Lab Assignment 1

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| Abstract # | Title | Word Count | #Words (Verified by WordNet) | #Medical Words  (Verified by Bioportal / BioNLP)  All (Gene/Species/etc) |
| 1 | Prognostic role of beclin-1 in locally advanced non-small cell lung cancer in patients receiving docetaxel-platinum induction chemotherapy. | 65 | 31 | 0 |
| 2 | Exosomal miR-27a Derived from Gastric Cancer Cells Regulates the Transformation of Fibroblasts into Cancer-Associated Fibroblasts. | 59 | 30 | 0 |
| 3 | Dosimetric superiority of IMRT with jaw tracking technique for whole esophagus and T-shaped field radiotherapy in advanced esophageal cancer. | 49 | 28 | 0 |
| 4 | Method for optimizing planning target volume margin for patients receiving lung stereotactic body radiotherapy. | 305 | 119 | 0 |
| 5 | An augmented correlation framework for the estimation of tumour translational and rotational motion during external beam radiotherapy treatments using intermittent monoscopic X-ray imaging and an external respiratory signal. | 295 | 128 | 0 |
| 6 | Sodium chloride (NaCl) potentiates digoxin-induced anti-tumor activity in small cell lung cancer. | 43 | 24 | 0 |
| 7 | Brain microvascular endothelial cell exosome-mediated S100A16 up-regulation confers small-cell lung cancer cell survival in brain. | 344 | 127 | 0 |
| 8 | Limbic encephalitis associated with antibodies against the a-Amino-3-Hydroxy-5-Methyl-4-Isoxazolepropionic acid receptor: a case report. | 130 | 53 | 0 |
| 9 | Proteogenomic systems analysis identifies targeted therapy resistance mechanisms in EGFR-mutated lung cancer. | 181 | 91 | 0 |
| 10 | |Rapalog combined with CCR4 antagonist improves anticancer vaccines efficacy. | 98 | 39 | 0 |

Abstract 1

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| --- | --- | --- |
| Type | Count | Examples ( Even List all words Depending on the Size) |
| POS : Noun | 28 | outcome, treatment, cell, lung, cancer, NSCLC, therapies, induction, chemotherapy, IC, results, study, significance, excision, repair, cross-complementation, group, ERCC1, beclin-1, protein, mass, GRP78, patients, NSCLC, docetaxel-platinum, IC, efficacy, safety, |
| POS:Verb | 6 | remains, yielding, aimed, assess, advanced, receiving, |
| NER : Name | 0 |  |
| Triplet | 4 | [(outcome,remains with,therapies,1.0), (outcome,remains,poor,1.0)]  [(patients,is with,locally advanced NSCLC,1.0), (clinicopathologic significance,is in,patients with locally advanced NSCLC receiving,1.0)]  Count:4 |

Abstract2

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| --- | --- | --- |
| Type | Count | Examples ( Even List all words Depending on the Size) |
| POS : Noun | 20 | behavior, cancer, GC, cancer, cells, microenvironment, Fibroblasts, proportion, components, tumor, microenvironment, development, disease, evidence, exosomes, transport, systems, contents, microRNAs, miRNAs, |
| POS:Verb | 9 | is, determined, regulated, represent, promote, accumulating, suggests, function, relay, |
| NER : Name | 0 |  |
| Triplet | 20 | [(Fibroblasts,represent,large proportion,1.0), (Fibroblasts,represent,large proportion of components in tumor microenvironment,1.0), (Fibroblasts,represent,proportion of components,1.0), (Fibroblasts,represent,proportion in tumor microenvironment,1.0), (they,promote,development of disease,1.0), (Fibroblasts,represent,proportion,1.0), (they,development of,disease,0.6353417089450191), (large proportion,is in,tumor microenvironment,1.0), (Fibroblasts,represent,proportion of components in tumor microenvironment,1.0), (they,promote,development,1.0), (Fibroblasts,represent,large proportion in tumor microenvironment,1.0), (Fibroblasts,represent,large proportion of components,1.0)]  [(exosomes,function microRNAs as,transport systems,1.0), (exosomes,function as,transport systems,0.056389717451277965), (microRNAs,relay,their contents,1.0), (exosomes,function,especially microRNAs,1.0), (exosomes,function,miRNAs,1.0), (exosomes,function microRNAs as,intercellular transport systems,1.0), (exosomes,function,microRNAs,1.0), (exosomes,function as,intercellular transport systems,0.056389717451277965)]  Count:20 |

Abstract 3

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| --- | --- | --- |
| Type | Count |  |
| POS : Noun | 22 | esophagus, field, radiotherapy, intensity, radiotherapy, IMRT, technique, esophageal, cancer, doses, lung, heart, challenge, aim, study, superiority, IMRT, jaw, tracking, technique, esophagus, radiotherapy, |
| POS:Verb | 7 | using, modulated, absorbed, remains, was, investigate, plans, |
| NER : Name | 0 |  |
| Triplet | 12 | [(doses,remains,challenge,1.0), (lower doses,remains,challenge,1.0), (absorbed doses,remains,challenge,1.0), (lower absorbed doses,remains,challenge,1.0)]  [(aim,was,investigate,1.0), (dosimetric superiority,plans with,jaw tracking technique for whole esophagus radiotherapy,1.0), (superiority,plans with,jaw tracking technique,1.0), (superiority,plans with,jaw tracking technique for whole esophagus radiotherapy,1.0), (superiority,plans with,jaw tracking technique for esophagus radiotherapy,1.0), (dosimetric superiority,plans with,jaw tracking technique for esophagus radiotherapy,1.0), (dosimetric superiority,plans with,jaw tracking technique,1.0), (dosimetric superiority,is in,IMRT,1.0)]  Count:12 |

