignant neoplasms of the liver, type unspecified***
- ***C22.9: Malignant neoplasms of the liver, not specified as primary or Secondary***

# Results from GCR

All neoplasms of liver and intrahepatic bile ducts in 2015-2016 – **291**

Registered in HCV treatment database – **30**

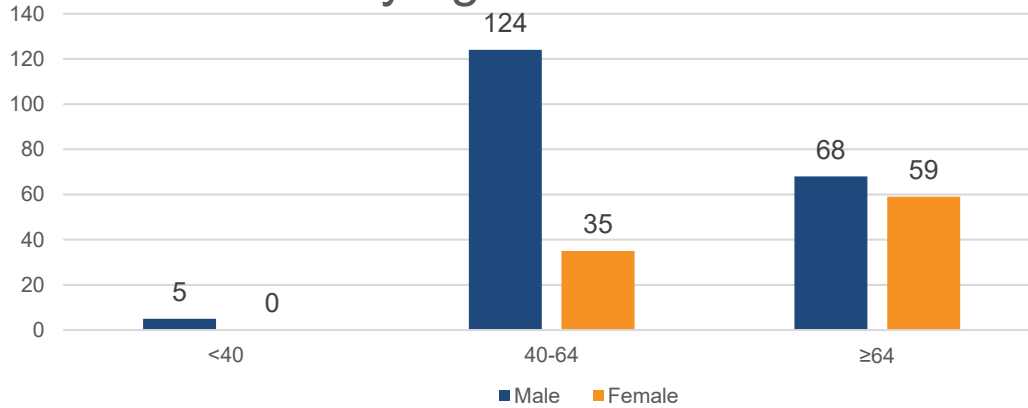
291 Hepatobiliary Cancers (C22) by ICD-10-CM Code Reported to GCR 2015-2016



