Methods Data between 1994 and 2003 helped to determine evolution and prediction of the disease and were given by the CRNT; this registry is covering the north of Tunisia then half of the Tunisian population. The data of incidence, by age bracket of 5 years, were planned for 4 periods 2004-2008, 2009-2013, 2014-2018, 2019-2024. For the analysis we used a model of type Bayésien age-troop. The implementation of this analysis was realised by a sampling of Gibbs by means of the software WinBUGS.

Result Between 1994 and 2003, we observed negative annual average spleen of standardised incidence evolution in men and women (−3.3% vs 2.7%) also for the standardised incidences which showed a rather important decline (26.4% at the man and −22.3% at the woman). Between periods 1994–1998 and 2019–2024, at the man the number of annual average case could decrease by 56%. At the woman, the number of annual average case could remain stable, the specific rates according to the age increase from the age bracket 65 to 69 but decrease rather sharply at the child’s and the adults whose age is 65-year-old subordinate. Then an important decrease of 70% in men and 45% in women was observed. NPC acknowledged a favourable evolution from 1994 to 2003 probably due to a better socioeconomic level. If this tendency is maintained, it could be an interesting area of research.

Breast cancer is the most frequent cancer localisation in Tunisian women. With age of population, combined to a generation effect, it is very likely that we will see in near future an important rise in breast cancer incidence. Also all the Tunisian data have always shown a high rate of young patients (ages below 35 years) around 11%. This study is designed to establish a forecast of the level of the incidence and of a numbers of cases of breast cancer until 2024 in Northern Tunisia. We also try to foresee the evolution of the percentage of young women.

Methods Data given by the Cancer Registry of Northern Tunisia (CRNT) from 1994 to 2003 are used as a baseline for further prediction. This cancer register is covering half of the Tunisian population. The data of incidence have estimated for the periods 2004–2008, 2009–2013, 2014–2018, 2019–2024. Predictions were based on a Bayesian Age-Cohort model. The implementation of this trial has been carried out by sampling after Gibbs method using WinBugs software.

Results The number of cases is growing continuously over the four periods. Thus, in 2019–2024, nearly 2000 cases/year are expected in the Northern part of the country. The standardised incidence will grow from 21.6 cases/100 000 women in 1994–1998 to 46.4 cases/100 000 women in 2019–2024, an increase of 80%. Until the age of 59 the specific rates par age rise moderately, beyond we can observe acceleration. Finally the projection allows a follow-up of the percentage of young women < 35 years in step with the periods. The ageing of the population and the cohort effect let us preva a clear tendency to fall.

Conclusion The evolution of the percentage of young women show that the modification of the ages pyramid of the general population paired to a cohort effect (the future generations will have a higher risk) will lead to a lowering of this percentage over years. Thus it is very likely that we can’t keep the genetic hypothesis (Tunisian women would have a higher risk due to genetic state).