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ALLERGY  
ANESTHESIOLOGY  
CARDIAC & CARDIOVASCULAR SYSTEMS  
CLINICAL NEUROLOGY  
CRITICAL CARE MEDICINE  
DENTISTRY, ORAL SURGERY & MEDICINE  
DERMATOLOGY  
EMERGENCY MEDICINE  
ENDOCRINOLOGY & METABOLISM  
ENVIRONMENTAL SCIENCES  
GASTROENTEROLOGY & HEPATOLOGY  
GERIATRICS & GERONTOLOGY  
HEALTH CARE SCIENCES & SERVICES  
HEMATOLOGY  
IMMUNOLOGY  
INFECTIOUS DISEASES  
INTEGRATIVE & COMPLEMENTARY MEDICINE  
MEDICINE, GENERAL & INTERNAL  
MEDICINE, RESEARCH & EXPERIMENTAL  
NEUROSCIENCES  
NURSING  
NUTRITION & DIETETICS  
OBSTETRICS & GYNECOLOGY  
ONCOLOGY  
OPHTHALMOLOGY  
ORTHOPEDECS  
OTORHINOLARYNGOLOGY  
PATHOLOGY  
PEDIATRICS  
PERIPHERAL VASCULAR DISEASE  
PHARMACOLOGY & PHARMACY  
PSYCHIATRY  
PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH  
RADIOLOGY, NUCLEAR MEDICINE & MEDICAL IMAGING  
REHABILITATION  
REPRODUCTIVE BIOLOGY  
RESPIRATORY SYSTEM  
RHEUMATOLOGY  
SURGERY  
TOXICOLOGY  
TRANSPLANTATION  
TROPICAL MEDICINE  
UROLOGY & NEPHROLOGY  
VIROLOGY  
SUBSTANCE ABUSE

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Supplementary Table 2. Journals selected for the investigation in this study.

