Outcomes of routine HIV, Hepatitis B and Hepatitis C testing in patients starting chemotherapy for solid organ tumours at a London District General Hospital: screening uptake and management of positive results

M. Williamson[1], S.Ranasinghe[1], L. Tookman[2], A. Millar[1], F. Raja[1]

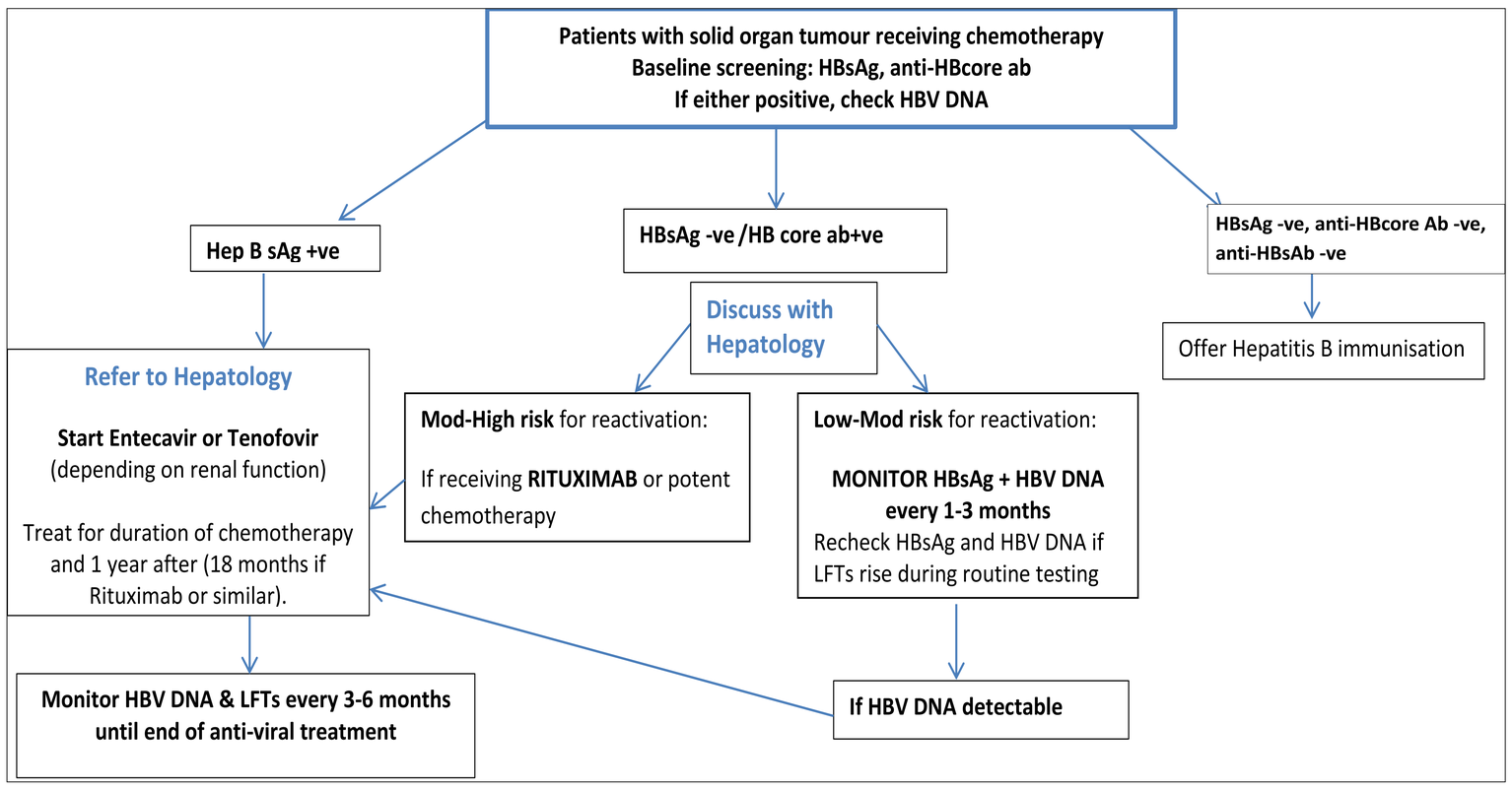
[1]North Middlesex University Hospital (NMUH), London [2]University College Hospital, London

North Middlesex University Hospital NHS Trust

Background

- London Cancer Guidelines **recommend screening for Hepatitis B (HBV), Hepatitis C (HCV) and HIV** in all patients with solid organ tumours.
- **Risk of HBV reactivation is highest in chronic Hepatitis B infection,**[1] which can be minimised through appropriate screening, monitoring and antiviral prophylaxis [2].
- Knowledge of HIV status determines appropriate use of antiretroviral therapy and **prophylaxis against opportunistic infections**.[3] Patients with HIV infection are at higher risk of developing AIDS defining and non-AIDS defining cancers.
- Routine HIV testing for all oncology patients has been recommended, but few institutions implement this.

Figure 1:
Hepatitis B Screening Algorithm[2]



Method

Routine HBV, HCV and HIV screening for patients starting chemotherapy was introduced in September 2017.
Protocols were developed to guide screening, monitoring, antiviral choice and referrals.
Clinical information for patients was gathered from Chemocare, discharge summaries, clinic letters and Medway results system.

