Comparison of nonparametric analysis of variance methods - a Monte Carlo study
Part A: Two between subjects factors designs

Appendix 2
Tables and Graphs of the Type I Error Rate for large *n*

All tables and graphs refer to α=0.05. Reported are the proportions of rejections of the corresponding null hypothesis.
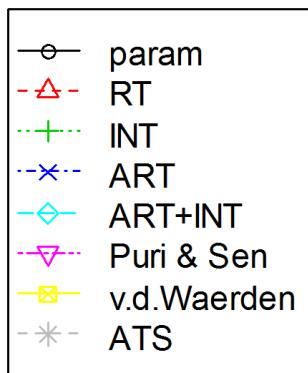
The legend for all graphs is the same:

—o—	param
- △ -	RT
···+···	INT
--×--	ART
—◇—	ART+INT
-▽-	Puri & Sen
—⊠—	v.d.Waerden
- ＊ -	ATS

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(effects $ab_{ij} = 0.6*s$ / unequal n_i / # levels = 4*5)   69

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(effects $a_i = 0.6*s$ $ab_{ij} = 0.6*s$ / equal n_i / # levels = 2*4)   85

2. 1.   Main effect A - null model (equal n_i / # levels = 2*4)

2. 1. 1   normal distribution - equal variances

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	3.95	5.80	5.20	4.55	5.25	5.30	5.75	5.30	4.60	5.05
RT	4.35	5.25	5.00	5.35	5.95	5.70	5.30	5.50	4.65	4.80
INT	4.25	5.70	4.95	4.80	5.25	5.15	5.30	5.45	4.90	5.05
ART	4.70	5.10	5.15	5.20	6.05	5.30	5.40	5.35	4.55	4.95
ART+INT	4.35	5.60	4.95	4.85	5.30	5.35	5.30	5.30	4.85	4.75
Puri & Sen	4.70	5.30	4.95	5.25	6.00	5.65	5.35	5.45	4.60	4.80
v.d.Waerden	4.55	5.50	4.90	4.95	5.40	5.10	5.25	5.40	4.90	5.05
ATS	4.05	5.25	4.95	5.35	5.95	5.70	5.30	5.50	4.65	4.80
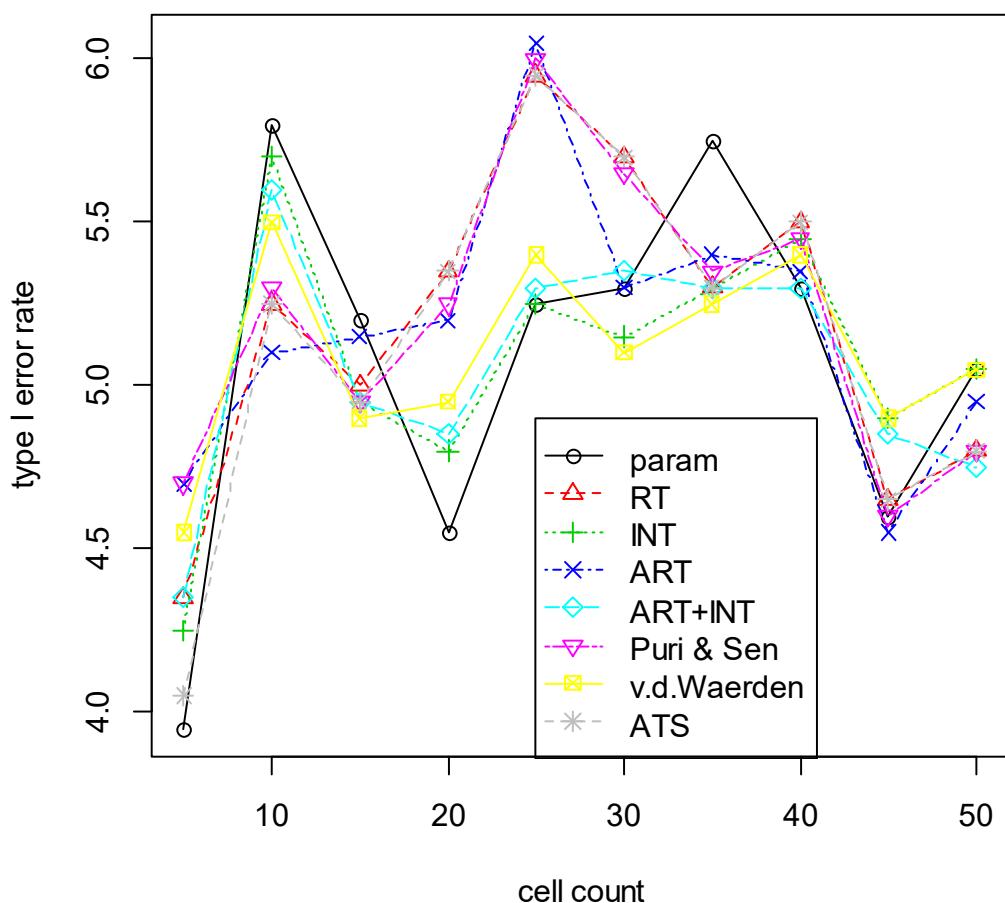
2. 1. 2   normal distribution - unequal variances (on B)