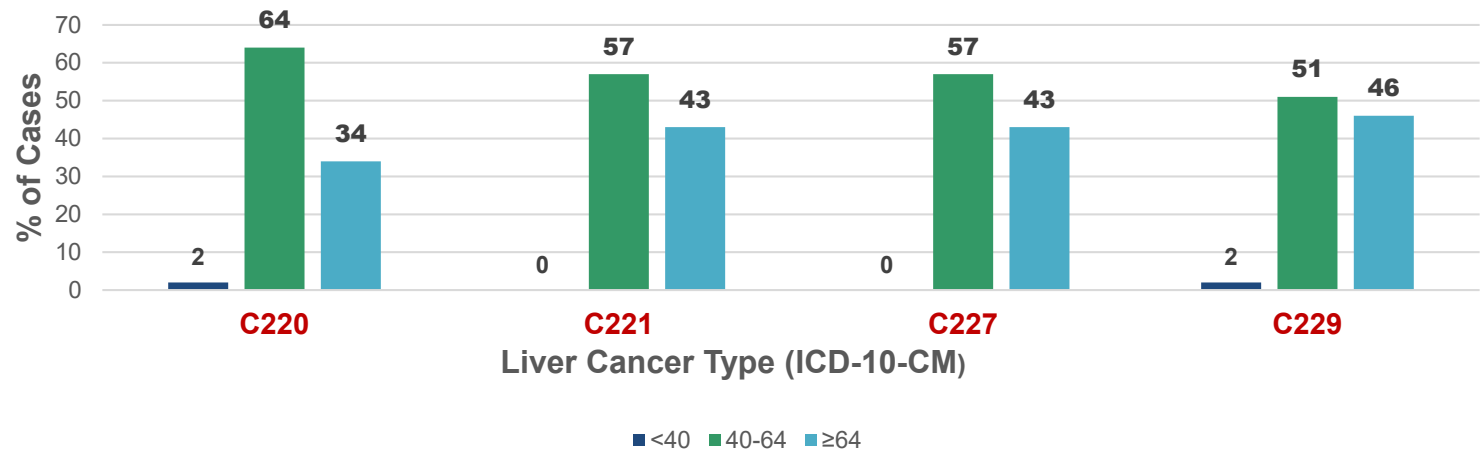


# 291 hepatobiliary cancers reported to the GCR in 2015-2016

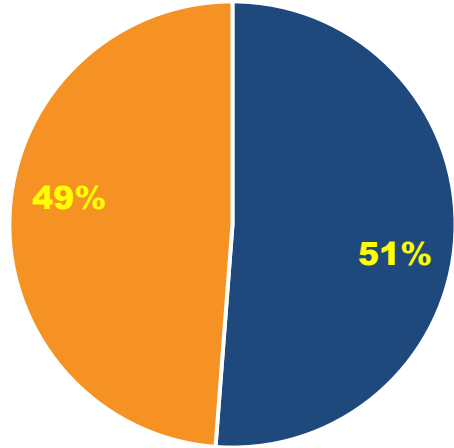
by age and sex



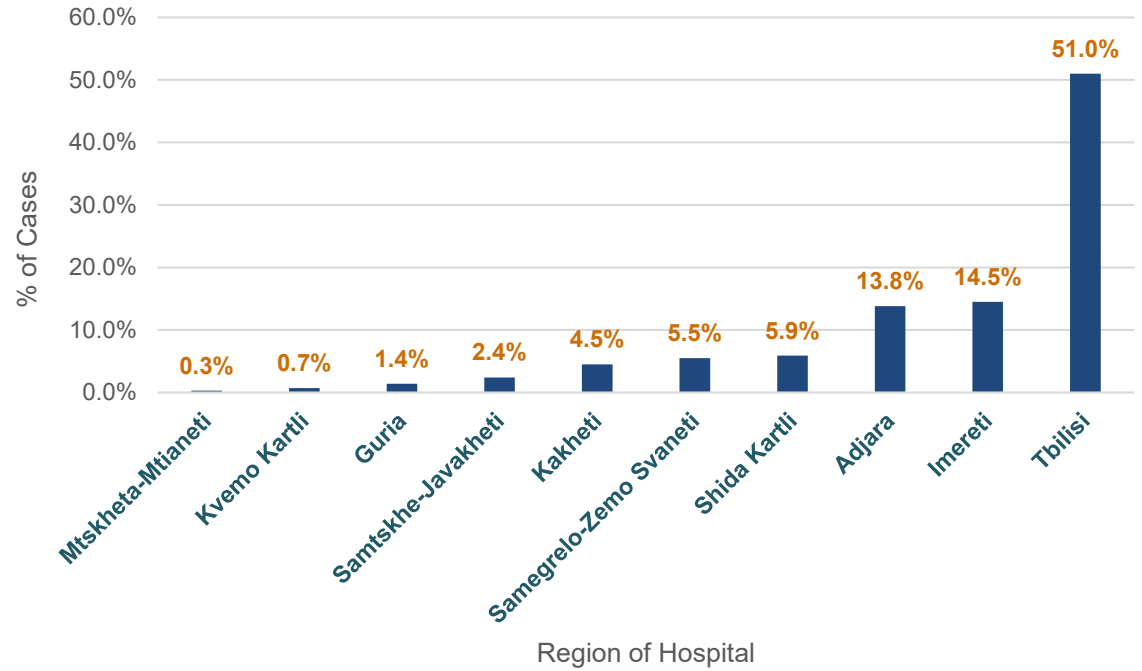
by ICD-10-CM codes and age group distribution



