



Ekspresi ESR-1 Berlebih Pada Kanker Prostat Metastatik

Abstrak

Latar Belakang: Studi ini bertujuan untuk membandingkan ekspresi ESR-1 pada BPH dan kanker prostat.

Metode: Sampel dikumpulkan dari satu rumah sakit selama periode tahun 2014 sampai 2020. Kami mengeluarkan sampel yang konsentrasian RNA-nya dibawah standar minimal yang diperbolehkan untuk di proses. Parafin yang terdapat di dalam formalin dihilangkan dan ekstraksi RNA dengan modifikasi yang signifikan dilakukan oleh protokol pemproduksi. Ekspresi RNA di investigasi dengan RT PCR kuantitatif . kami mengkategorikan *Benign Prostate Hyperplasia* (BPH), *Non-Metastatic Prostate Cancer* (Non-MPCa) dan grup *Metastatic Prostate Cancer* (MPCa). Analisa data menggunakan One Way ANOVA.

Hasil: 40 sampel termasuk 15 BPH, 6 *Non-Metastatic Prostate Cancer*, 19 *Metastatic Prostat Cancer*. Ekspresi ESR1 pada BPH (6.9 ± 3.8) dibandingkan dengan ekspresi ESR1 pada MPCa (12.7 ± 9.5) dan Non- MPCa (2.6 ± 1.0) menunjukkan perbedaan yang signifikan. Ekspresi ESR1 pada Non-MPCa dibandingkan MPCa juga menunjukkan perbedaan yang signifikan yang mana pada ekspresi MPCa menunjukkan kenaikan level ekspresi ESR1.

Kesimpulan: Studi ini menunjukkan bahwa terdapat perbedaan ekspresi yang signifikan pada *Benign Prostatic Hyperplasia*, *Non-Metastatic Prostate Cancer*, dan *Metastatic Prostate Cancer*

Kata kunci: Kanker Prostat, Benign Prostatic Hyperplasia, ESR-1, ESR- α



ESR-1 Overexpressed in Metastatic Prostate Cancer

Abstract

Introduction : This study aims to compare the expression of ESR-1 in BPH and prostate cancer.

Methods : The samples were collected from single-center hospital in a period from 2014 to 2020. We exclude samples which RNA concentration is under the minimum standard allowance to proceed. Deparaffinize formalin-fixed paraffin-embedded and RNAs extraction by manufacturer's protocol with slight modification was performed. The RNA expression was investigated by using quantitative real-time polymerase chain reaction. We categorized into Benign Prostate Hyperplasia (BPH), Non-Metastatic Prostate Cancer (Non-MPCa) and Metastatic Prostate Cancer (MPCa) group. The One Way ANOVA was used to analyze the data.

Result : The 40 samples included 15 BPH, 6 non-metastatic prostate cancer, 19 metastatic prostate cancer. Expression of ESR1 in BPH (6.9 ± 3.8) compared to expression ESR1 in MPCa (12.7 ± 9.5) and Non-MPCa (2.6 ± 1.0) shows a significant difference. Expression of ESR1 in Non-MPCa compared to MPCa also shows a significant difference in which expression MPCa shows an increased level of ESR1 expression.

Conclusion : This study shows that ESR 1 has significant expression differences in Benign Prostatic Hyperplasia, non-Metastatic Prostate Cancer, and Metastatic Prostate Cancer. The highest ESR1 expression is found in Metastatic Prostate Cancer. In conclusion, higher ESR1 expression is related to metastatic in prostate cancer.

Keyword : Prostate Cancer, Benign Prostatic Hyperplasia, ESR-1, ESR- α