Abstract 4

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| --- | --- | --- |
| Type | Count |  |
| POS : Noun | 111 | Lung, radiotherapy, SBRT, requirements, accuracy, approaches, treatment, planning, tumour, volume, planning, target, volume, PTV, dose, dose, delivery, uncertainties, treatment, technique, PTV, expansion, patient, population, method, image, registration, DIR, planning, CT, treatment, CT, CBCT, transformation, target, treatment, geometry, computation, target/PTV, validation, method, motion, self-validation, technique, estimation, DIR, error, data, workflow, PTV, margin, patients, fractions, Targets, patients, CT, images, SBRT, delivery, CBCT, acquisition, couch, correction, CBCT, cases, validation, technique, targets, volumes, CTs, treatment, CBCTs, accuracy, analysis, percentages, target, volumes, mm, PTV, margins, data, treatment, margins, mm, coverage, mm, PTV, margin, %, target, volume, coverage, %, probability, technique, ITV, shapes/deformations, PTV, margin, optimization, analysis, data, mm, PTV, margin, process, approach, disease, sites, treatment, strategies, |
| POS:Verb | 57 | places, targeting, is, expanded, resulting, is, covered, ensures, encountered, developed, optimizing, relies, resulting, is, used, map, planned, allowing, achieved, overlap, was, performed, using, was, implemented, allow, being, analyzed, was, used, optimize, treated, were, contoured, followed, was, acquired, demonstrated, is, transforming, planning, showed, covered, were, Analyzing, acquired, demonstrated, exceeding, did, improve, achieved, is, incorporates, allow, indicates, is, is, |
| NER : Name | 0 |  |
| Triplet | 112 | [(Lung radiotherapy,targeting accuracy over,approaches,1.0), (Lung stereotactic-body radiotherapy,targeting accuracy over,approaches,1.0), (Lung stereotactic-body radiotherapy,targeting accuracy over,standard approaches,1.0), (Lung radiotherapy,places,requirements,1.0), (Lung radiotherapy,targeting,accuracy,1.0), (Lung stereotactic-body radiotherapy,targeting,accuracy,1.0), (Lung radiotherapy,places,additional requirements,1.0), (Lung stereotactic-body radiotherapy,places,additional requirements,1.0), (Lung stereotactic-body radiotherapy,places,requirements,1.0), (Lung radiotherapy,targeting accuracy over,standard approaches,1.0)]  [(resulting planning target volume,is covered with,dose,1.0), (resulting planning target volume,is,covered,1.0), (resulting planning target volume,is covered with,full dose,1.0), (planning target volume,is,covered,1.0), (tumour volume,is expanded In,treatment planning,1.0), (planning target volume,is covered with,full dose,1.0), (tumour volume,is,geometrically expanded,1.0), (planning target volume,is covered with,dose,1.0), (tumour volume,is,expanded,1.0), (tumour volume,is geometrically expanded In,treatment planning,1.0)]  []  []  [(planning CT,of registration is,DIR,1.0), (method,relies on,deformable image registration of planning CT,1.0), (method,relies to,treatment CT,1.0), (method,relies on,DIR,1.0), (method,relies to,treatment cone-beam CT,1.0), (method,relies on,image registration,1.0), (method,relies to,CBCT,1.0), (method,relies on,deformable image registration,1.0), (method,relies on,image registration of planning CT,1.0)]  [(transformation,map,target,1.0), (transformation,map target onto,treatment geometry,1.0), (resulting transformation,map,planned target,1.0), (transformation,is,used,1.0), (resulting transformation,map target onto,treatment geometry,1.0), (resulting transformation,map,target,1.0), (resulting transformation,is,used,1.0), (transformation,map,planned target,1.0)]  []  [(self-validation technique,allow,analyzed,0.14059619431790493), (self-validation technique,was also implemented,allow,0.14059619431790493), (self-validation technique,allow,estimation,1.0), (self-validation technique,allow,estimation of DIR error,1.0), (data,being,analyzed,1.0), (self-validation technique,allow estimation,analyzed,1.0), (self-validation technique,was,also implemented,1.0), (self-validation technique,was implemented,allow,0.14059619431790493), (self-validation technique,was,implemented,1.0)]  [(Our workflow,retrospectively optimize,PTV margin,1.0), (Our workflow,optimize PTV margin for,25 patients treated,1.0), (Our workflow,optimize PTV margin for,25 patients treated over 93 fractions,1.0), (Our workflow,optimize,PTV margin,1.0), (Our workflow,retrospectively optimize PTV margin for,25 patients,1.0), (Our workflow,was,used,1.0), (Our workflow,retrospectively optimize PTV margin for,25 patients treated,1.0), (Our workflow,optimize PTV margin for,25 patients,1.0), (Our workflow,retrospectively optimize PTV margin for,25 patients treated over 93 fractions,1.0)]  [(Targets,were,contoured,1.0), (Targets,were contoured on,four-dimensional CT images,1.0), (Targets,were contoured on,CT images,1.0)]  [(SBRT delivery,followed,CBCT acquisition,1.0), (SBRT delivery,followed,couch correction,1.0)]  [(CBCT,was,also acquired,1.0), (post-treatment CBCT,was,acquired,1.0), (CBCT,was also acquired in,cases,1.0), (post-treatment CBCT,was acquired in,cases,1.0), (CBCT,was acquired in,cases,1.0), (post-treatment CBCT,was also acquired in,cases,1.0), (post-treatment CBCT,was,also acquired,1.0), (CBCT,was,acquired,1.0)]  [(DIR-based technique,transforming,targets volumes,1.0), (DIR-based technique,is,capable,1.0), (technique,transforming,targets volumes,1.0), (treatment CBCTs,is with,sub-mm accuracy,1.0), (technique,is,capable,1.0)]  []  []  [(5 mm PTV margin,Finally achieved,target volume coverage,1.0), (mm PTV margin,achieved target volume coverage with,probability,1.0), (5 mm PTV margin,achieved target volume coverage with,95 % probability,1.0), (mm PTV margin,Finally achieved,target volume coverage,1.0), (5 mm PTV margin,Finally achieved,95 % target volume coverage,1.0), (5 mm PTV margin,Finally achieved target volume coverage with,95 % probability,1.0), (5 mm PTV margin,achieved,target volume coverage,1.0), (mm PTV margin,Finally achieved target volume coverage with,95 % probability,1.0), (mm PTV margin,Finally achieved,95 % target volume coverage,1.0), (mm PTV margin,achieved,95 % target volume coverage,1.0), (5 mm PTV margin,achieved,95 % target volume coverage,1.0), (mm PTV margin,Finally achieved target volume coverage with,probability,1.0), (5 mm PTV margin,Finally achieved target volume coverage with,probability,1.0), (mm PTV margin,achieved,target volume coverage,1.0), (5 mm PTV margin,achieved target volume coverage with,probability,1.0), (mm PTV margin,achieved target volume coverage with,95 % probability,1.0)]  [(technique,incorporates,complex ITV shapes/deformations,1.0), (&#13; &#13; Our technique,is,accurate,1.0), (&#13; &#13; Our technique,incorporates,ITV shapes/deformations,1.0), (&#13; &#13; technique,is,accurate,1.0), (&#13; &#13; technique,incorporates,complex ITV shapes/deformations,1.0), (&#13; &#13; technique,incorporates,ITV shapes/deformations,1.0), (&#13; &#13; technique,incorporates ITV shapes/deformations,allow,0.14059619431790493), (&#13; &#13; Our technique,incorporates ITV shapes/deformations,allow,0.14059619431790493), (&#13; &#13; Our technique,incorporates,complex ITV shapes/deformations,1.0), (Our technique,incorporates,ITV shapes/deformations,1.0), (technique,incorporates ITV shapes/deformations,allow,0.14059619431790493), (Our technique,incorporates ITV shapes/deformations,allow,0.14059619431790493), (technique,is,accurate,1.0), (Our technique,incorporates,complex ITV shapes/deformations,1.0), (Our technique,is,accurate,1.0), (technique,incorporates,ITV shapes/deformations,1.0)]  [(5 mm PTV margin,is optimal for,our process,1.0), (mm PTV margin,is optimal for,our process,1.0), (mm PTV margin,is,optimal,1.0), (5 mm PTV margin,is,optimal,1.0)]  [(approach,is,generalizable,1.0), (approach,is generalizable to,disease sites,1.0), (approach,is generalizable to,other disease sites,1.0)]  []  Count:112 |

