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Background: Laboratory studies suggest that drugs that inhibit platelets and coagulation impair the growth and dissemination of breast cancer cells. Use of antiplatelet and anticoagulant prescription drugs therefore may improve breast cancer prognosis.

Objectives: To investigate the association between antiplatelet and anticoagulant prescriptions and breast cancer recurrence.

Methods: Our study cohort consisted of all women diagnosed with early-stage breast cancer during 1996-2008 who were included in the Danish Breast Cancer Group (DBCG) registry. We retrieved information on antiplatelet and vitamin K antagonist (VKA) prescriptions from the National Prescription Registry, and information on breast cancer recurrence from the DBCG. Follow-up began on the breast cancer diagnosis date and continued until breast cancer recurrence, emigration, death, or 31 December 2012, whichever occurred first. We used Cox regression models to estimate associations between drug exposure, modelled as time-varying exposures lagged by one year, and breast cancer recurrence, accounting for competing risks of mortality and adjusting for potential confounders. Associations are reported as recurrence hazard ratios (HRs) with 95% confidence intervals (95%CI).

Results: We identified 34,474 patients with 234,746 person-years of follow-up (median = 7.1 years), during which 4,751 recurrences were diagnosed. 1,496 (4%) women received at least one prescription for platelet inhibitors and 1,619 (5%) received at least one prescription for VKAs. Both crude and adjusted HRs showed no evidence of an association between exposure to either platelet inhibitors [HRcrude = 0.75 (95%CI = 0.58-0.97); HRadjusted = 0.88 (95% CI = 0.68-1.15)], or VKAs [HRcrude = 1.05 (95% CI = 0.85-1.29); HRadjusted = 1.17 (95%CI = 0.95-1.44)] and recurrence.

Conclusions: Our study suggests no notable reduction in breast cancer recurrence associated with prescriptions for platelet inhibitors and VKAs.

962. Safety And Efficacy Of New Oral Anticoagulants, And Low Molecular Weight Heparins Compared To Aspirin Associated With Total Knee And Hip Replacement

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Background: There has been much debate recently on the best type of antithrombotic agent following elective total joint replacement (TJR) surgery.

Objectives: To compare rates of venous thromboembolism (VTE), gastro intestinal (GI)-bleeding and mortality events, with use of new oral anticoagulants (NOAC) or low molecular weight heparins (LMWH) compared to aspirin in patients undergoing TJR.

Methods: A population based retrospective cohort study was performed using the Clinical Practice Research Datalink (CPRD). Patients ≥18 years of age who had undergone total knee (TKR (n = 3,261)) or hip replacement (THR (n = 4,016)) between 2008 and 2012 were included. Within this population three cohorts were selected, based on their first prescription within the 35 day period after surgery: Use of NOACs only, LMWHs only, and aspirin only. Incidence rates were calculated and Cox proportional hazard models were fitted to estimate the risk of VTE, GI-bleeding and all-cause mortality with the use of NOACs and

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LMWHs compared to aspirin use after TKR and THR. We statistically adjusted our analyses for lifestyle factors, comorbidities and concomitant drug use.

Results: TKR and THR patients currently on LMWHs had higher risk of VTE (HR = 3.3 (1.0-10.9) and HR = 42.7 (10.0-183.5) respectively). Although higher incidence rates were found, use of LMWHs or NOACs was not associated with a significantly increased risk of GI bleedings and all-cause mortality in THR and TKR patients.

Conclusions: In contrast to a similar or better safety and efficacy profile of NOACs and LWMHs, as compared to aspirin, reported in previous studies, we found a similar (or increased) risk of VTE, GI-bleeding, and all-cause mortality.

963. Outcomes Associated With Non-Adherence To Anti-Hypertensives And Statins

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Background: Non-adherence to medicines is associated with poorer patient outcomes. As hypertension and dyslipidaemia are asymptomatic, adherence can be an issue due to the lack of perceived treatment benefit.

Objectives: To determine the effect of non-adherence in relation to: (i) blood pressure in anti-hypertensive use and (ii) LDL and total cholesterol levels in statin use.

Methods: Design: Retrospective cohort study with health assessments linked to pharmacy claims data.

Setting: Community dwelling participants aged ≥ 50 years from 2009-2011. Means-tested subset of the population.

Exposures: The proportion of days covered (PDC) for each of five classes of antihypertensive medication (WHO ATC: C02, C03, C07, C08, and C09) and all statins (C10AA) during 12 months prior to the health assessment. The average PDC was calculated and adherence assumed at PDC ≥80%.

Main outcome measures: (i) Mean systolic and diastolic blood pressure (BP) measurement (from two recordings) and (ii) total cholesterol (TC) and LDL cholesterol levels.

Statistical analysis: Multivariable linear and logistic regression, adjusting for covariates including age, gender, smoking status, chronic disease, educational level and BMI. Adjusted regression coefficients ( ) or adjusted odds ratios (OR) are presented with 95% confidence intervals (CI). Targets for reaching TC≤ 5mmol/L and LDL≤3.5mmol/L were used.

Results: There were n = 998 receiving anti-hypertensive medications, with n = 567 (56.8%) adherent. For systolic BP the adjusted coefficient for adherent vs non-adherent was non-significant = -1.11 (95%CI -3.81, 1.59), but was significant for diastolic BP = -2.14 (95%CI -3.64, -0.65). There were n = 771 receiving statins and having blood lipid data, with 482 (62.5%) adherent. Adherent subjects were more likely to reach target TC (OR = 1.79, 95%CI 1.27,2.52) and LDL (OR = 1.65, 95%CI 1.12,2.41).

Conclusions: Adherence to anti-hypertensive medication reduced diastolic but not systolic BP and adherence to statins improved targets for TC and LDL cholesterol. The results support improving adherence amongst patients taking anti-hypertensive and lipid lowering therapy for optimal patient outcomes.

964. De-Novo Post-Diagnosis Statin Use And Mortality In Women With Stage I-III Breast Cancer

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Background: Preclinical evidence suggests an anti-cancer role for statins, through inhibition of cell proliferation and oncogene signalling effects. Epidemiological studies have investigated the role of statins in reducing cancer-specific mortality, however, there is conflicting evidence due to varying

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