	cell count									
method	5	10	15	20	25	30	35	40	45	50
parametric	4.60	5.70	4.60	4.60	5.20	5.35	5.60	4.95	5.15	4.95
RT	5.15	5.20	4.90	4.85	5.45	5.15	4.65	5.25	4.80	4.75
INT	4.50	5.70	4.70	4.95	5.25	5.15	5.30	4.95	5.20	5.15
ART	6.85	6.85	6.25	6.00	7.50	6.90	7.05	6.55	6.85	6.50
ART+INT	5.50	6.40	5.60	5.45	6.35	6.15	6.00	5.65	6.00	6.00
Puri & Sen	4.95	5.10	4.80	4.65	5.50	5.10	4.60	5.25	4.75	4.65
v.d.Waerden	4.40	5.45	4.65	4.80	5.10	5.20	5.30	5.00	5.10	5.10
ATS	4.55	5.15	4.90	4.85	5.40	5.15	4.60	5.25	4.80	4.75
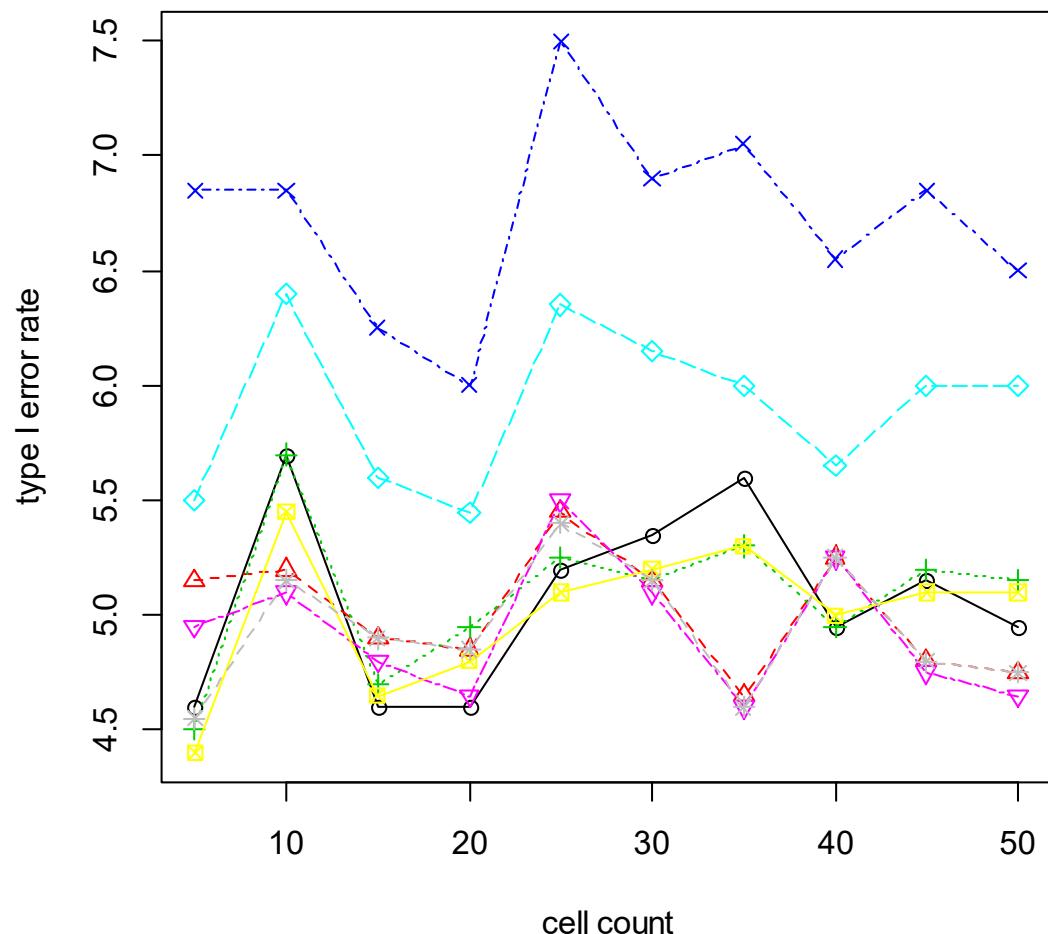
2. 1. 3   normal distribution - unequal variances (on A and B)