Abstract 5

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| --- | --- | --- |
| Type | Count |  |
| POS : Noun | 118 | count for POS\_noun is 118: evidence, tumour, motion, monitoring, degrees, freedom, 6DoF, 3D, translations, 3D, rotations, time, algorithms, 6DoF, target, motion, estimation, imaging, frequency, patients, imaging, dose, paper, method, 6DoF, motion, monitoring, 2D, kV, imaging, signal, Method, approach, correlation, model, signal, 6DoF, motion, treatments, model, information, pre-treatment, CBCT, tumor, motion, signal, kV, images, model, parameters, changes, correlation, baseline, shifts, method, silico, data, lung, SABR, patients, tumour, motion, beacons, signal, bellows, belt, Projection, images, CBCT, Hz, kV, images, 3D, beacon, positions, imager, IMRT, VMAT, treatments, imaging, intervals, s, s, s, s, s., Results, scenarios, motion, method, accuracy, mean, precision, deviation, motion, estimates, Motion, estimation, errors, imaging, interval, imaging, interval, s, errors, mm, mm, mm, translation, Left-Right, Superior-Inferior, Anterior-Posterior, directions, rotation, axes, VMAT, IMRT, treatments, |
| POS:Verb | 39 | count for POS\_verb is 39: Increasing, shows, include, Existing, requires, exposing, presents, using, is, optimise, be, built, using, obtained, be, estimated, using, are, used, update, accounting, was, evaluated, using, recorded, were, projecting, were, increasing, update, tested, estimates, had, were, increased, update, increased, update, were, |
| NER : Name | 0 |  |
| Triplet | 233 | []  [(real time algorithms,requires,intrafraction fluoroscopic imaging,1.0), (continuous intrafraction imaging,thereby exposing patients to,imaging dose,1.0), (continuous intrafraction imaging,thereby exposing patients to,additional high imaging dose,1.0), (continuous intrafraction imaging,exposing,patients,1.0), (continuous imaging,thereby exposing patients to,additional imaging dose,1.0), (imaging,exposing patients to,additional imaging dose,1.0), (real time algorithms,requires,imaging,1.0), (continuous intrafraction fluoroscopic imaging,exposing,patients,1.0), (real time algorithms,requires,continuous imaging,1.0), (continuous fluoroscopic imaging,exposing patients to,imaging dose,1.0), (Existing real time algorithms,requires,imaging,1.0), (Existing real time algorithms,requires,continuous intrafraction imaging,1.0), (continuous intrafraction fluoroscopic imaging,thereby exposing patients to,additional imaging dose,1.0), (intrafraction imaging,thereby exposing patients to,additional imaging dose,1.0), (intrafraction imaging,thereby exposing patients to,high imaging dose,1.0), (time algorithms,requires,imaging,1.0), (intrafraction fluoroscopic imaging,thereby exposing patients to,additional high imaging dose,1.0), (Existing time algorithms,requires,fluoroscopic imaging,1.0), (continuous intrafraction imaging,exposing patients to,high imaging dose,1.0), (fluoroscopic imaging,exposing patients to,additional high imaging dose,1.0), (intrafraction fluoroscopic imaging,thereby exposing patients to,additional imaging dose,1.0), (intrafraction imaging,exposing,patients,1.0), (intrafraction imaging,exposing patients to,imaging dose,1.0), (intrafraction imaging,thereby exposing,patients,1.0), (continuous imaging,thereby exposing patients to,imaging dose,1.0), (fluoroscopic imaging,exposing patients to,high imaging dose,1.0), (continuous intrafraction imaging,thereby exposing patients to,high imaging dose,1.0), (Existing real time algorithms,requires,continuous fluoroscopic imaging,1.0), (continuous imaging,thereby exposing patients to,additional high imaging dose,1.0), (continuous intrafraction imaging,exposing patients to,additional high imaging dose,1.0), (Existing time algorithms,requires,continuous intrafraction imaging,1.0), (Existing real time algorithms,requires imaging at,frequency,1.0), (fluoroscopic imaging,exposing patients to,additional imaging dose,1.0), (Existing time algorithms,requires imaging at,frequency,1.0), (continuous intrafraction fluoroscopic imaging,thereby exposing patients to,additional high imaging dose,1.0), (imaging,thereby exposing patients to,additional high imaging dose,1.0), (intrafraction fluoroscopic imaging,exposing patients to,additional high imaging dose,1.0), (real time algorithms,requires,fluoroscopic imaging,1.0), (real time algorithms,requires,intrafraction imaging,1.0), (intrafraction fluoroscopic imaging,exposing patients to,additional imaging dose,1.0), (time algorithms,requires,intrafraction imaging,1.0), (continuous intrafraction fluoroscopic imaging,thereby exposing patients to,imaging dose,1.0), (intrafraction imaging,thereby exposing patients to,additional high imaging dose,1.0), (real time algorithms,requires,continuous fluoroscopic imaging,1.0), (Existing time algorithms,requires,intrafraction fluoroscopic imaging,1.0), (fluoroscopic imaging,thereby exposing patients to,high imaging dose,1.0), (continuous imaging,exposing patients to,additional high imaging dose,1.0), (intrafraction fluoroscopic imaging,thereby exposing,patients,1.0), (time algorithms,requires,continuous fluoroscopic imaging,1.0), (continuous imaging,thereby exposing,patients,1.0), (continuous fluoroscopic imaging,exposing patients to,additional imaging dose,1.0), (continuous intrafraction imaging,thereby exposing,patients,1.0), (fluoroscopic imaging,thereby exposing,patients,1.0), (Existing real time algorithms,requires,fluoroscopic imaging,1.0), (continuous intrafraction imaging,exposing patients to,additional imaging dose,1.0), (real time algorithms,requires,continuous intrafraction imaging,1.0), (intrafraction fluoroscopic imaging,exposing,patients,1.0), (time algorithms,requires,intrafraction fluoroscopic imaging,1.0), (continuous intrafraction fluoroscopic imaging,exposing patients to,imaging dose,1.0), (continuous intrafraction fluoroscopic imaging,exposing patients to,additional imaging dose,1.0), (intrafraction imaging,exposing patients to,additional imaging dose,1.0), (continuous fluoroscopic imaging,exposing patients to,additional high imaging dose,1.0), (continuous imaging,thereby exposing patients to,high imaging dose,1.0), (continuous intrafraction fluoroscopic imaging,exposing patients to,high imaging dose,1.0), (Existing real time algorithms,requires,continuous intrafraction fluoroscopic imaging,1.0), (time algorithms,requires,continuous intrafraction fluoroscopic imaging,1.0), (real time algorithms,requires imaging at,frequency,1.0), (imaging,exposing patients to,additional high imaging dose,1.0), (continuous imaging,exposing patients to,additional imaging dose,1.0), (Existing time algorithms,requires,intrafraction imaging,1.0), (fluoroscopic imaging,exposing patients to,imaging dose,1.0), (continuous intrafraction imaging,exposing patients to,imaging dose,1.0), (fluoroscopic imaging,exposing,patients,1.0), (imaging,thereby exposing,patients,1.0), (continuous fluoroscopic imaging,thereby exposing,patients,1.0), (fluoroscopic imaging,thereby exposing patients to,additional imaging dose,1.0), (continuous fluoroscopic imaging,thereby exposing patients to,additional imaging dose,1.0), (continuous intrafraction imaging,thereby exposing patients to,additional imaging dose,1.0), (time algorithms,requires,fluoroscopic imaging,1.0), (time algorithms,requires,continuous intrafraction imaging,1.0), (Existing real time algorithms,requires,continuous imaging,1.0), (Existing time algorithms,requires,continuous imaging,1.0), (fluoroscopic imaging,thereby exposing patients to,imaging dose,1.0), (Existing time algorithms,requires,imaging,1.0), (imaging,thereby exposing patients to,additional imaging dose,1.0), (continuous imaging,exposing,patients,1.0), (continuous intrafraction fluoroscopic imaging,thereby exposing patients to,high imaging dose,1.0), (imaging,thereby exposing patients to,imaging dose,1.0), (Existing time algorithms,requires,continuous intrafraction fluoroscopic imaging,1.0), (imaging,exposing,patients,1.0), (real time algorithms,requires,continuous intrafraction fluoroscopic imaging,1.0), (time algorithms,requires imaging at,frequency,1.0), (imaging,exposing patients to,high imaging dose,1.0), (Existing real time algorithms,requires,intrafraction imaging,1.0), (intrafraction fluoroscopic imaging,thereby exposing patients to,imaging dose,1.0), (fluoroscopic imaging,thereby exposing patients to,additional high imaging dose,1.0), (continuous fluoroscopic imaging,thereby exposing patients to,high imaging dose,1.0), (Existing time algorithms,requires,continuous fluoroscopic imaging,1.0), (imaging,thereby exposing patients to,high imaging dose,1.0), (continuous imaging,exposing patients to,high imaging dose,1.0), (intrafraction fluoroscopic imaging,thereby exposing patients to,high imaging dose,1.0), (imaging,exposing patients to,imaging dose,1.0), (continuous fluoroscopic imaging,exposing patients to,high imaging dose,1.0), (continuous fluoroscopic imaging,exposing,patients,1.0), (intrafraction imaging,exposing patients to,high imaging dose,1.0), (Existing real time algorithms,requires,intrafraction fluoroscopic imaging,1.0), (continuous intrafraction fluoroscopic imaging,thereby exposing,patients,1.0), (intrafraction fluoroscopic imaging,exposing patients to,imaging dose,1.0), (continuous intrafraction fluoroscopic imaging,exposing patients to,additional high imaging dose,1.0), (time algorithms,requires,continuous imaging,1.0), (continuous fluoroscopic imaging,thereby exposing patients to,imaging dose,1.0), (intrafraction imaging,thereby exposing patients to,imaging dose,1.0), (intrafraction fluoroscopic imaging,exposing patients to,high imaging dose,1.0), (continuous imaging,exposing patients to,imaging dose,1.0), (intrafraction imaging,exposing patients to,additional high imaging dose,1.0), (continuous fluoroscopic imaging,thereby exposing patients to,additional high imaging dose,1.0)]  [(paper,presents,first method capable of 6DoF motion monitoring,1.0), (paper,presents,first method capable,1.0), (paper,presents,method capable,1.0), (paper,presents,method capable of 6DoF motion monitoring,1.0), (paper,presents,first method,1.0), (paper,presents,method,1.0)]  [(Our approach,optimise,state-augmented correlation model between signal,1.0), (Our approach,optimise,state-augmented linear correlation model between signal,1.0), (Our approach,optimise,state-augmented correlation model between external signal,1.0), (Our approach,optimise,linear correlation model between signal,1.0), (Our approach,optimise,state-augmented linear correlation model,1.0), (Our approach,optimise,correlation model,1.0), (Our approach,optimise,state-augmented linear correlation model between external signal,1.0), (Our approach,optimise,correlation model between signal,1.0), (Our approach,optimise,state-augmented correlation model,1.0), (Our approach,optimise,correlation model between external signal,1.0), (Our approach,optimise,linear correlation model between external signal,1.0), (Our approach,optimise,linear correlation model,1.0)]  [(model,using,information obtained,1.0), (model,can,In standard treatments can built,1.0), (model,using,information,1.0), (model,can,In treatments can built,1.0), (model,can,can built,1.0), (model,using,information obtained during pre-treatment CBCT,1.0), (information,obtained during,pre-treatment CBCT,0.9338658542477113)]  [(Real-time tumor motion,using,just external signal,1.0), (Real-time 6DoF tumor motion,can,can then estimated,1.0), (6DoF tumor motion,can,can estimated,1.0), (Real-time 6DoF tumor motion,using,external signal,1.0), (Real-time tumor motion,using,signal,1.0), (tumor motion,using,external signal,1.0), (6DoF tumor motion,using,signal,1.0), (tumor motion,using,just external signal,1.0), (6DoF tumor motion,using,just external signal,1.0), (Real-time 6DoF tumor motion,using,just external signal,1.0), (Real-time 6DoF tumor motion,using,just signal,1.0), (6DoF tumor motion,using,external signal,1.0), (Real-time tumor motion,can,can then estimated,1.0), (Real-time tumor motion,can,can estimated,1.0), (Real-time tumor motion,using,just signal,1.0), (Real-time 6DoF tumor motion,can,can estimated,1.0), (Real-time 6DoF tumor motion,using,signal,1.0), (tumor motion,using,signal,1.0), (6DoF tumor motion,can,can then estimated,1.0), (tumor motion,can,can then estimated,1.0), (Real-time tumor motion,using,external signal,1.0), (tumor motion,using,just signal,1.0), (6DoF tumor motion,using,just signal,1.0), (tumor motion,can,can estimated,1.0)]  [(Intermittent intrafraction kV images,are,used,1.0), (kV images,are,used,1.0), (Intermittent kV images,update,model parameters,1.0), (changes,is in,correlation,1.0), (kV images,update,model parameters,1.0), (Intermittent intrafraction kV images,update,model parameters,1.0), (Intermittent kV images,are,used,1.0), (intrafraction kV images,are,used,1.0), (intrafraction kV images,update,model parameters,1.0)]  [(method,was evaluated with,internal tumour motion recorded,1.0), (method,was,evaluated in silico with internal tumour motion recorded with beacons,1.0), (&#13; method,was,evaluated in silico with internal tumour motion,1.0), (&#13; method,was evaluated with,tumour motion recorded,1.0), (&#13; method,was evaluated with,tumour motion recorded with beacons,1.0), (method,was,evaluated in silico with internal tumour motion recorded with electromagnetic beacons,1.0), (&#13; method,was evaluated in,silico,1.0), (&#13; method,was,evaluated in silico with tumour motion recorded with beacons,1.0), (using,data from,6 lung SABR patients,0.8937395988052802), (&#13; method,was,evaluated in silico with internal tumour motion recorded with electromagnetic beacons,1.0), (&#13; method,was,evaluated in silico with tumour motion recorded,1.0), (method,was,evaluated in silico with internal tumour motion recorded,1.0), (method,was evaluated with,tumour motion,1.0), (method,was,evaluated in silico with tumour motion recorded with electromagnetic beacons,1.0), (method,was evaluated with,tumour motion recorded with beacons,1.0), (&#13; method,using,data,1.0), (method,was,evaluated in silico with tumour motion recorded,1.0), (method,using,data,1.0), (&#13; method,was,evaluated,1.0), (method,was evaluated with,tumour motion recorded with electromagnetic beacons,1.0), (&#13; method,was evaluated with,internal tumour motion recorded with electromagnetic beacons,1.0), (method,using,data from 6 lung SABR patients,1.0), (&#13; method,was,evaluated in silico with tumour motion,1.0), (&#13; method,was evaluated with,tumour motion recorded with electromagnetic beacons,1.0), (&#13; method,was,evaluated in silico with internal tumour motion recorded with beacons,1.0), (method,was evaluated with,internal tumour motion recorded with electromagnetic beacons,1.0), (method,was evaluated in,silico,1.0), (method,was,evaluated in silico with internal tumour motion,1.0), (method,was,evaluated in silico with tumour motion,1.0), (&#13; method,was evaluated with,internal tumour motion,1.0), (method,was evaluated with,internal tumour motion,1.0), (method,was evaluated with,tumour motion recorded,1.0), (&#13; method,using,data from 6 lung SABR patients,1.0), (&#13; method,was evaluated with,tumour motion,1.0), (method,was evaluated with,internal tumour motion recorded with beacons,1.0), (&#13; method,was evaluated with,internal tumour motion recorded,1.0), (method,was,evaluated,1.0), (&#13; method,was evaluated with,internal tumour motion recorded with beacons,1.0), (&#13; method,was,evaluated in silico with internal tumour motion recorded,1.0), (method,was,evaluated in silico with tumour motion recorded with beacons,1.0), (&#13; method,was,evaluated in silico with tumour motion recorded with electromagnetic beacons,1.0)]  [(Projection images,were,simulated,1.0), (Projection images,projecting,3D beacon positions,1.0), (Projection images,projecting 3D beacon positions onto,imager,1.0), (Projection images,projecting,3D Calypso beacon positions,1.0)]  [(IMRT treatments,were,simulated,1.0), (0.1 s,estimates with,our method,1.0), (0.1 s,estimates For,tested clinical scenarios,1.0), (motion estimates,were,accurate,1.0), (rotational motion estimates,were,accurate,1.0)]  [(Motion estimation errors,increased,imaging update,1.0)]  [(interval,mm in,Left-Right directions,1.0), (0.1 0.6 mm,is in,Left-Right directions,1.0), (largest imaging,update,interval,1.0), (errors,were,0.1 0.6 mm in Left-Right directions,0.6043893080512294), (imaging,update,interval,1.0), (errors,were,0.1 0.6 mm,0.6043893080512294), (errors,were,0.1 0.6 mm respectively,0.6043893080512294), (errors,were,0.1 0.6 mm in Left-Right directions respectively,0.6043893080512294)]  Count:233 |