2013 impact factor 6 or over	4-<6	2-<4	Under 2
NEW ENGL J MED	ENVIRON MODELL SOFTW	TOXICON	TURK GOGUS KALP DAMA
LANCET	PEDIATRICS	J NEUROL SCI	RENAL FAILURE
JAMA-J AM MED ASSOC	PSYCHO-ONCOLOGY	AM J NEURORADIOL	ENVIRON MONIT ASSESS
J CLIN ONCOL	EXP NEUROL	PHYTOTHER RES	ZH NEVROL PSIKHIATR
BMJ-BRIT MED J	ALIMENT PHARM THER	INT J TUBERC LUNG D	ANIM REPROD SCI
NEURON	PLOS NEGLECT TROP D	J UROLOGY	NEUROL SCI
ENERG ENVIRON SCI	AM J OBSTET GYNECOL	AGR ECOSYST ENVIRON	J EMERG MED
J AM COLL CARDIOL	AM J PATHOL	EXP CELL RES	ENVIRON TOXICOL PHAR
NAT NEUROSCI	PAIN	DIABETES RES CLIN PR	BRAIN INJURY
CIRCULATION	INT J RADIAT ONCOL	OBES SURG	BMC PEDIATR
EUR HEART J	J AM MED INFORM ASSN	J VISION	AM J MED SCI
SCI TRANSL MED	THROMB HAEMOSTASIS	AM J INFECT CONTROL	WATER SCI TECHNOL
GASTROENTEROLOGY	J THROMB HAEMOST	ENVIRON TOXICOL CHEM	J STROKE CEREBROVASC
J EXP MED	ARTHRIT CARE RES	DRUG ALCOHOL DEPEN	CLINICS
J CLIN INVEST	EUR J CANCER	ECOL ECON	PROG UROL
AM J RESP CRIT CARE	AM J RESP CELL MOL	BMC NEUROL	ENVIRON SCI-PROC IMP
J ALLERGY CLIN IMMUN	PSYCHOL MED	VIRUS RES	J VIROL METHODS
HEPATOLOGY	BRIT J PHARMACOL	BIOL REPROD	BURNS
CIRC RES	AM J EPIDEMIOL	EUR J GASTROEN HEPAT	J NEUROSCI METH
J HEPATOL	RESUSCITATION	APPL CATAL A-GEN	J ORAL MAXIL SURG
NEUROSCI BIOBEHAV R	MOVEMENT DISORD	BREAST	PAK J MED SCI
BRAIN	BIOCHEM PHARMACOL	J NEURO-ONCOL	INT J ORAL MAX IMPL
BLOOD	NEUROBIOL AGING	SPINE J	ANN VASC SURG
BIOL PSYCHIAT	AM J KIDNEY DIS	EUR J PHARM SCI	KARDIOL POL
CLIN INFECT DIS	J TRANSL MED	TRANSPLANTATION	J CARDIOTHOR VASC AN
LEUKEMIA	GASTROINTEST ENDOSC	J PHARMACEUT BIOMED	CHINESE MED J-PEKING
CANCER RES	HAEMATOLOGICA	BMC PREGNANCY CHILDB	RHEUMATOL INT
ANN RHEUM DIS	RHEUMATOLOGY	AM J TROP MED HYG	B ENVIRON CONTAM TOX
DIABETES CARE	PROG NEURO-PSYCHOPH	J ENVIRON MANAGE	SUSTAINABILITY-BASEL
ONCOGENE	CLIN J AM SOC NEPHRO	TOXICOL IN VITRO	BONE JOINT J
KIDNEY INT	J AM COLL SURGEONS	MAGN RESON IMAGING	INT J CLIN EXP PATHO
DIABETES	J THORAC CARDIOV SUR	CORNEA	FOOT ANKLE INT
CEREB CORTEX	AM J SURG PATHOL	CHEMOSPHERE	EUR J OBSTET GYN R B
NEUROLOGY	REMOTE SENS ENVIRON	GEN COMP ENDOCR	ENVIRON MANAGE
GLOBAL CHANGE BIOL	J NUTR	CLIN ORAL IMPLAN RES	INT J GYNECOL CANCER
CLIN CANCER RES	OBESITY	BRIT J OPHTHALMOL	SURG TODAY
PLOS PATHOG	EUR RADIOL	TOXICOL APPL PHARM	ONCOL LETT
ARTHRITIS RHEUM-US	J AM ACAD DERMATOL	AM J CARDIOL	INTERNAL MED
NEUROPSYCHOPHARMACOL	INT J OBESITY	CLIN VACCINE IMMUNOL	J DRUGS DERMATOL
ANTIOXID REDOX SIGN	PHARM RES-DORDR	SLEEP MED	SKELETAL RADIOL
HYPERTENSION	J PHYSIOL-LONDON	CLIN EXP RHEUMATOL	PHARM BIOL
EMERG INFECT DIS	BIOL CONSERV	MOL VIS	PEDIATR EMERG CARE
BMC MED	ARTERIOSCL THROM VAS	J AM HEART ASSOC	PEDIATR CARDIOL
J CONTROL RELEASE	ENVIRON POLLUT	FOOD CHEM TOXICOL	EMERG MED J
ANN SURG	J NEUROCHEM	EUR J PHARMACOL	J CRANIOFAC SURG
STEM CELLS	ATHEROSCLEROSIS	ACTA TROP	AM J EMERG MED
CHEST	HUM REPROD	SPINE	ANTICANCER RES
EUR RESPIR J	AM HEART J	FRONT HUM NEUROSCI	ACTA NEUROCHIR
ENVIRON HEALTH PERSP	BREAST CANCER RES TR	MAGN RESON MED	PEDIATR RADIOL
HUM BRAIN MAPP	J CEREBR BLOOD F MET	NEUROSCIENCE	HEPATO-GASTROENTEROL
AM J CLIN NUTR	FERTIL STERIL	CURR MED CHEM	J CLIN NEUROSCI
DIABETOLOGIA	CAN J CARDIOL	J SEX MED	ACTA PAEDIATR
J NEUROSCI	RADIOTHER ONCOL	NUTRIENTS	INDIAN J SURG
J BONE MINER RES	J AM GERIATR SOC	NEPHROL DIAL TRANSPL	RESP PHYSIOL NEUROBI
ANN ONCOL	TOXICOL SCI	FRONT NEURAL CIRCUIT	DEUT MED WOCHENSCHR
AIDS	BONE	PRENATAL DIAG	J MATERN-FETAL NEO M
CLIN GASTROENTEROL H	LIVER INT	J GEN INTERN MED	INT J MED SCI
MOL THER	ENVIRON RES LETT	ARTHROSCOPY	INT J ENDOCRINOL
J INVEST DERMATOL	BRIT J ANAESTH	INT J ONCOL	OTOL NEUROTOL
J CLIN ENDOCR METAB	INFECT IMMUN	ENVIRON SCI POLLUT R	INT J PEDIATR OTORHI
RADIOLOGY	HEALTH AFFAIR	TRIALS	TERAPEVT ARKH
AM J TRANSPLANT	CANCER-AM CANCER SOC	INVEST OPHTH VIS SCI	ANZ J SURG
INT J CARDIOL	OSTEOPOROSIS INT	ARCH VIROL	J KOREAN MED SCI
OPHTHALMOLOGY	CANCER EPIDEM BIOMAR	AM J ROENTGENOL	OR SURG OR MED OR PA
ANESTHESIOLOGY	PSYCHOPHARMACOLOGY	UROL ONCOL-SEMIN ORI	J OBSTET GYNAECOL
CRIT CARE MED	ADDICTION	AM J PHYSIOL-GASTR L	IRAN J PUBLIC HEALTH
NEUROIMAGE	NEUROPHARMACOLOGY	QUAL LIFE RES	OTOLARYNG HEAD NECK
MOL CANCER THER	INT J CANCER	COLORECTAL DIS	J PAEDIATR CHILD H
CORTEX	J NUTR BIOCHEM	VIROL J	BMC COMPLEM ALTERN M
HEART	MOL CELL ENDOCRINOL	WASTE MANAGE	BRIT J ORAL MAX SURG
STROKE	MOL PHARMACOL	EUR J CLIN PHARMACOL	J ENVIRON SCI-CHINA