	cell count									
method	5	10	15	20	25	30	35	40	45	50
parametric	5.00	5.75	4.75	4.45	5.65	5.05	5.10	5.05	5.40	4.85
RT	5.00	5.20	4.90	4.80	5.70	5.30	5.00	4.95	4.70	4.75
INT	4.50	5.55	4.50	4.70	5.30	4.95	5.15	4.75	5.05	4.80
ART	6.45	6.85	6.15	5.65	7.70	7.10	6.85	6.65	6.85	6.00
ART+INT	5.35	6.05	5.40	5.40	6.25	6.00	5.60	5.50	5.75	5.60
Puri & Sen	4.70	5.05	4.90	4.50	5.65	5.35	4.80	5.05	4.65	4.65
v.d.Waerden	4.60	5.35	4.50	4.65	5.35	4.85	5.10	4.75	5.05	4.55
ATS	4.70	5.15	4.90	4.75	5.70	5.30	5.00	4.90	4.70	4.75
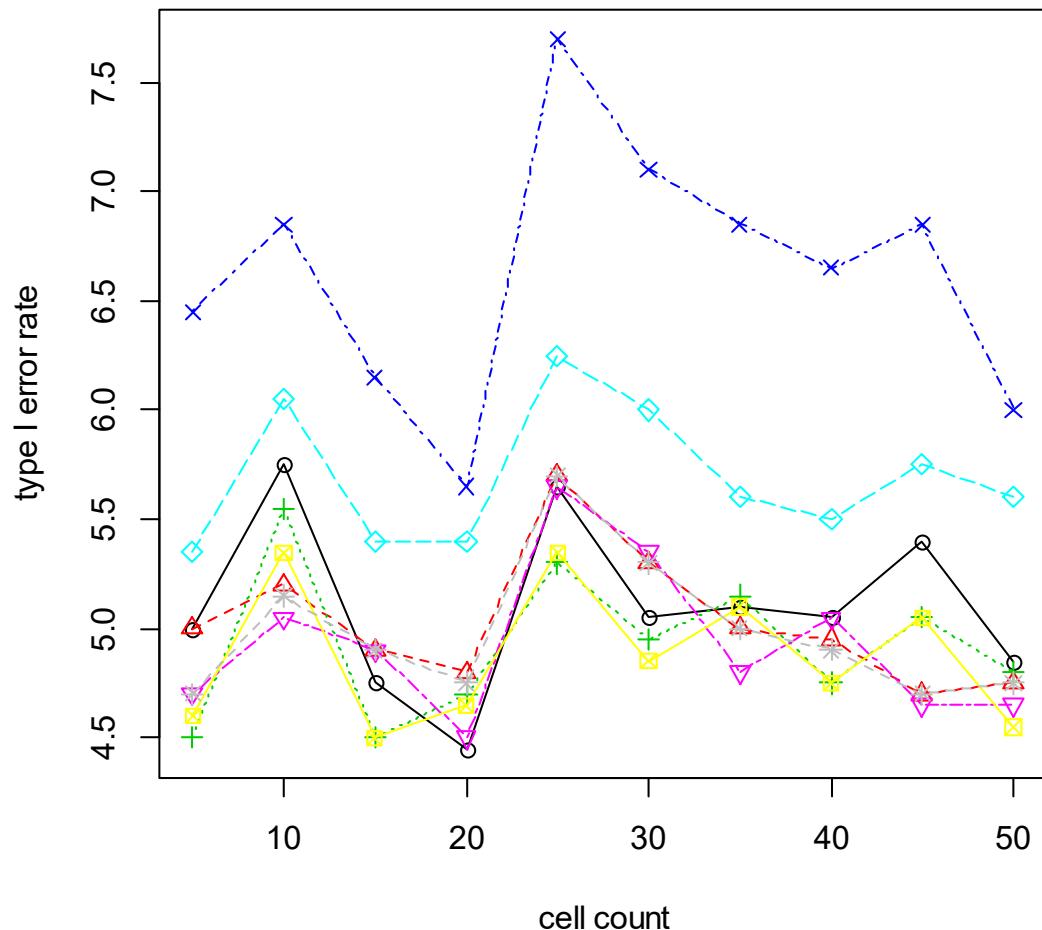
2. 1. 4   right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.80	5.50	4.85	4.95	4.60	4.90	4.55	4.85	5.80	5.40
RT	4.95	5.80	5.40	4.40	4.65	5.00	4.40	4.15	5.95	5.05
INT	4.95	5.80	5.00	4.70	4.35	4.60	4.35	4.35	6.00	4.75
ART	5.25	5.45	5.60	4.85	4.90	5.00	4.80	4.35	6.05	5.45
