

# Korelasi perubahan kurva kinetik pada magnetic resonance imaging dengan perubahan ukuran tumor sebagai penanda respons tumor pasca kemoterapi neoadjuvan pasien kanker payudara = correlation of kinetic curve gradient degree changes and tumor size changes in magnetic resonance imaging as a tumor response marker for neoadjuvant chemotherapy in breast cancer patients

Laila Rose Foresta, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20367198&lokasi=lokal>

---

## Abstrak

[Penelitian ini bertujuan mencari penanda respons tumor yang lebih dini untuk kemoterapi neoadjuvan pada kasus kanker payudara stadium lanjut, yaitu dengan mengkorelasikan derajat kemiringan washout fase delay kurva kinetik pada pemeriksaan DCE-MRI dengan perubahan ukuran tumor kanker payudara. Perubahan neovaskularisasi sudah dapat dinilai sejak 24 jam pertama setelah pemberian kemoterapi siklus pertama, sedangkan pengukuran tumor umumnya paling baik dinilai setelah kemoterapi neoadjuvan siklus ketiga. Penelitian ini merupakan studi deskriptif analitik dari data sekunder MRI payudara mulai Agustus 2011 hingga April 2013. Analisa korelasi perubahan derajat kemiringan washout fase delay kurva kinetik DCE-MRI dengan perubahan ukuran tumor sebelum dan sesudah pemberian kemoterapi neoadjuvan awal, dilakukan dengan uji korelasi Pearson. Hasil analisa menunjukkan tidak ada korelasi yang bermakna ( $r=0,151$ ,  $p=0,622$ ) antara perubahan sudut kemiringan washout fase delay kurva kinetik dengan perubahan ukuran tumor sebelum dan setelah pemberian kemoterapi neoadjuvan, sehingga dapat disimpulkan bahwa parameter perubahan sudut kemiringan washout secara tunggal tidak dapat berfungsi sebagai penanda respons tumor kemoterapi neoadjuvan. Hal ini dikarenakan respons tumor merupakan proses yang multifaktorial sehingga perubahan sudut gradien washout saja secara langsung tidak dapat menunjukkan respons yang terjadi pasca kemoterapi neoadjuvan.; This study assessed the possibility of a faster tumor response marker for neoadjuvant chemotherapy (NAC) by correlating the changes in kinetic curve washout gradient degree on the delayed phase of DCE-MRI after the first cycle, with changes in tumor size after the third cycle, as well as their roles in assessing tumor response for NAC. Studies show that changes in tumor size after the third NAC can be used to detect tumor response, whereas neovascularization changes with DCE-MRI can be detected as fast as 24 hours after the first cycle of chemotherapy. This is an analytic study using breast MR data obtained between August 2011 until April 2013. Analysis of the correlation between changes in kinetic curve washout gradient with changes in tumor size before and after NAC was performed using the Pearson correlation test. Based on the correlation analysis results, there is no significant correlation ( $r=0,151$ ,  $p=0.622$ ) between the change in the angle of the washout kinetic curve gradient with the changes in tumor size before and after NAC. This concludes that changes in the degree of the washout angle alone cannot serve as a marker of tumor response to NAC, due of the multifactorial variables that take part in the process, and the kinetic curve alone is not sufficient to directly evaluate response.; This study assessed the possibility of a faster tumor response marker for neoadjuvant chemotherapy (NAC) by correlating the changes in kinetic curve washout gradient degree on the delayed phase of DCE-MRI after the first cycle, with changes in tumor size after the third cycle, as well as their roles in assessing tumor response for NAC. Studies show that changes in tumor size after the third NAC can be used to detect tumor response, whereas

neovascularization changes with DCE-MRI can be detected as fast as 24 hours after the first cycle of chemotherapy. This is an analytic study using breast MR data obtained between August 2011 until April 2013. Analysis of the correlation between changes in kinetic curve washout gradient with changes in tumor size before and after NAC was performed using the Pearson correlation test. Based on the correlation analysis results, there is no significant correlation ( $r=0,151$ ,  $p=0.622$ ) between the change in the angle of the washout kinetic curve gradient with the changes in tumor size before and after NAC. This concludes that changes in the degree of the washout angle alone cannot serve as a marker of tumor response to NAC, due of the multifactorial variables that take part in the process, and the kinetic curve alone is not sufficient to directly evaluate response., This study assessed the possibility of a faster tumor response marker for neoadjuvant chemotherapy (NAC) by correlating the changes in kinetic curve washout gradient degree on the delayed phase of DCE-MRI after the first cycle, with changes in tumor size after the third cycle, as well as their roles in assessing tumor response for NAC. Studies show that changes in tumor size after the third NAC can be used to detect tumor response, whereas neovascularization changes with DCE-MRI can be detected as fast as 24 hours after the first cycle of chemotherapy. This is an analytic study using breast MR data obtained between August 2011 until April 2013. Analysis of the correlation between changes in kinetic curve washout gradient with changes in tumor size before and after NAC was performed using the Pearson correlation test. Based on the correlation analysis results, there is no significant correlation ( $r=0,151$ ,  $p=0.622$ ) between the change in the angle of the washout kinetic curve gradient with the changes in tumor size before and after NAC. This concludes that changes in the degree of the washout angle alone cannot serve as a marker of tumor response to NAC, due of the multifactorial variables that take part in the process, and the kinetic curve alone is not sufficient to directly evaluate response.]