Abstract 6

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| --- | --- | --- |
| Type | Count |  |
| POS : Noun | 17 | count for POS\_noun is 17: cell, lung, cancer, SCLC, neuroendocrine, tumor, mortality, therapy, SCLC, patients, drug, library, glycoside, CG, digoxin, inhibitor, Na, |
| POS:Verb | 5 | count for POS\_verb is 5: is, is, needed, screening, identified, |
| NER : Name | 0 |  |
| Triplet | 33 | [(cell lung cancer,is,malignant neuroendocrine tumor with high mortality,1.0), (Small cell lung cancer,is,malignant neuroendocrine tumor with very high mortality,1.0), (Small cell lung cancer,is,malignant neuroendocrine tumor,1.0), (Small cell lung cancer,is,neuroendocrine tumor,1.0), (Small cell lung cancer,is,neuroendocrine tumor with mortality,1.0), (Small cell lung cancer,is,malignant neuroendocrine tumor with high mortality,1.0), (cell lung cancer,is,neuroendocrine tumor with mortality,1.0), (cell lung cancer,is,malignant neuroendocrine tumor,1.0), (malignant neuroendocrine tumor,is with,very high mortality,1.0), (cell lung cancer,is,malignant neuroendocrine tumor with mortality,1.0), (cancer,is,malignant,1.0), (cell lung cancer,is,neuroendocrine tumor with high mortality,1.0), (cell lung cancer,is,neuroendocrine tumor,1.0), (cell lung cancer,is,malignant neuroendocrine tumor with very high mortality,1.0), (cell lung cancer,is,neuroendocrine tumor with very high mortality,1.0), (Small cell lung cancer,is,neuroendocrine tumor with very high mortality,1.0), (Small cell lung cancer,is,neuroendocrine tumor with high mortality,1.0), (Small cell lung cancer,is,malignant neuroendocrine tumor with mortality,1.0)]  [(therapy,is,needed,1.0), (Effective new therapy,is,needed,1.0), (Effective therapy,is,needed,1.0), (new therapy,is,needed,1.0), (new therapy,is,urgently needed,1.0), (Effective new therapy,is,urgently needed,1.0), (Effective therapy,is,urgently needed,1.0), (therapy,is,urgently needed,1.0)]  [(we,identified,glycoside,1.0), (we,identified,CG,1.0), (we,identified,namely digoxin,1.0), (we,identified,cardiac glycoside,1.0), (we,identified,digoxin,1.0), (we,screening,drug library,1.0), (we,screening,FDA-approved drug library,1.0)]  Count:33 |

