

## Intisari

# HUBUNGAN TRANSFUSI DARAH PERIOPERATIF DENGAN MORTALITAS KANKER BULI PADA PASIEN PASCA RADIKAL SISTEKTOMI

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## Latar Belakang

Tranfusi darah perioperatif berhubungan dengan dampak buruk yang berujung pada mortalitas beberapa kasus pasien dengan keganasan. Mekanisme yang menjelaskan hal tersebut adalah menurunnya imunitas *host* yang disebabkan oleh obat – obatan anastesi dan opioid, serta meningkatnya pelepasan sel – sel tumor yang bersirkulasi selama pembedahan. Hal tersebut berpotensi untuk menyebabkan *outcome* yang buruk selama pasien menjalani transfusi perioperatif.

## Tujuan

Mengevaluasi hubungan antara waktu transfusi darah dan kelangsungan hidup pasien kanker kandung kemih yang menjalani radikal sistektomi. Untuk mengukur perbedaan hasil antara pasien yang menjalani transfusi darah perioperatif dan pasien yang menjalani transfusi darah setelah operasi.

## Metode

Penelitian ini adalah penelitian analitik prospektif dengan desain *cross sectional*. Tiga puluh pasien dengan tumor kandung kemih yang melakukan radikal sistektomi dimasukkan dalam data penelitian. *Recurrent Free Survival* (RFS), *Cancer Specific Survival* (CSS) dan *Overall Survival* (OS) dianalisis dengan metode *Kaplan-Meier* dan dibandingkan antara kohort dengan tes *log-rank*. Uji *chi-square* digunakan untuk evaluasi perbandingan masing-masing kelompok.

## Hasil

Dari total 29 pasien yang menjalani kistektomi radikal, 22 pasien menerima transfusi darah perioperatif. 17 pasien menjalani transfusi intraoperatif, sedangkan sisanya menjalani transfusi setelah operasi. Rerata kehilangan darah 1491 cc dan rata-rata *survival rate* adalah 13,2 bulan.

## Kesimpulan

Transfusi darah intraoperatif secara signifikan terkait dengan peningkatan risiko kematian akibat kanker. Investigasi lebih lanjut diperlukan untuk menentukan mekanisme biologis yang mendasari hasil pasien.

**Kata kunci :** Kanker Kandung Kemih, radikal sistektomi, transfusi darah, mortalitas

## Abstract

# THE RELATIONSHIP OF PERIOPERATIVE BLOOD TRANSFUSION WITH BLADDER CANCER MORTALITY IN RADICAL CYSTECTOMY PATIENTS

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## **Background**

Perioperative blood transfusion is associated with adverse effects that lead to mortality in some cases of patients with malignancy. The mechanism that explains this is the decrease in host immunity caused by anesthetic drugs and opioids, and the increased release of tumor cells that circulate during surgery. This has the potential to cause a bad outcome for patients undergoing perioperative transfusion.

## **Objective**

To evaluate the relationship between blood transfusion timings and survival of patients with bladder cancer who undergo radical cystectomy. To measure the differences in outcomes between patients undergoing perioperative blood transfusion and patients undergoing blood transfusion after surgery.

## **Methods**

This research is a prospective analytic study with cross sectional design. Thirty patients with bladder tumors who performed radical cystectomy and did not undergo perioperative chemotherapy were included in the study data. Recurrence-free survival (RFS), cancer-specific survival (CSS) and overall survival (OS) were analyzed by the Kaplan-Meier method and compared between cohorts with log-rank tests. Chi-square test was used for comparison evaluation of each group.

## **Results**

From the total of 29 patients who had the radical cystectomy, 22 patients received perioperative blood transfusion. The 17 patients had the transfusion intraoperatively, while the rest had the transfusion after the operation. The mean of blood loss were 1491 cc and mean of survival were 13,2 months.

## **Conclusion**

Intraoperative blood transfusion is significantly associated with an increased risk of cancer mortality. Further investigation is needed to determine the biological mechanisms underlying patient outcomes.

**Keyword :** Bladder Cancer, Radical cystectomy, blood transfusion, mortality