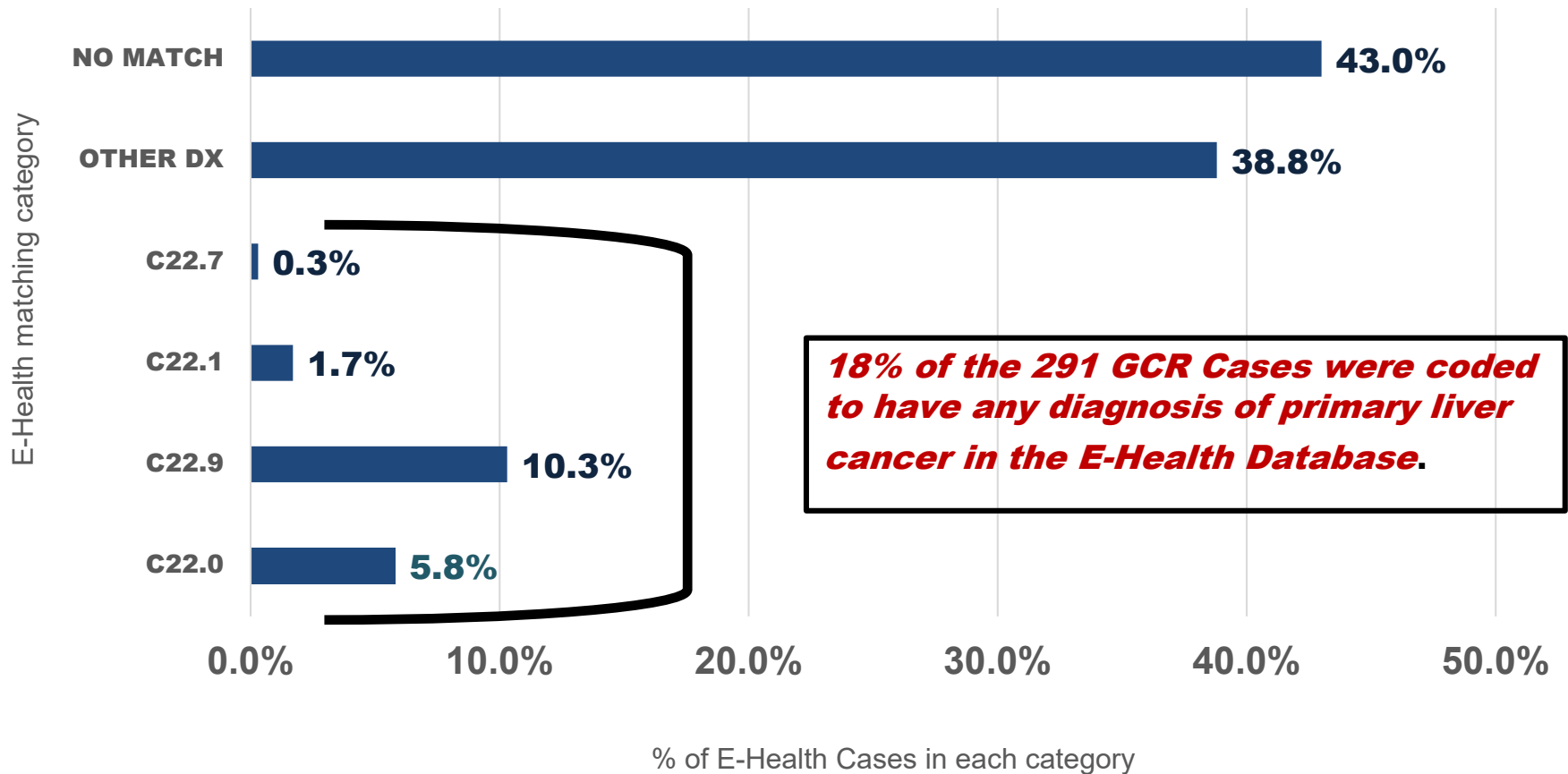
# Cases by regions



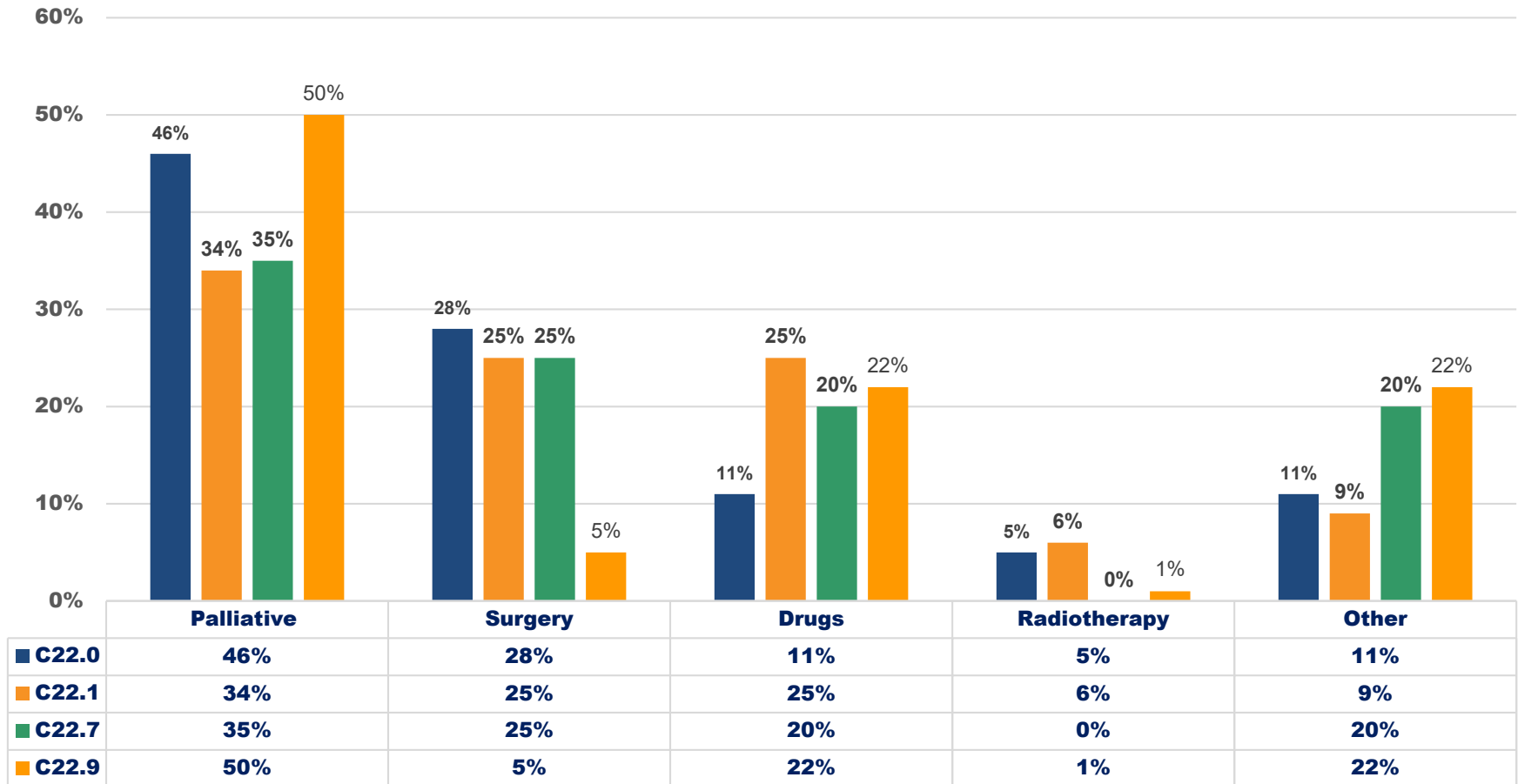
■ Tbilisi ■ All Other Regions



# Results of matching 291 cases reported to GCR to E-Health Database: 2015-2016



# Cancer treatment used among 291 patients reported to GCR: 2015-2016



# Data extraction form

- Summary information
- Facility information
- Civil, occupational and insurance information
- Fibrosis and cirrhosis: categorization and indicators
- Viral hepatitis serological testing and diagnoses
- Medical risk factors for HCC
- Serum AFP testing, imaging results and biopsy interpretation
- Final diagnoses, staging, disposition and treatment plans

