Supplementary Table S1: Demographic, clinical, and pathological characteristics of patients by preoperative statin use

|  |  |  |  |
| --- | --- | --- | --- |
|  | Study sample (n=843) | Patients excluded due to pre-operative statin use (n=915) | p-value |
| Age, mean ± SD | 60.4 (6.3) | 62.1 (5.6) | <0.0001ǂ |
| Race, n (%) |  |  | 0.001§ |
| Black | 343 (40.7) | 302 (33.0) |  |
| Non-black | 500 (59.3) | 612 (67.0) |  |
| Year of surgery, median (Q1-Q3) | 2005 (2003-2007) | 2006 (2004-2008) | <0.0001† |
| Follow-up, median (Q1-Q3) | 74.3 (41.3-102.8) | 66.0 (41.4-94.3) | 0.048† |
| PSA, median (Q1-Q3) | 6.5 (4.8-9.8) | 5.6 (4.4-8.1) | <0.0001† |
| Statin use, n (%) |  |  | <0.0001§ |
| Never | 416 (49.4) | 0 |  |
| Ever | 427 (50.7) | 915 (100) |  |
| BMI, median (Q1-Q3) | 27.4 (24.8-30.5) | 28.7 (26.0-32.3) | <0.0001† |
| Diabetes, n (%) | 132 (20.9) | 237 (34.7) | <0.0001§ |
| Cholesterol, mean (SD) | 190.7 (33.4) | 186.0 (43.4) | 0.0062ǂ |
| LDL, mean (SD) | 117.3 (30.2) | 113.8 (39.4) | 0.018ǂ |
| HDL, mean (SD) | 46.7 (16.9) | 43.7 (12.5) | <0.0001ǂ |
| Triglycerides, mean (SD) | 135.2 (84.3) | 147.8 (84.0) | 0.002ǂ |
| Pathological Gleason score, n (%) |  |  | 0.637§ |
| 2-6 | 302 (35.8) | 333 (36.4) |  |
| 7 (3+4) | 348 (41.3) | 359 (39.2) |  |
| 7 (4+3)-10 | 193 (22.9) | 223 (24.4) |  |
| Positive margins, n (%) | 369 (43.8) | 354 (38.7) | 0.030§ |
| Extracapsular extension, n (%) | 153 (18.2) | 158 (17.3) | 0.628§ |
| Seminal vesicle invasion, n (%) | 74 (8.8) | 69 (7.5) | 0.343§ |
| Positive lymph nodes, n (%) | 21 (2.5) | 18 (2.0) | 0.168§ |

SD=standard deviation; Q1=25th percentile; Q3=75th percentile; PSA=prostate specific antigen; BMI=body mass index; p values calculated by ǂt-test, † Wilcoxon rank-sum or § chi-square test

Supplementary Table S2: Correlation coefficients among lipids and between lipids and BMI.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Cholesterol** | **LDL** | **HDL** | **Triglycerides** |
| **LDL** | 0.83, p<0.0001 |  |  |  |
| **HDL** | 0.21, p<0.0001 | - 0.12, p=0.001 |  |  |
| **Triglycerides** | 0.24, p<0.0001 | - 0.01, p=0.758 | - 0.33, p<0.0001 |  |
| **BMI** | 0.05, p=0.153 | 0.08, p=0.028 | - 0.27, p<0.0001 | 0.19, p<0.0001 |

Correlation coefficients calculated using Pearson’s correlation

Supplementary Table S3: Hazard ratios for lipid level categories predicting risk of biochemical recurrence after radical prostatectomy with death as a competing risk

|  |  |  |  |
| --- | --- | --- | --- |
| **Total cholesterol** | **<200 mg/dL** | **≥200 mg/dL** | **Continuous§** |
| Unadjusted | *Ref.* | 1.13 (0.90-1.43), p=0.292 | 1.02 (0.98, 1.06), p=0.318 |
| Adjusted\* | *Ref.* | 1.07 (0.83-1.37), p=0.606 | 1.02 (0.98, 1.05), p=0.416 |
| **LDL** | **<130 mg/dL** | **≥130 mg/dL** | **Continuous§** |
| Unadjusted | *Ref.* | 1.06 (0.83-1.35), p=0.651 | 1.00 (0.96, 1.04), p=0.922 |
| Adjusted\* | *Ref.* | 1.03 (0.80-1.34), p=0.801 | 1.00 (0.96, 1.04), p=0.985 |
| **HDL** | **≥40 mg/dL** | **<40 mg/dL** | **Continuous§** |
| Unadjusted | *Ref.* | 1.12 (0.89-1.41), p=0.343 | 0.98 (0.91, 1.06), p=0.661 |
| Adjusted\* | *Ref.* | 1.08 (0.84-1.39), p=0.547 | 0.97 (0.89, 1.05), p=0.397 |
| **Triglycerides** | **<150 mg/dL** | **≥150 mg/dL** | **Continuous§** |
| Unadjusted | *Ref.* | 1.15 (0.91-1.47), p=0.235 | 1.02 (1.00,1.03), p=0.011 |
| Adjusted\* | *Ref.* | 1.31 (1.01-1.69), p=0.040 | 1.02 (1.01, 1.03), p=0.003 |

Cells display *hazard ratio (95% confidence interval), p-value*

HDL=high density lipoprotein; LDL=low density lipoprotein

**§**Hazard ratios are for every 10 mg/dL increase

\*Hazard ratios are adjusted for age, race, pre-operative PSA, year of surgery, BMI, surgical center, statin use, pathological Gleason score, prostate weight, positive surgical margins, extracapsular extension, and seminal vesicle invasion

Supplementary Table S4: Hazard ratios for abnormal lipid levels predicting risk of biochemical recurrence after radical prostatectomy with death as a competing risk

|  |  |
| --- | --- |
| **Total cholesterol** | **Continuous; ≥ 200** |
| Unadjusted | 1.06 (0.97, 1.15), p=0.215 |
| Adjusted\* | 1.10 (1.02, 1.18), p=0.014 |
| **LDL** | **Continuous; ≥ 130** |
| Unadjusted | 1.01 (0.89, 1.14), p=0.878 |
| Adjusted\* | 1.06 (0.96, 1.16), p=0.256 |
| **HDL** | **Continuous; < 40** |
| Unadjusted | 0.52 (0.52, 1.06), p=0.103 |
| Adjusted\* | 0.66 (0.42, 1.01), p=0.058 |
| **Triglycerides** | **Continuous; ≥ 150** |
| Unadjusted | 1.04 (1.02, 1.06), p<0.001 |
| Adjusted\* | 1.03 (1.00, 1.05), p=0.019 |

Cells display *hazard ratio (95% confidence interval), p-value*

All hazard ratios are for every 10 mg/dL increase

HDL=high density lipoprotein; LDL=low density lipoprotein

\*Hazard ratios are adjusted for age, race, pre-operative PSA, year of surgery, BMI, surgical center, statin use, pathological Gleason score, positive surgical margins, extracapsular extension, and seminal vesicle invasion