Abstract 7

|  |  |  |
| --- | --- | --- |
| Type | Count |  |
| POS : Noun | 156 | count for POS\_noun is 156: cell, lung, cancer, SCLC, subtype, lung, cancer, predilection, brain, metastases, efforts, advances, therapeutics, SCLC, prognosis, patients, SCLC, brain, metastases, understanding, mechanisms, SCLC, brain, metastasis, treatments, study, S100A16, levels, SCLC, brain, metastases, event, brain, microenvironment, cell, coculture, system, coculturing, SCLC, cells, brain, cells, HBMECs, expression, S100A16, SCLC, cells, treatment, HBMECs, GW4869, inhibitor, release, effect, SCLC, cells, results, Western, blot, analyses, immunofluorescence, HBMEC, ultracentrifugation, elevation, translocation, cytoplasm, nucleus, S100A16, SCLC, cells, inhibition, experiments, S100A16, benefit, HBMEC, exosomes, survival, SCLC, cells, stress, elevation, S100A16, SCLC, cells, loss, membrane, potential, m, resistance, apoptosis, conditions, Annexin, V/propidium, iodide, JC-1, assay, results, effect, presence, element, m, prohibitin, PHB, protein, membrane, delivery, PHB-1, siRNAs, S100A16, SCLC, cells, effects, findings, S100A16, role, survival, SCLC, cells, function, S100A16, target, SCLC, brain, metastasis.-Xu, Z.-H., Miao, Z.-W., Jiang, Q.-Z., Gan, D.-X., Wei, X.-G., Xue, X.-Z., Li, J.-Q., Zheng, F., Qin, X.-X., Fang, W.-G., Chen, Y.-H., Li, B., Brain, cell, S100A16, up-regulation, cell, lung, cancer, cell, survival, brain, |
| POS:Verb | 35 | count for POS\_verb is 35: is, is, is, improving, were, associated, was, arising, Using, found, led, increased, blocked, cocultured, indicated, exosomes, purified, induced, demonstrated, contributed, prevented, enhanced, were, determined, showed, was, caused, overexpressing, weakened, suggest, plays, facilitating, modulating, identifying, confers, |
| NER : Name | 10 | count for NER\_name is 10: Miao, Jiang, Wei, Xue, Li, Zheng, Qin, Fang, Chen, Li, |
| Triplet | 369 | [(cell lung cancer,is aggressive histologic subtype with,predilection for early brain metastases,1.0), (cell lung cancer,is,histologic subtype of lung cancer with strong predilection for brain metastases,1.0), (Small cell lung cancer,is,histologic subtype of lung cancer with predilection,1.0), (Small cell lung cancer,is histologic subtype with,predilection,1.0), (Small cell lung cancer,is aggressive subtype with,predilection for brain metastases,1.0), (Small cell lung cancer,is,aggressive histologic subtype,1.0), (Small cell lung cancer,is most aggressive subtype of,lung cancer,1.0), (Small cell lung cancer,is,aggressive histologic subtype of lung cancer with strong predilection,1.0), (cell lung cancer,is,subtype of lung cancer with strong predilection for brain metastases,1.0), (Small cell lung cancer,is,most aggressive subtype,1.0), (Small cell lung cancer,is,subtype of lung cancer with strong predilection,1.0), (cell lung cancer,is,histologic subtype of lung cancer with strong predilection,1.0), (Small cell lung cancer,is,subtype,1.0), (cell lung cancer,is,most aggressive histologic subtype of lung cancer with predilection for brain metastases,1.0), (cell lung cancer,is most aggressive histologic subtype of,lung cancer,1.0), (cell lung cancer,is,subtype,1.0), (Small cell lung cancer,is,aggressive subtype of lung cancer with strong predilection for brain metastases,1.0), (Small cell lung cancer,is,subtype of lung cancer with strong predilection for brain metastases,1.0), (Small cell lung cancer,is,aggressive subtype of lung cancer with strong predilection for early brain metastases,1.0), (cell lung cancer,is,histologic subtype of lung cancer with strong predilection for early brain metastases,1.0), (cell lung cancer,is subtype with,strong predilection for early brain metastases,1.0), (Small cell lung cancer,is,most aggressive subtype of lung cancer with strong predilection,1.0), (Small cell lung cancer,is histologic subtype with,strong predilection for early brain metastases,1.0), (Small cell lung cancer,is subtype with,predilection for brain metastases,1.0), (cell lung cancer,is,aggressive histologic subtype of lung cancer with predilection,1.0), (Small cell lung cancer,is,histologic subtype of lung cancer with predilection for brain metastases,1.0), (cell lung cancer,is aggressive subtype with,strong predilection for brain metastases,1.0), (cell lung cancer,is,aggressive histologic subtype,1.0), (Small cell lung cancer,is subtype of,lung cancer,1.0), (Small cell lung cancer,is,aggressive subtype of lung cancer with strong predilection,1.0), (Small cell lung cancer,is,most aggressive histologic subtype of lung cancer with predilection,1.0), (cell lung cancer,is,most aggressive histologic subtype of lung cancer with strong predilection for early brain metastases,1.0), (Small cell lung cancer,is,most aggressive histologic subtype,1.0), (cell lung cancer,is most aggressive histologic subtype with,predilection for brain metastases,1.0), (cell lung cancer,is,subtype of lung cancer with predilection,1.0), (Small cell lung cancer,is most aggressive subtype with,predilection for early brain metastases,1.0), (Small cell lung cancer,is,most aggressive histologic subtype of lung cancer with predilection for brain metastases,1.0), (cell lung cancer,is,aggressive subtype of lung cancer with strong predilection,1.0), (cell lung cancer,is,most aggressive histologic subtype of lung cancer with strong predilection,1.0), (cell lung cancer,is,aggressive histologic subtype of lung cancer with predilection for brain metastases,1.0), (cell lung cancer,is aggressive subtype with,predilection,1.0), (cell lung cancer,is,aggressive subtype of lung cancer with predilection,1.0), (cell lung cancer,is most aggressive subtype with,predilection for brain metastases,1.0), (cell lung cancer,is most aggressive histologic subtype with,strong predilection,1.0), (Small cell lung cancer,is most aggressive histologic subtype with,predilection for brain metastases,1.0), (Small cell lung cancer,is,histologic subtype of lung cancer with strong predilection for brain metastases,1.0), (Small cell lung cancer,is,aggressive subtype of lung cancer with predilection for early brain metastases,1.0), (cell lung cancer,is subtype with,strong predilection,1.0), (cell lung cancer,is most aggressive subtype with,predilection,1.0), (Small cell lung cancer,is,aggressive subtype of lung cancer with predilection for brain metastases,1.0), (Small cell lung cancer,is most aggressive histologic subtype of,lung cancer,1.0), (cell lung cancer,is most aggressive subtype with,strong predilection for brain metastases,1.0), (Small cell lung cancer,is aggressive histologic subtype with,predilection for early brain metastases,1.0), (Small cell lung cancer,is histologic subtype of,lung cancer,1.0), (cell lung cancer,is,aggressive histologic subtype of lung cancer with strong predilection,1.0), (cell lung cancer,is aggressive histologic subtype with,strong predilection,1.0), (cell lung cancer,is subtype with,strong predilection for brain metastases,1.0), (cell lung cancer,is histologic subtype with,strong predilection for brain metastases,1.0), (cell lung cancer,is,aggressive histologic subtype of lung cancer with strong predilection for early brain metastases,1.0), (Small cell lung cancer,is aggressive subtype of,lung cancer,1.0), (cell lung cancer,is aggressive subtype with,predilection for brain metastases,1.0), (Small cell lung cancer,is aggressive subtype with,strong predilection for brain metastases,1.0), (cell lung cancer,is most aggressive subtype with,predilection for early brain metastases,1.0), (cell lung cancer,is aggressive subtype of,lung cancer,1.0), (cell lung cancer,is histologic subtype with,strong predilection,1.0), (Small cell lung cancer,is subtype with,strong predilection for early brain metastases,1.0), (Small cell lung cancer,is histologic subtype with,predilection for early brain metastases,1.0), (Small cell lung cancer,is,most aggressive histologic subtype of lung cancer with strong predilection for early brain metastases,1.0), (cell lung cancer,is most aggressive subtype of,lung cancer,1.0), (Small cell lung cancer,is most aggressive histologic subtype with,strong predilection for brain metastases,1.0), (cell lung cancer,is aggressive histologic subtype with,predilection,1.0), (Small cell lung cancer,is aggressive histologic subtype of,lung cancer,1.0), (Small cell lung cancer,is most aggressive histologic subtype with,predilection,1.0), (Small cell lung cancer,is,subtype of lung cancer with predilection,1.0), (cell lung cancer,is,histologic subtype of lung cancer with predilection for brain metastases,1.0), (cell lung cancer,is,most aggressive subtype of lung cancer with strong predilection for brain metastases,1.0), (cell lung cancer,is,histologic subtype of lung cancer with predilection for early brain metastases,1.0), (cell lung cancer,is,most aggressive subtype,1.0), (cell lung cancer,is,most aggressive histologic subtype of lung cancer with predilection for early brain metastases,1.0), (cell lung cancer,is,aggressive histologic subtype of lung cancer with predilection for early brain metastases,1.0), (cell lung cancer,is,subtype of lung cancer with strong predilection for early brain metastases,1.0), (cell lung cancer,is subtype with,predilection,1.0), (Small cell lung cancer,is aggressive histologic subtype with,strong predilection for brain metastases,1.0), (Small cell lung cancer,is,subtype of lung cancer with strong predilection for early brain metastases,1.0), (cell lung cancer,is most aggressive histologic subtype with,strong predilection for brain metastases,1.0), (cell lung cancer,is,aggressive subtype of lung cancer with predilection for early brain metastases,1.0), (cell lung cancer,is aggressive histologic subtype with,strong predilection for early brain metastases,1.0), (cell lung cancer,is most aggressive histologic subtype with,predilection for early brain metastases,1.0), (Small cell lung cancer,is,aggressive histologic subtype of lung cancer with predilection,1.0), (Small cell lung cancer,is,most aggressive histologic subtype of lung cancer with predilection for early brain metastases,1.0), (Small cell lung cancer,is histologic