

Exploring clinical and socio-economic factors associated with breast cancer treatment waiting times in Luxembourg: the RELIANCE-BC study

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BACKGROUND

In Luxembourg, cancer is the second leading cause of death in women with breast cancer the most common in terms of incidence and mortality. Luxembourg's National Cancer Registry is a Population Based Cancer Registry (PBCR) collecting all new cancer cases diagnosed and/or treated on the territory of Luxembourg. The RELIANCE (“REaL-life cANCER epidemiology to identify risk factors for cancer with a particular focus on prevention and care”) Breast Cancer study, aims to evaluate cancer epidemiology for the first time in Luxembourg using longitudinal population data from the RNC. The study involves a retrospective analysis of the RNC breast cancer cohort 2013-2018 including waiting times for breast cancer treatment.

RESULTS

Table 1. Number and percentage of type of treatment

Treatment	First, n (%)	Second following surgery, n (%)
Surgery	1,600 (85.52)	193 (12.06)
Radiotherapy	9 (0.48)	593 (37.06)
Chemotherapy	181 (9.67)	450 (28.13)
Hormonal therapy	61 (3.26)	254 (15.88)
Targeted therapy	20 (1.07)	43 (2.69)
No treatment		67 (4.19)
Total	1,871 (100)	1,600 (100)

Figure 1. Median waiting times

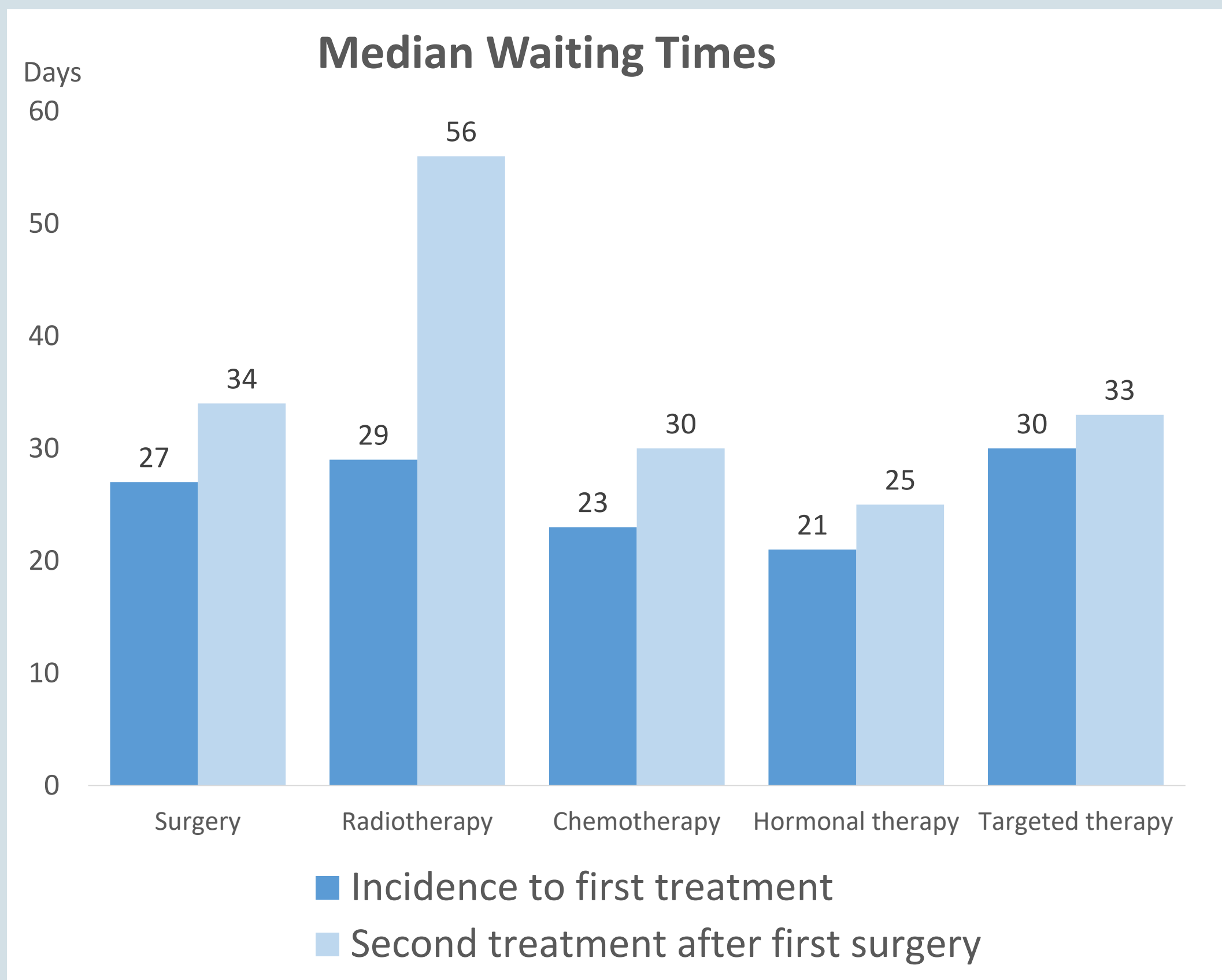


Table 2. Multi-level model estimates

Variable	Waiting time, first treatment, n=1,871		Waiting time, second treatment following surgery, n=1,490	
	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error
Age_diagnosis	1.01	0.00***	1.00	0.00***
Stage 2, 3 and 4	0.93	0.01***	0.91	0.01***
Laterality: Left	1.01	0.01	0.95	0.01***
Multifocality: Yes	1.02	0.01*	0.92	0.01***
Diagnostic_mammography: Yes	1.13	0.02***	1.02	0.02
Diagnostic_ultrasound: Yes	1.19	0.03***	0.99	0.02
Diagnostic_MRI: Yes	1.15	0.01***	1.09	0.01***
Grade:Moderately differentiated	0.94	0.01***	0.93	0.01***
Grade:Poorly differentiated	0.90	0.01***	0.84	0.01***
Grade:Undifferentiated	0.69	0.06***	0.43	0.07***
Behaviour: Invasive	0.80	0.02***	0.73	0.02***
Year_diagnosis: 2014	1.06	0.02***	1.26	0.02***
Year_diagnosis: 2015	1.04	0.02**	1.11	0.02***
Year_diagnosis: 2016	1.08	0.02***	1.21	0.02***
Year_diagnosis: 2017	1.07	0.02***	1.33	0.02***
Year_diagnosis: 2018	1.05	0.02**	1.09	0.02***
Socio-Economic Index	1.00	0.11	0.96	0.12
Constant	18.46	1.22***	48.06	3.49***
Level 2 (Commune) variance	0.04	0.01	0.05	0.01

AIM

To explore the clinical and socio-economic factors associated with breast cancer treatment waiting times in Luxembourg.

MATERIALS AND METHODS

The analysis included 1,871 female breast cancer cases resident in Luxembourg. We measured two separate waiting times as the number of days between: 1) incidence and first treatment and 2) first surgery and second treatment. We used a multi-level poisson model to investigate the relationship between waiting times and 1) individual-level clinical factors and 2) a socio-economic index of individuals’ area of residence.

PERSPECTIVE

This study will support breast cancer management in Luxembourg and enable the comparison of patient pathways and the influence of clinical and socioeconomic factors.

FUNDING AND CONTACT INFO

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RELIANCE study
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