

# Quality of Life after Donor Nephrectomy for Living Donor Kidney Transplantation at Srinagarind Hospital

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**Objective:** To determine the quality of life (QoL) of donors who have undergone nephrectomy for living donor kidney transplantation at Srinagarind Hospital, using the Thai version of the Short-Form, 36-item, health survey (SF-36).

**Material and Method:** The SF-36 questionnaires were sent by mail to 93 living donors who underwent nephrectomy between Jan 1, 1990 and Dec 31, 2008. The first part collected demographic data and the donor/recipient relationship, the second surveyed QoL, and the third asked about decision-making, donation-related stress and feedback.

**Results:** Forty-nine questionnaires were returned completed (30 women; 19 men: mean age  $44.2 \pm 9.5$  (range, 28-65) years). Thirty-one participants (61%) were siblings of the recipients. The QoL scores were not significantly different from the general Thai population; albeit nominally higher for mental health and social function. Upon reflection, only 5 (10%) had second thoughts.

**Conclusion:** Donor nephrectomy did not affect QoL; thus, from that perspective living kidney transplantation is a suitable procedure for donors.

**Keywords:** QoL, Renal transplantation, SF-36

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Kidney transplantation is currently the best treatment for patients with end-stage renal disease. The limitation of cadaveric kidneys for transplantation is the long waiting time for a healthy, matched organ. Living donors, therefore, is a rescue for these patients. Many reports stated that living kidney donor surgery appears to be safe, with both low morbidity and mortality<sup>(1-3)</sup>.

The short-form, 36-item, health survey (SF-36) is a standardized questionnaire for measuring quality of life (QoL)<sup>(4)</sup>. Johnson et al<sup>(5)</sup> utilized the SF-36 for the multivariate analysis and discovered that most living donors enjoyed an excellent QoL. Here in, the authors use the SF-36 questionnaire to survey the QoL of kidney donors to assess any psychological and sociological sequelae after kidney donation.

## Material and Method

A total of 93 living donors underwent

nephrectomy at Srinagarind Hospital, Khon Kaen University, between January 1, 1990 and December 31, 2008. The questionnaires were sent to the kidney donors by post-mail. The questionnaire contained three parts: (1) demographic data and relationship between the donor and recipient; (2) the SF-36 health survey to determine QoL; and, (3) decision-making vis-a-vis (*i.e.*, second thoughts and/or reservations), donation-related stress and feedback.

**Table 1.** Donor characteristics

No. of donors	48
Males	18
Females (%)	30
Age, mean (yr)	44.2 (28-65)
Education	
Completed primary school	19
High school	10
Bachelor degree	19
Relation to recipient	
Sibling	31
Parent	3
Offspring	8
Spouse	6

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**Results**

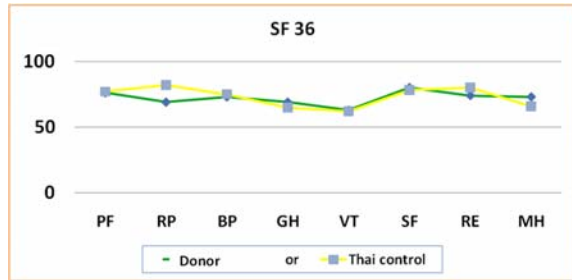
More than half of the questionnaires were completed and returned (49 donors: 30 women and 19 men). The mean age of respondents was 44.2 ± 9.5 years (range, 28-65). Most (65%) of respondents were siblings of the recipients.

According to SF-36, the respective mean for Physical function (PF), Role physical (RP), Body pain (BP), General health (GH), Vitality (VT), Social function (SF), Role emotional (RE) and Mental health (MH) was 76.4 ± 14.1, 69.8 ± 37, 73.4 ± 24.1, 69.3 ± 22.3, 63.9 ± 16.7, 79.5 ± 19.2, 73.8 ± 38.1 and 73.2 ± 16.2 (Table 2).

Most of the donors (90%) were satisfied with their decision, while 5 of them (10%) had second thoughts or reservations.