subtype with,predilection for brain metastases,1.0), (cell lung cancer,is aggressive histologic subtype with,strong predilection for brain metastases,1.0), (Small cell lung cancer,is,aggressive histologic subtype of lung cancer with strong predilection for brain metastases,1.0), (Small cell lung cancer,is,histologic subtype of lung cancer with predilection for early brain metastases,1.0), (Small cell lung cancer,is,aggressive subtype of lung cancer with predilection,1.0), (Small cell lung cancer,is,most aggressive subtype of lung cancer with predilection,1.0), (cell lung cancer,is aggressive subtype with,strong predilection for early brain metastases,1.0), (Small cell lung cancer,is most aggressive subtype with,predilection for brain metastases,1.0), (cell lung cancer,is most aggressive subtype with,strong predilection,1.0), (Small cell lung cancer,is most aggressive subtype with,strong predilection,1.0), (Small cell lung cancer,is most aggressive subtype with,strong predilection for brain metastases,1.0), (Small cell lung cancer,is most aggressive subtype with,strong predilection for early brain metastases,1.0), (Small cell lung cancer,is aggressive histologic subtype with,predilection for brain metastases,1.0), (cell lung cancer,is,most aggressive subtype of lung cancer with strong predilection,1.0), (Small cell lung cancer,is histologic subtype with,strong predilection,1.0), (cell lung cancer,is,subtype of lung cancer with predilection for brain metastases,1.0), (cell lung cancer,is,aggressive subtype,1.0), (cell lung cancer,is histologic subtype with,predilection for early brain metastases,1.0), (Small cell lung cancer,is,aggressive histologic subtype of lung cancer with predilection for brain metastases,1.0), (cell lung cancer,is histologic subtype with,strong predilection for early brain metastases,1.0), (cell lung cancer,is histologic subtype of,lung cancer,1.0), (Small cell lung cancer,is subtype with,predilection,1.0), (cell lung cancer,is aggressive histologic subtype of,lung cancer,1.0), (cell lung cancer,is most aggressive histologic subtype with,strong predilection for early brain metastases,1.0), (cell lung cancer,is,most aggressive subtype of lung cancer with strong predilection for early brain metastases,1.0), (Small cell lung cancer,is,most aggressive histologic subtype of lung cancer with strong predilection for brain metastases,1.0), (cell lung cancer,is,most aggressive subtype of lung cancer with predilection,1.0), (cell lung cancer,is subtype with,predilection for early brain metastases,1.0), (Small cell lung cancer,is aggressive histologic subtype with,strong predilection,1.0), (Small cell lung cancer,is subtype with,predilection for early brain metastases,1.0), (Small cell lung cancer,is,aggressive histologic subtype of lung cancer with predilection for early brain metastases,1.0), (Small cell lung cancer,is subtype with,strong predilection,1.0), (Small cell lung cancer,is,aggressive histologic subtype of lung cancer with strong predilection for early brain metastases,1.0), (cell lung cancer,is,aggressive histologic subtype of lung cancer with strong predilection for brain metastases,1.0), (cell lung cancer,is most aggressive histologic subtype with,predilection,1.0), (Small cell lung cancer,is,histologic subtype of lung cancer with strong predilection for early brain metastases,1.0), (Small cell lung cancer,is,most aggressive subtype of lung cancer with predilection for brain metastases,1.0), (Small cell lung cancer,is most aggressive histologic subtype with,strong predilection,1.0), (cell lung cancer,is,subtype of lung cancer with strong predilection,1.0), (cell lung cancer,is aggressive histologic subtype with,predilection for brain metastases,1.0), (cell lung cancer,is subtype with,predilection for brain metastases,1.0), (cell lung cancer,is,aggressive subtype of lung cancer with strong predilection for early brain metastases,1.0), (cell lung cancer,is aggressive subtype with,strong predilection,1.0), (Small cell lung cancer,is,subtype of lung cancer with predilection for early brain metastases,1.0), (cell lung cancer,is,aggressive subtype of lung cancer with strong predilection for brain metastases,1.0), (cell lung cancer,is,most aggressive histologic subtype,1.0), (cell lung cancer,is,most aggressive histologic subtype of lung cancer with strong predilection for brain metastases,1.0), (cell lung cancer,is,histologic subtype,1.0), (cell lung cancer,is aggressive subtype with,predilection for early brain metastases,1.0), (Small cell lung cancer,is most aggressive histologic subtype with,predilection for early brain metastases,1.0), (cell lung cancer,is,most aggressive subtype of lung cancer with predilection for early brain metastases,1.0), (Small cell lung cancer,is,most aggressive histologic subtype of lung cancer with strong predilection,1.0), (cell lung cancer,is histologic subtype with,predilection for brain metastases,1.0), (aggressive histologic subtype,is with,strong predilection for early brain metastases,1.0), (cell lung cancer,is subtype of,lung cancer,1.0), (Small cell lung cancer,is,most aggressive subtype of lung cancer with predilection for early brain metastases,1.0), (Small cell lung cancer,is aggressive histologic subtype with,strong predilection for early brain metastases,1.0), (Small cell lung cancer,is subtype with,strong predilection for brain metastases,1.0), (Small cell lung cancer,is aggressive subtype with,predilection for early brain metastases,1.0), (Small cell lung cancer,is most aggressive subtype with,predilection,1.0), (cell lung cancer,is,most aggressive histologic subtype of lung cancer with predilection,1.0), (Small cell lung cancer,is most aggressive histologic subtype with,strong predilection for early brain metastases,1.0), (Small cell lung cancer,is aggressive histologic subtype with,predilection,1.0), (cell lung cancer,is,histologic subtype of lung cancer with predilection,1.0), (Small cell lung cancer,is,histologic subtype of lung cancer with strong predilection,1.0), (cell lung cancer,is,aggressive subtype of lung cancer with predilection for brain metastases,1.0), (Small cell lung cancer,is,most aggressive subtype of lung cancer with strong predilection for brain metastases,1.0), (Small cell lung cancer,is,aggressive subtype,1.0), (Small cell lung cancer,is,subtype of lung cancer with predilection for brain metastases,1.0), (cell lung cancer,is,most aggressive subtype of lung cancer with predilection for brain metastases,1.0), (Small cell lung cancer,is histologic subtype with,strong predilection for brain metastases,1.0), (cell lung cancer,is most aggressive subtype with,strong predilection for early brain metastases,1.0), (Small cell lung cancer,is aggressive subtype with,predilection,1.0), (Small cell lung cancer,is aggressive subtype with,strong predilection,1.0), (Small cell lung cancer,is,histologic subtype,1.0), (Small cell lung cancer,is,most aggressive subtype of lung cancer with strong predilection for early brain metastases,1.0), (cell lung cancer,is,subtype of lung cancer with predilection for early brain metastases,1.0), (Small cell lung cancer,is aggressive subtype with,strong predilection for early brain metastases,1.0), (cell lung cancer,is histologic subtype with,predilection,1.0)]  [(prognosis,is poor Despite,efforts in therapeutics for SCLC,1.0), (prognosis,is poor Despite,efforts in new therapeutics for SCLC,1.0), (efforts,is in,new therapeutics for SCLC,1.0), (prognosis,is poor Despite,efforts,1.0), (prognosis,is consistently poor Despite,efforts in new therapeutics,1.0), (prognosis,is consistently poor Despite,efforts in therapeutics for SCLC,1.0), (prognosis,is,poor,1.0), (prognosis,is,consistently poor,1.0), (patients,is with,SCLC,1.0), (prognosis,is consistently poor Despite,efforts,1.0), (prognosis,is poor Despite,efforts in therapeutics,1.0), (prognosis,is poor Despite,efforts in new therapeutics,1.0), (prognosis,is consistently poor Despite,efforts in therapeutics,1.0), (patients,is with,brain metastases,1.0), (prognosis,is consistently poor Despite,efforts in new therapeutics for SCLC,1.0)]  [(better understanding,improving,treatments,1.0), (understanding,improving,current treatments,1.0), (better understanding,improving,current treatments,1.0), (better understanding,is,important,1.0), (understanding,is,important,1.0), (understanding,is,Therefore important,1.0), (better understanding,is,Therefore important,1.0), (understanding,improving,treatments,1.0)]  [(possible secondary event,arising from,brain microenvironment,1.0), (elevated S100A16 levels,were,associated,1.0), (possible event,arising from,brain metastatic microenvironment,1.0), (possible event,arising from,brain microenvironment,1.0), (elevated S100A16 levels,were associated In,study,1.0), (possible secondary event,arising from,brain metastatic microenvironment,1.0), (S100A16 levels,were,associated,1.0), (S100A16 levels,were associated In,study,1.0)]  [(coculturing,is with,human brain microvascular endothelial cells,1.0), (increased expression,is in,SCLC cells,1.0), (coculturing,led to,increased expression in SCLC cells,1.0), (coculturing,led to,expression in SCLC cells,1.0), (coculturing,led to,expression,1.0), (coculturing,led to,increased expression of S100A16 in SCLC cells,1.0), (coculturing,led to,expression of S100A16,1.0), (we,Using,in cell coculture system,1.0), (coculturing,led to,expression of S100A16 in SCLC cells,1.0), (we,Using,cell coculture system,1.0), (coculturing,led to,increased expression of S100A16,1.0), (coculturing,led to,increased expression,1.0)]  [(treatment,Conversely significantly blocked effect in,SCLC cells,1.0), (treatment,blocked,effect,1.0), (treatment,Conversely blocked effect in,cocultured SCLC cells,1.0), (treatment,significantly blocked,effect,1.0), (treatment,Conversely significantly blocked,effect,1.0), (treatment,Conversely blocked,effect,1.0), (treatment,significantly blocked effect in,SCLC cells,1.0), (treatment,blocked effect in,cocultured SCLC cells,1.0), (treatment,is with,GW4869,1.0), (treatment,significantly blocked effect in,cocultured SCLC cells,1.0), (treatment,Conversely blocked effect in,SCLC