All patients with carcinoma gall bladder (biopsy proven) attending to the department of Radiotherapy, of a multispeciality hospital of Kolkata, have been retrospectively analyzed to observe the epidemiological pattern of gall bladder cancer in single tertiary health care centre of eastern India.

RESULTS
A total of 177 patients of carcinoma gall bladder attended to the department during June 2015- May 2017. Total number of patients attending the department during this period is 3912. The percentage of carcinoma gall bladder among total cancer patients is about 4.5%. Among 177 patients of carcinoma GB, 97 patients attended during June 2016- May 2017, 80 patients attended during June 2015- May 2016. Among total 3912 patients with cancer, 2032 patients attended during June 2016- May 2017, and 1880 patients attended during June 2015- May 2016. So, year-wise percentage of gall bladder carcinoma among all cancer patients were 4.8% during 2016-2017 and 4.3% during 2015-2016 (fig.1).

Fig.1- Year wise distribution of gall bladder Carcinoma

Total 177 patients of gall bladder carcinoma attended our department during June 2015- May 2017. Among them 136 were females and 41 were males. So, male:female = 1:3.32 (fig.2).

Keywords: gall bladder carcinoma, epidemiology, gall stone
Fig. 2- Male-female distribution
Age distribution- only 7 patients were in between 31-40 years, 38 patients were in between 41-50 years. Maximum number of patients (69) was in the age group from 51 to 60 years followed by 53 patients from 61 to 70 years of age. Few (10) patients were in between 71-80 years (fig. 3).

Fig. 3- Age group distribution
169 patients presented with co-existent gall stones. 8 patients were acalculous. So, percentage of co-existent gall stone disease in gall bladder cancers is 95.48% and percentage of acalculous gall bladder carcinoma is only 4.52% (fig. 4).

Fig. 4- Co-existent gall stone
Among females, 131 patients, out of 136 had gall stone and 5 were acalculous. Among males, 38 patients out of 41 had stone and 3 were acalculous (fig. 5).

Fig. 5- Calculous vs acalculous CA GB
98 patients (53.37%) presented with pain, 49 patients (27.68%) with painless jaundice. 17 (9.6%) patients presented with acid peptic disorder, and 13 (7.35%) with anorexia and weight loss.

19 patients were diagnosed incidentally after cholecystectomy for gall stone disease. So percentage of incidental carcinoma GB is about 10.7% (fig. 6).

Fig. 6- Incidental vs non incidental

Stage of disease at diagnosis (fig. 7):
1. Early stage (Operable) - 24 (13.6%),
2. Locally advanced, Operable - 41 (23.2%)
3. Locally advanced, Inoperable - 68 (38.4%)
4. Metastatic - 44 (24.9%).

Fig. 7- Stage at diagnosis

DISCUSSION
Incidence of Gall bladder cancer shows wide geographic variation. Though the worldwide occurrence of gall bladder cancer is less than 2/100000 individuals, there is extensive variance (11). Residents of Indo Gangetic belt, especially females of northern India and south Karachi Pakistan have been reported as one of the highest affected regions (6). The dramatic association of GBC with female gender and certain geographical regions (mostly developing countries) has been proposed to be influenced by various female hormones, cholesterol cycling and salmonella infections (12, 13). Cholelithiasis is one of the major risk factors of gall bladder cancer. Gallbladder cancer rates correlate well with the prevalence of gallstone disease (14). Gall bladder cancer carries poor prognosis as maximum patients tend to present late, only when contiguous structures and organs, such as the bile ducts or duodenum, are involved. At this stage the tumour is usually irresectable, and therefore the majority of patients undergo palliative treatment (15). In our study, 177 patients (4.5% of all cancer patients) of carcinoma GB attended during 2 years time span. As worldwide data suggests, here also female predominates over male (3.32: 1). Maximum patients are of fifth and sixth decade. Over 95% patients were associated with gall stone. This supports the role of gall stone disease as a major risk factor for gall bladder carcinoma. The main presenting feature is abdominal pain. Around 11% patients were diagnosed incidentally. Maximum patients presented with advanced disease. Patients are treated according to stage of disease with surgery or chemotherapy or chemoradiation, or combined modalities.
CONCLUSION

A significant number of gall bladder carcinoma patients attended the dept. of Radiotherapy of the multispecialty hospital of eastern India during a span of two years. As usual female predominates over male. Gall stone disease seems to be one of the most important risk factor for gall bladder cancer. Maximum patients present with advanced stage of disease.

REFERENCES