Aim: To improve routine screening for HIV, Hepatitis B and C in patients starting chemotherapy.
Baseline screening: Hepatitis B Surface Ag, anti Hepatitis B core Ab, anti-Hepatitis C virus Ab, HIV p24/antibody
Inclusion criteria: Patients starting chemotherapy for solid organ tumours or newly metastatic solid organ tumours
Intervention to increase screening in March 2018: departmental teaching with hepatology and new phlebotomy order set created to simplify requests.

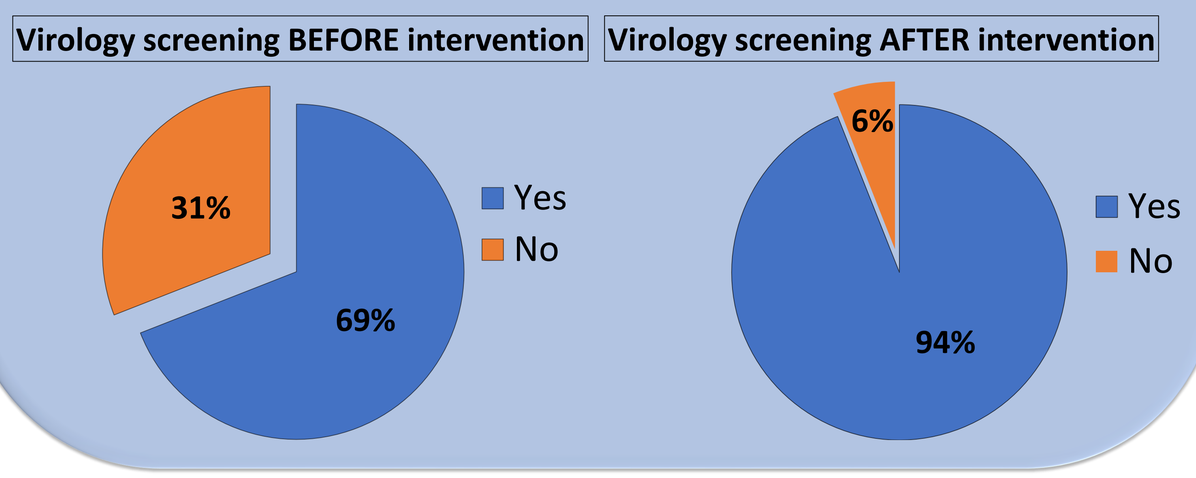
Results

Demographics:

- 133 patients started chemotherapy between Sept-Dec 2017
- 110 patients started chemotherapy between April-July 2018
- Age range overall: 26-86 years; 51% female
- 32% (n=35) Palliative treatment intent, similar to previous cohort (39%)
- Mode tumour site: Breast cancer (32%)

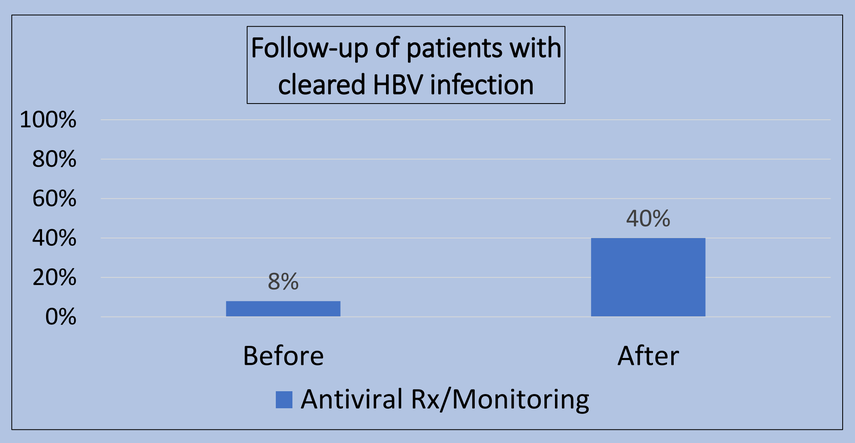
Screening uptake:

- **No patients declined** blood-borne virus screening
- All samples taken in correct phlebotomy bottles
- **Significant improvement** in screening after intervention : 94% (103/110)



Screening Outcomes

- Fewer patients identified with cleared HBV infection in this cohort: 5% (5/103) vs 14% (13/92)
- No patients with chronic HBV infection in this cohort
- Of patients with cleared HBV infection, 40% (2/5) were started on Lamivudine and monitored for reactivation
- **Some improvement in monitoring for reactivation in patients with cleared HBV infection after intervention:**



- No new HIV diagnoses in either cohort
- 1 patient in each cohort with cleared Hepatitis C infection
- 1 patient with chronic Hepatitis B in 2017 cohort

Conclusions and Recommendations

- Hepatitis B and C, and HIV **screening was acceptable** to patients undergoing immunosuppression through chemotherapy; no patients declined screening.
- **Screening rates and appropriate management of hepatitis results has increased** through departmental teaching and phlebotomy order set, but can be further improved. Referral pathways are being modified to facilitate change in practise.
- Screening has **identified patients with chronic and cleared HBV infection;** patients have been started on anti-viral therapy to prevent disease reactivation.
- We **recommend routine screening** of these conditions where immunosuppressive therapy may have a preventable adverse effect on clinical outcome.

References

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3. Antinori, A. *et al.* Better response to chemotherapy and prolonged survival in AIDS-related lymphomas responding to highly active antiretroviral therapy. *AIDS* **15**, 1483-1491(2001).