cells,1.0), (GW4869,inhibitor of,exosome release,1.0), (treatment,Conversely significantly blocked effect in,cocultured SCLC cells,1.0), (treatment,blocked effect in,SCLC cells,1.0)]  [(purified,also induced elevation in,recipient SCLC cells,1.0), (purified,induced elevation from,cytoplasm,1.0), (purified,also induced,elevation,1.0), (purified,also induced elevation in,SCLC cells,1.0), (purified,also induced translocation from,cytoplasm,1.0), (purified,also induced elevation to,nucleus of S100A16,1.0), (purified,also induced translocation to,nucleus,1.0), (purified,induced translocation in,recipient SCLC cells,1.0), (purified,induced translocation from,cytoplasm,1.0), (purified,induced translocation in,SCLC cells,1.0), (purified,induced translocation to,nucleus of S100A16,1.0), (purified,induced,translocation,1.0), (purified,induced elevation to,nucleus,1.0), (purified,also induced translocation in,recipient SCLC cells,1.0), (purified,induced,elevation,1.0), (purified,induced elevation to,nucleus of S100A16,1.0), (purified,also induced translocation in,SCLC cells,1.0), (purified,induced elevation in,SCLC cells,1.0), (purified,also induced,translocation,1.0), (purified,also induced elevation from,cytoplasm,1.0), (purified,induced translocation to,nucleus,1.0), (purified,also induced elevation to,nucleus,1.0), (purified,also induced translocation to,nucleus of S100A16,1.0), (purified,induced elevation in,recipient SCLC cells,1.0)]  [(S100A16,contributed,benefit of HBMEC exosomes,1.0), (S100A16,contributed,benefit for survival of recipient SCLC cells,1.0), (S100A16,benefit for,survival under stress,0.8299480880618496), (elevated S100A16,benefit for,survival of recipient SCLC cells under stress,0.8299480880618496), (elevated S100A16,contributed,benefit of HBMEC exosomes,1.0), (S100A16,contributed,benefit of HBMEC exosomes for survival of recipient SCLC cells under stress,1.0), (elevated S100A16,contributed,benefit for survival of recipient SCLC cells,1.0), (S100A16,contributed,benefit of HBMEC exosomes for survival,1.0), (S100A16,contributed,benefit for survival of SCLC cells under stress,1.0), (elevated S100A16,contributed,benefit of HBMEC exosomes for survival of recipient SCLC cells under stress,1.0), (elevated S100A16,contributed,benefit of HBMEC exosomes for survival under stress,1.0), (elevated S100A16,contributed,benefit of HBMEC exosomes for survival,1.0), (elevated S100A16,benefit for,survival,0.8299480880618496), (elevated S100A16,benefit for,survival under stress,0.8299480880618496), (S100A16,contributed,benefit,1.0), (elevated S100A16,benefit for,survival of SCLC cells under stress,0.8299480880618496), (elevated S100A16,contributed,benefit of HBMEC exosomes for survival of recipient SCLC cells,1.0), (elevated S100A16,contributed,benefit for survival,1.0), (elevated S100A16,contributed,benefit for survival of SCLC cells under stress,1.0), (elevated S100A16,contributed,benefit of HBMEC exosomes for survival of SCLC cells under stress,1.0), (elevated S100A16,benefit for,survival of recipient SCLC cells,0.8299480880618496), (S100A16,contributed,benefit for survival under stress,1.0), (elevated S100A16,contributed,benefit for survival of SCLC cells,1.0), (elevated S100A16,contributed,benefit for survival of recipient SCLC cells under stress,1.0), (S100A16,benefit for,survival of recipient SCLC cells under stress,0.8299480880618496), (elevated S100A16,contributed,benefit of HBMEC exosomes for survival of SCLC cells,1.0), (S100A16,benefit for,survival of SCLC cells under stress,0.8299480880618496), (S100A16,contributed,benefit of HBMEC exosomes for survival of SCLC cells under stress,1.0), (S100A16,benefit of,HBMEC exosomes,0.8299480880618496), (S100A16,benefit for,survival of recipient SCLC cells,0.8299480880618496), (S100A16,contributed,benefit of HBMEC exosomes for survival of SCLC cells,1.0), (elevated S100A16,benefit of,HBMEC exosomes,0.8299480880618496), (S100A16,contributed,benefit for survival,1.0), (S100A16,benefit for,survival,0.8299480880618496), (S100A16,contributed,benefit of HBMEC exosomes for survival of recipient SCLC cells,1.0), (S100A16,contributed,benefit for survival of recipient SCLC cells under stress,1.0), (elevated S100A16,contributed,benefit for survival under stress,1.0), (S100A16,contributed,benefit of HBMEC exosomes for survival under stress,1.0), (S100A16,contributed,benefit for survival of SCLC cells,1.0), (elevated S100A16,benefit for,survival of SCLC cells,0.8299480880618496), (S100A16,benefit for,survival of SCLC cells,0.8299480880618496), (elevated S100A16,contributed,benefit,1.0)]  [(elevation,is in,SCLC cells,1.0), (elevation,resistance to,apoptosis,1.0), (elevation,prevented,loss,1.0), (elevation,Moreover prevented,loss of membrane potential,1.0), (elevation,prevented,loss of mitochondrial membrane potential,1.0), (elevation,enhanced resistance to,apoptosis,1.0), (elevation,prevented,loss of membrane potential,1.0), (elevation,Moreover prevented,loss,1.0), (elevation,Moreover prevented,loss of mitochondrial membrane potential,1.0)]  [(S100A16-mediated protective effect,was caused by,presence,1.0), (S100A16-mediated protective effect,was caused by,presence of element in m,1.0), (effect,was caused by,presence in m,1.0), (S100A16-mediated effect,was caused by,presence of element,1.0), (S100A16-mediated effect,was,caused,1.0), (S100A16-mediated protective effect,was,caused,1.0), (S100A16-mediated effect,was caused by,presence,1.0), (protective effect,was caused by,presence,1.0), (S100A16-mediated effect,was caused by,presence in m,1.0), (protective effect,was,caused,1.0), (effect,was caused by,presence of element,1.0), (effect,was caused by,presence of important element in m,1.0), (protective effect,was caused by,presence of element,1.0), (S100A16-mediated protective effect,was caused by,presence in m,1.0), (S100A16-mediated protective effect,was caused by,presence of important element in m,1.0), (protein,is in,mitochondrial inner membrane,1.0), (effect,was caused by,presence of important element,1.0), (effect,was caused by,presence of element in m,1.0), (S100A16-mediated effect,was caused by,presence of element in m,1.0), (protective effect,was caused by,presence in m,1.0), (protective effect,was caused by,presence of important element in m,1.0), (protective effect,was caused by,presence of important element,1.0), (protective effect,was caused by,presence of element in m,1.0), (S100A16-mediated protective effect,was caused by,presence of element,1.0), (m,protein in,mitochondrial inner membrane,1.0), (S100A16-mediated effect,was caused by,presence of important element,1.0), (effect,was,caused,1.0), (S100A16-mediated effect,was caused by,presence of important element in m,1.0), (presence,is in,m,1.0), (S100A16-mediated protective effect,was caused by,presence of important element,1.0), (effect,was caused by,presence,1.0)]  []  [(S100A16,plays,role,1.0), (S100A16,identifying S100A16 as,potential target in SCLC brain metastasis.-Xu,1.0), (elevated S100A16,plays,role,1.0), (elevated S100A16,identifying S100A16 as,potential target,1.0), (important potential target,is in,metastasis.-Xu,1.0), (S100A16,identifying S100A16 as,potential target,1.0), (S100A16,identifying,S100A16,1.0), (elevated S100A16,facilitating,survival of SCLC cells,1.0), (S100A16,facilitating,survival of SCLC cells,1.0), (S100A16,facilitating,survival,1.0), (elevated S100A16,facilitating,survival,1.0), (elevated S100A16,identifying,S100A16,1.0), (elevated S100A16,identifying S100A16 as,potential target in SCLC brain metastasis.-Xu,1.0)]  [(B. Brain microvascular cell S100A16 up-regulation,confers,cell lung cancer cell survival,1.0), (B. Brain microvascular cell exosome-mediated S100A16 up-regulation,confers,cell lung cancer cell survival,1.0), (B. Brain cell S100A16 up-regulation,confers cell lung cancer cell survival in,brain,1.0), (B. Brain endothelial cell exosome-mediated S100A16 up-regulation,confers,cell lung cancer cell survival,1.0), (B. Brain microvascular endothelial cell exosome-mediated S100A16 up-regulation,confers,cell lung cancer cell survival,1.0), (B. Brain microvascular cell exosome-mediated S100A16 up-regulation,confers,small cell lung cancer cell survival,1.0), (B. Brain microvascular cell exosome-mediated S100A16 up-regulation,confers cell lung cancer cell survival in,brain,1.0), (B. Brain microvascular endothelial cell S100A16 up-regulation,confers,cell lung cancer cell survival,1.0), (B. Brain microvascular endothelial cell S100A16 up-regulation,confers cell lung cancer cell survival in,brain,1.0), (B. Brain cell S100A16 up-regulation,confers,cell lung cancer cell survival,1.0), (B. Brain microvascular cell S100A16 up-regulation,confers,small cell lung cancer cell survival,1.0), (B. Brain microvascular endothelial cell S100A16 up-regulation,confers,small cell lung cancer cell survival,1.0), (B. Brain endothelial cell exosome-mediated S100A16 up-regulation,confers cell lung cancer cell survival in,brain,1.0), (B. Brain microvascular endothelial cell exosome-mediated S100A16 up-regulation,confers,small cell lung cancer cell survival,1.0), (B. Brain endothelial cell S100A16 up-regulation,confers,small cell lung cancer cell survival,1.0), (B. Brain cell exosome-mediated S100A16 up-regulation,confers,small cell lung cancer cell survival,1.0), (B. Brain endothelial cell S100A16 up-regulation,confers cell lung cancer cell survival in,brain,1.0), (B. Brain cell exosome-mediated S100A16 up-regulation,confers cell lung cancer cell survival in,brain,1.0), (B. Brain cell exosome-mediated S100A16 up-regulation,confers,cell lung cancer cell survival,1.0), (B. Brain microvascular cell S100A16 up-regulation,confers cell lung cancer cell survival in,brain,1.0), (B. Brain cell S100A16 up-regulation,confers,small cell lung cancer cell survival,1.0), (B. Brain microvascular endothelial cell exosome-mediated S100A16 up-regulation,confers cell lung cancer cell survival in,brain,1.0), (B. Brain endothelial cell S100A16 up-regulation,confers,cell lung cancer cell survival,1.0), (B. Brain endothelial cell exosome-mediated S100A16 up-regulation,confers,small cell lung cancer cell survival,1.0)]  Count:369 |