Supplementary Table 3. Example of multivariate analysis: logistic regression analysis for recurrence after surgery of hypothetical cancer with potential prognostic factors.

Univariate Analysis

Potential prognostic factors	P value	Odds ratio	95% Confidence Interval	
			Lower	Upper
Adjuvant chemotherapy	0.101	0.45	0.17	1.17
Lymph node metastasis	<0.001	8.31	2.88	24.00
Biomarker positive	<0.001	17.11	5.38	54.39

Multivariate Analysis

Potential prognostic factors	P value	Odds ratio	95% Confidence Interval		P value	Odds ratio	95% Confidence Interval	
			Lower	Upper			Lower	Upper
Multivariate analysis 1					Multivariate analysis 2			
Using only significant variables in univariate analysis					Using all potential prognostic factors			
Adjuvant chemotherapy		Not included			0.015	0.14	0.03	0.69
Lymph node metastasis	0.005	6.08	1.72	21.51	0.001	12.60	2.67	59.42
Biomarker positive	<0.001	13.77	3.99	47.48	<0.001	16.05	4.11	62.69
Multivariate analysis 3					Multivariate analysis 4			
Adjuvant chemotherapy + Lymph node metastasis					Adjuvant chemotherapy + Biomarker positive			
Adjuvant chemotherapy	0.013	0.18	0.05	0.70	0.093	0.35	0.10	1.19
Lymph node metastasis	<0.001	15.63	4.03	60.61		Not included		
Biomarker positive		Not included			<0.001	18.92	5.61	63.89

Inappropriate conclusion about adjuvant chemotherapy:

With multivariate analysis 1, adjuvant chemotherapy has no effect.

Desirable conclusion about adjuvant chemotherapy:

With multivariate analyses 2 to 4, adjuvant chemotherapy was inversely associated with recurrence after adjustment for lymph node metastasis.

Lymph node metastasis was a stronger confounder for the association between adjuvant chemotherapy and recurrence than the biomarker.

Supplementary Table 4. Cross-tabulation table for the association between adjuvant chemotherapy and recurrence stratified by lymph node metastasis for hypothetical cancer.

Lymph node metastasis		No recurrence		recurrence		Total
		Number	%	Number	%	Number
Absent	Without adjuvant chemotherapy	22	73.3%	8	26.7%	30
	With adjuvant chemotherapy	22	91.7%	2	8.3%	24
	Total	44	81.5%	10	18.5%	54
Present	Without adjuvant chemotherapy	1	10.0%	9	90.0%	10
	With adjuvant chemotherapy	8	50.0%	8	50.0%	16
	Total	9	34.6%	17	65.4%	26
Overall	Without adjuvant chemotherapy	23	57.5%	17	42.5%	40
	With adjuvant chemotherapy	30	75.0%	10	25.0%	40
	Total	53	66.3%	27	33.8%	80

Chi-square test for 2x2 table without stratification (Overall):  $P = 0.098$

Odds ratio: 0.45 95% Confidence Interval 0.17-1.17

Mantel-Haenszel test for stratified analysis:  $P = 0.013$

Common odds ratio: 0.19 95% Confidence Interval 0.05-0.71