**Discussion**

Several studies indicated that living-donor kidney donations does not negatively affect the QoL<sup>(6-11)</sup>. The results of the current study are similar to a study conducted by Sam-ang et al<sup>(12)</sup> in which there was no significant difference in QoL between donors and the general Thai population (Fig. 1). Surprisingly, the QoL score for kidney donors was nominally higher in some categories (*viz.*, for mental health and social function); adding to the evidence that living kidney donation has a positive effect on donor QoL, as noticed



**Fig. 1** Comparison of QoL for the general Thai population and kidney donors

**Table 2.** SF-36: QOL results

	Mean	SD	Min	Max
Physical function (PF)	76.4	14.1	52.2	97.7
Role physical (RP)	69.8	37.2	0	100
Body pain (BP)	73.4	24.1	10	100
General health (GH)	69.3	22.3	5	100
Vitality (VT)	63.9	16.7	30	100
Social function (SF)	79.5	19.2	25	100
Role emotional (RE)	73.8	38.1	0	100
Mental health (MH)	73.2	16.2	44	100

by Shuji et al<sup>(9)</sup>. The reason for this positive outcome cannot be deduced from the current data.

The response rate to the questionnaire was 53% of 93 donors at Srinagarind Hospital. This relatively small number limits the generalizability of the conclusions on the real effect of living donor nephrectomy in Thailand. A large prospective multi center study should be done to determine the QoL among living kidney donors.

**Conclusion**

The SF-36 score indicated a trend of no significant difference in QoL between living kidney donors at Srinagarind Hospital and the general Thai population. It can tentatively be asserted that donor nephrectomy has no measureable negative effect on donor QoL; thus, living kidney transplantation should be considered when appropriate.

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**Potential conflicts of interest**

None.

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## คุณภาพชีวิตหลังการผ่าตัดเอาไตออกเพื่อใช้ในการปลูกถ่ายไตในโรงพยาบาลศรีนครินทร์

วรากร จำแสนชื่น, วิเชียร ศิริธนะพล, เอกรินทร์ โชติกวาณิชย์, ศิริ เชื้ออินทร์, ขจิตร์ พาชีรัตน์,  
ทองอวบ อุดรวิเชียร

**วัตถุประสงค์:** เพื่อศึกษาคุณภาพชีวิตของผู้บริจาคไตที่เข้ารับการผ่าตัดเอาไตออกเพื่อใช้ในการปลูกถ่ายไตในโรงพยาบาลศรีนครินทร์ โดยการใช้แบบสอบถาม SF-36 ฉบับภาษาไทย

**วัสดุและวิธีการ:** ทำการส่งแบบสอบถาม SF-36 ทางจดหมาย ให้แก่ผู้บริจาคไตที่เข้ารับการผ่าตัดเอาไตออกในช่วงวันที่ 1 มกราคม พ.ศ. 2543 ถึง 31 ธันวาคม พ.ศ. 2551 ส่วนแรกของแบบสอบถามคือข้อมูลพื้นฐานและความสัมพันธ์ระหว่างผู้รับและผู้บริจาคไต ส่วนที่สองศึกษาเกี่ยวกับคุณภาพชีวิตและส่วนที่สามสอบถามเกี่ยวกับการตัดสินใจ ความเครียดที่เกิดขึ้นจากการบริจาคไตและข้อเสนอแนะอื่นๆ

**ผลการศึกษา:** ผู้บริจาคไต 49 คน ได้ตอบแบบสอบถามและส่งกลับ เป็นผู้บริจาคไตเพศหญิง 30 คน อายุเฉลี่ยเท่ากับ  $44.2 \pm 9.5$  ปี (28-65 ปี) ผู้บริจาคไตส่วนมาก (31 คน, 65%) เป็นพี่น้องกับผู้ที่ได้รับบริจาคคะแนคุณภาพชีวิตของผู้บริจาคไตไม่ได้มีความแตกต่างอย่างมีนัยสำคัญ เมื่อเทียบกับประชากรทั่วไปของประเทศไทยและยังมีค่าคะแนนสูงกว่าในหัวข้อเรื่องสภาพจิตใจและหน้าที่ทางสังคม มีผู้บริจาคไต 5 คน (10%) มีความต้องการที่จะเก็บไตไว้

**สรุป:** การผ่าตัดเอาไตออกไม่ได้ ส่งผลกระทบต่อคุณภาพชีวิตของผู้บริจาคไต ดังนั้นการผ่าตัดปลูกถ่ายไตจากผู้บริจาคที่มีชีวิตยังเป็นทางเลือกที่เหมาะสมสำหรับผู้บริจาคไต

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