Abstract 8

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| --- | --- | --- |
| Type | Count |  |
| POS : Noun | 52 | count for POS\_noun is 52: case, man, encephalitis, LE, antibodies, acid, receptor, AMPAR, patient, memory, loss, months, resonance, electroencephalogram, AMPAR, antibodies, blood, serum, fluid, test, results, CT, scans, tumor, lobus, pulmonis, needle, biopsy, results, cell, lung, cancer, SCLC, patient, LE, AMPAR, antibodies, SCLC, months, immunotherapy, tumor, removal, patient, memory, AMPAR, antibodies, patients, LE, tumor, treatment, tumor, immunotherapy, |
| POS:Verb | 21 | count for POS\_verb is 21: report, associated, presented, were, were, found, were, found, was, performed, showed, was, diagnosed, associated, was, restored, recommend, be, detected, Prompt, are, |
| NER : Name | 0 |  |
| Triplet | 67 | [(51-year-old man,is with,limbic encephalitis associated,1.0), (We,report,case of man with encephalitis associated with antibodies against Amino-3-Hydroxy-5-Methyl-4-Isoxazolepropionic acid receptor,1.0), (We,report,case of man with encephalitis associated with antibodies against acid receptor,1.0), (We,report,case of 51-year-old man with encephalitis associated,1.0), (We,report,case of 51-year-old man with encephalitis associated with antibodies against Amino-3-Hydroxy-5-Methyl-4-Isoxazolepropionic acid receptor,1.0), (We,report,case of 51-year-old man with encephalitis,1.0), (We,report,case of man with limbic encephalitis associated,1.0), (We,report,case of man,1.0), (We,report,case of man with limbic encephalitis associated with antibodies against Amino-3-Hydroxy-5-Methyl-4-Isoxazolepropionic acid receptor,1.0), (We,report,case of man with encephalitis associated,1.0), (We,report,case,1.0), (We,report,case of 51-year-old man with encephalitis associated with antibodies against acid receptor,1.0), (We,report,case of man with encephalitis associated with antibodies,1.0), (We,report,case of man with limbic encephalitis associated with antibodies,1.0), (We,report,case of 51-year-old man with limbic encephalitis associated with antibodies against acid receptor,1.0), (We,report,case of 51-year-old man with encephalitis associated with antibodies,1.0), (We,report,case of man with encephalitis,1.0), (We,report,case of man with limbic encephalitis associated with antibodies against acid receptor,1.0), (We,report,case of 51-year-old man with limbic encephalitis associated with antibodies against Amino-3-Hydroxy-5-Methyl-4-Isoxazolepropionic acid receptor,1.0), (We,report,case of 51-year-old man,1.0), (We,report,case of man with limbic encephalitis,1.0), (We,report,case of 51-year-old man with limbic encephalitis,1.0), (We,report,case of 51-year-old man with limbic encephalitis associated with antibodies,1.0), (We,report,case of 51-year-old man with limbic encephalitis associated,1.0)]  [(patient,presented with,memory loss,1.0), (patient,presented with,anterograde memory loss,1.0), (patient,presented with,anterograde memory loss 2 months,1.0), (patient,presented with,memory loss 2 months,1.0)]  [(resonance,were,normal,1.0), (electroencephalogram,were,normal,1.0), (Cranial magnetic resonance,were,normal,1.0), (Cranial resonance,were,normal,1.0), (magnetic resonance,were,normal,1.0)]  [(AMPAR antibodies,were,found,1.0), (AMPAR antibodies,were found in,blood serum,1.0)]  [(other test results,were,unremarkable,1.0)]  [(CT scans,found,tumor,1.0), (CT scans,found tumor in,lobus pulmonis,1.0), (CT scans,found tumor in,right lobus pulmonis,1.0), (CT scans,found tumor in,lobus superior pulmonis,1.0), (CT scans,found tumor in,right lobus superior pulmonis,1.0)]  [(results,showed,cell lung cancer,1.0), (CT-guided needle biopsy,was,performed,1.0), (pathological results,showed,small cell lung cancer,1.0), (results,showed,small cell lung cancer,1.0), (pathological results,showed,SCLC,1.0), (needle biopsy,was,performed,1.0), (results,showed,SCLC,1.0), (pathological results,showed,cell lung cancer,1.0)]  [(patient,was diagnosed with,LE associated with AMPAR antibodies,1.0), (patient,was diagnosed with,LE associated,1.0), (patient,was,diagnosed,1.0), (patient,was diagnosed with,LE,1.0)]  [(patient,has,memory,1.0), (patient 's memory,was partially restored after,Three months,1.0), (patient 's memory,was restored after,Three months,1.0), (patient 's memory,was,partially restored,1.0), (patient 's memory,was,restored,1.0)]  [(AMPAR antibodies,be detected in,patients with classic LE with tumor,1.0), (AMPAR antibodies,be detected in,patients with LE,1.0), (AMPAR antibodies,be detected in,patients with classic LE,1.0), (AMPAR antibodies,be detected in,patients with classic LE tumor,1.0), (patients,is with,classic LE with tumor,1.0), (AMPAR antibodies,be detected in,patients with LE tumor,1.0), (AMPAR antibodies,be detected in,patients,1.0), (AMPAR antibodies,be detected in,patients with LE with tumor,1.0), (AMPAR antibodies,be,detected,1.0)]  []  Count:67 |

Abstract 9

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| --- | --- | --- |
| Type | Count |  |
| POS : Noun | 54 | count for POS\_noun is 54: Cancer, precision, medicine, knowledge, aberrations, tumors, studies, complexity, cancers, number, mutations, cancer, effects, mutations, combinations, driver, mutations, systems, analysis, model, cell, lung, cancer, therapy, sequencing, discovery, phosphoproteomics, modeling, alterations, approach, complexity, reduction, events, resistance, phosphoproteins, alterations, testing, phosphoproteins, targeting, HSPB1, DBNL, AKT1, effects, resistance, therapy, approach, profiling, aberrations, combination, therapies, cancers, article, copyright, rights, |
| POS:Verb | 29 | count for POS\_verb is 29: relies, have, shown, observed, is, believed, be, linked, are, perform, targeted, integrates, identify, allows, involved, mediating, perform, predicted, discovered, showed, overcoming, be, used, complement, identify, propose, is, protected, reserved, |
| NER : Name | 0 |  |
| Triplet | 57 | [(Cancer precision medicine,shown,complexity in many cancers,0.4727605190318521), (Cancer precision medicine,shown,mutational complexity in many cancers,0.4727605190318521), (Cancer precision medicine,shown,complexity in cancers,0.4727605190318521), (Cancer precision medicine,relies on,knowledge about genetic aberrations in tumors,1.0), (Cancer precision medicine,shown,high mutational complexity in many cancers,0.4727605190318521), (Cancer precision medicine,relies on,knowledge about aberrations in tumors,1.0), (Cancer precision medicine,shown,mutational complexity in cancers,0.4727605190318521), (Cancer precision medicine,largely relies on,knowledge about aberrations in tumors,1.0), (Cancer precision medicine,shown,high complexity in cancers,0.4727605190318521), (Cancer precision medicine,shown,high complexity in many cancers,0.4727605190318521), (Cancer precision medicine,relies on,knowledge about aberrations,1.0), (Cancer precision medicine,largely relies on,knowledge about aberrations,1.0), (Cancer precision medicine,relies on,knowledge,1.0), (Cancer precision medicine,largely relies on,knowledge,1.0), (Cancer precision medicine,relies on,knowledge about genetic aberrations,1.0), (genetic aberrations,is in,tumors,1.0), (high mutational complexity,is in,many cancers,1.0), (Cancer precision medicine,shown,high mutational complexity in cancers,0.4727605190318521), (Cancer precision medicine,largely relies on,knowledge about genetic aberrations in tumors,1.0), (Cancer precision medicine,largely relies on,knowledge about genetic aberrations,1.0)]  [(large number,is,believed,1.0), (number,is,believed,1.0)]  [(we,perform,systems analysis of model of EGFR-mutated cell lung cancer,1.0), (we,perform,systems analysis,1.0), (we,perform,systems analysis of model,1.0), (we,perform,systems analysis of model of EGFR-mutated cell lung cancer resistant,1.0), (we,perform,systems analysis of model of EGFR-mutated non-small cell lung cancer,1.0), (we,perform,systems analysis of model of cell lung cancer,1.0), (we,perform,systems analysis of model of cell lung cancer resistant,1.0), (we,perform,systems analysis of model of EGFR-mutated non-small cell lung cancer resistant,1.0), (we,perform,systems analysis of model of non-small cell lung cancer,1.0), (we,perform,systems analysis of model of non-small cell lung cancer resistant,1.0)]  [(Our approach,allows for,complexity reduction,1.0), (Our approach,allows for,complexity reduction from over 2,000 events,1.0), (Our approach,allows for,complexity reduction from over 2,000 genetic events involved,1.0), (Our approach,allows for,complexity reduction from over 2,000 genetic events,1.0), (Our approach,allows for,complexity reduction from over 2,000 events potentially involved,1.0), (Our approach,allows for,complexity reduction from over 2,000 genetic events potentially involved,1.0), (Our approach,allows for,complexity reduction from over 2,000 events involved,1.0)]  [(potent effects,targeting of,HSPB1,0.8343199165675379), (targeting,showed,anti-proliferative effects,1.0), (potent anti-proliferative effects,targeting of,HSPB1,0.8343199165675379), (targeting,showed,effects,1.0), (We,perform,testing,1.0), (effects,targeting of,HSPB1,0.8343199165675379), (targeting,showed,potent anti-proliferative effects,1.0), (We,perform,single testing,1.0), (anti-proliferative effects,targeting of,HSPB1,0.8343199165675379), (targeting,showed,potent effects,1.0)]  [(Our approach,may,may used,1.0), (Our approach,complement,profiling,1.0), (Our approach,may,may therefore used,1.0), (Our approach,propose,combination therapies across cancers,1.0), (Our approach,propose,combination therapies,1.0), (Our approach,complement,mutational profiling,1.0)]  [(article,is,protected,1.0), (article,is protected by,copyright,1.0)]  []  Count:57 |

Abstract 10

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| --- | --- | --- |
| Type | Count |  |
| POS : Noun | 46 | count for POS\_noun is 46: mTOR, pathway, inhibitors, rapalogs, tool, memory, CD8, T, cells, study, combination, temsirolimus, vaccines, designs, cancer, vaccines, peptides, B, subunit, Shiga, toxin, antigen, delivery, vector, tumor, models, melanoma, lung, colon, cancer, administration, temsirolimus, tumor, growth, CD8, T-cell, responses, vaccination, CD8, T, cells, vaccine, temsirolimus, characteristics, memory, CD127, |
| POS:Verb | 10 | count for POS\_verb is 10: represent, induce, investigated, Using, showed, decreased, enhanced, induced, induced, exhibit, |
| NER : Name | 0 |  |
| Triplet | 19 | []  [(we,investigated,combination of temsirolimus,1.0), (we,investigated,combination of temsirolimus with vaccines,1.0), (we,investigated combination In,study,1.0), (we,investigated,combination with anticancer vaccines,1.0), (we,investigated,combination of temsirolimus with anticancer vaccines,1.0), (we,investigated,combination with vaccines,1.0), (we,investigated,combination,1.0), (combination,is with,anticancer vaccines,1.0)]  [(administration,enhanced,CD8 T-cell responses induced,1.0), (administration,efficiently decreased,tumor growth,1.0), (administration,enhanced,CD8 T-cell responses,1.0), (administration,enhanced,CD8 T-cell responses induced by vaccination,1.0), (administration,decreased,tumor growth,1.0), (administration,enhanced,tumor-specific CD8 T-cell responses,1.0), (we,Using,designs,1.0), (administration,enhanced,tumor-specific CD8 T-cell responses induced,1.0), (tumor growth,administration of,temsirolimus,0.9428287104361791), (we,Using,designs of cancer vaccines,1.0), (administration,enhanced,tumor-specific CD8 T-cell responses induced by vaccination,1.0)]  []  Count:19 |