**INSTRUMENT FOR ABSTRACTION OF DATA FROM CASE REPORTS OF LIVER CANCER CASES**

**1. SUMMARY INFORMATION**

1.1 Primary reviewer: \_\_\_\_\_ 1.3 Date of record review: \_\_/\_\_/\_\_\_\_ (dd/mm/yyyy)

1.2 Study ID #: \_\_\_\_\_ 1.5.1 Region: \_\_\_\_\_ 1.5.2 City/Town: \_\_\_\_\_

1.4 National ID number: \_\_\_\_\_ 1.5 Current place of residence: \_\_\_\_\_

1.6 Sex:  Male  Female 1.7 Date of birth: \_\_/\_\_/\_\_\_\_ (dd/mm/yyyy)

1.8 Comments/notes: \_\_\_\_\_

**2. FACILITY INFORMATION**

2.1 Facility name: \_\_\_\_\_

2.2 Town/region: \_\_\_\_\_

2.3 Facility type:  Specialty Center  General Hospital (Private)  General Hospital (Public)  Unknown  Other \_\_\_\_\_

2.4 Transferred from another facility?  Yes  No  Self-Referred  
If Yes, Name and Type of Facility: \_\_\_\_\_

2.5 Physician-referred or self-referred?  Referred by a Physician  YES  NO  UNKNOWN  
 Other/Unknown

2.6 Is an oncology specialist listed as attending or consulting for diagnosis/care during this admission?  YES  NO  UNKNOWN

2.7 Date of admission: \_\_/\_\_/\_\_\_\_ (dd/mm/yyyy) 2.8 Date of discharge: \_\_/\_\_/\_\_\_\_ (dd/mm/yyyy)

2.9 Final diagnoses: \_\_\_\_\_

2.10 ICD-10-CM codes: \_\_\_\_\_

1 \_\_\_\_\_  
2 \_\_\_\_\_  
3 \_\_\_\_\_  
4 \_\_\_\_\_

2.11 Status of patient at discharge:  Died  Discharged to Home  Transferred to Another Facility  
 Unknown Name and Location of Facility if Transferred: \_\_\_\_\_

**3. CIVIL, OCCUPATIONAL AND INSURANCE INFORMATION**

3.1 Marital status:  single  married  widowed  divorced/separated  
 unknown  no  unknown

3.2 Retired?  yes  no

3.3 Occupation/s or former occupation/s: \_\_\_\_\_

3.4 Type(s) of insurance/payment (check all that apply)  Social insurance  other  
 self-pay  unknown

3.5 Other information/comments: \_\_\_\_\_

**4. FIBROSIS & CIRRHOSIS: CATEGORIZATION AND INDICATORS**

4.1 Does the medical record indicate that the patient has any of these diagnoses (in the past or at this hospitalization)?  Cirrhosis  Liver Failure  
 End-Stage Liver Disease  Liver Fibrosis  Chronic Liver Disease  
Check Any of those mentioned

*Piloted in 3 facilities in different cities*

# Current status

- Facilities selected based on the following criteria:
  - 4 big cities – Tbilisi, Gori, Kutaisi, Batumi
  - $\geq 3$  hepatobiliary cancer cases reported to GCR in 2015-2016
- Field work conducted
- Database developed

# Limitations/Challenges

- Underreporting in cancer registry
- Misreporting of ICD-10-CM codes
- No electronic medical charts in most medical facilities
- Lack of necessary information in medical charts
- Mostly advanced cases where no diagnostic tests were performed
- Data extraction form poorly adapted to outpatient cases

**Thank you!**



# Acknowledgements

- US CDC, Division of Viral Hepatitis
- US CDC, South Caucasus Office
- NCDC, Communicable Disease Department
- NCDC, Statistics Department