ART+INT	4.90	5.20	4.95	4.40	4.05	4.75	4.40	4.20	5.40	5.05
Puri & Sen	4.95	5.55	5.25	4.55	4.60	5.10	4.40	4.15	5.85	5.10
v.d.Waerden	4.85	5.65	4.95	4.55	4.35	4.45	4.40	4.35	6.05	4.85
ATS	4.95	5.80	5.40	4.40	4.65	5.00	4.40	4.15	5.95	5.05
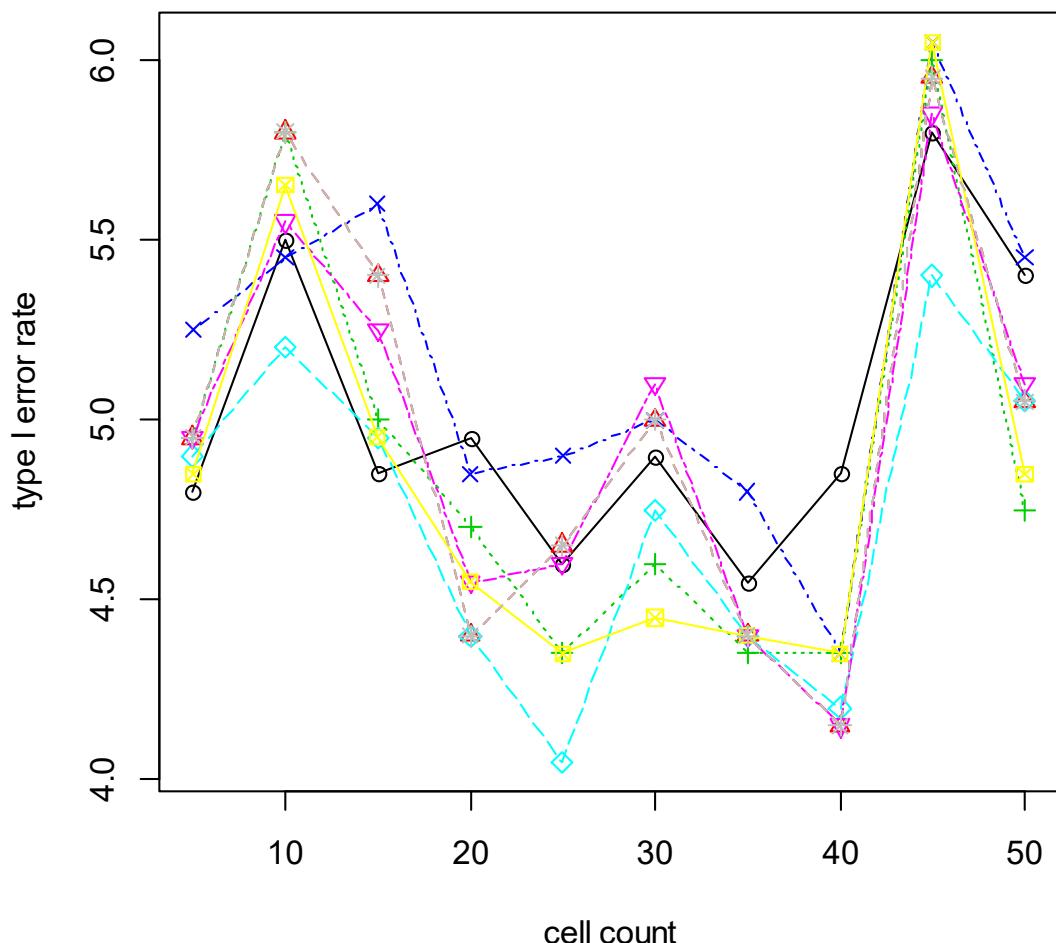
2. 1. 5   exponential distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.95	4.90	5.25	4.75	4.95	5.50	6.35	5.10	5.55	5.05
RT	4.90	6.00	5.15	4.90	5.15	5.60	6.10	4.80	4.55	5.05
INT	4.95	5.40	5.35	4.70	5.25	5.80	6.30	4.85	4.45	5.10
ART	5.40	5.40	5.35	4.90	5.00	5.80	5.80	4.65	5.00	5.30
ART+INT	3.95	4.50	4.60	3.90	4.20	4.65	5.70	4.15	3.95	4.45
Puri & Sen	4.30	5.70	4.95	4.90	5.15	5.55	6.05	4.80	4.55	5.00
v.d.Waerden	4.35	5.15	5.40	4.70	5.15	5.85	6.25	4.85	4.45	5.00
ATS	4.60	5.95	5.15	4.90	5.15	5.60	6.10	4.80	4.55	5.05
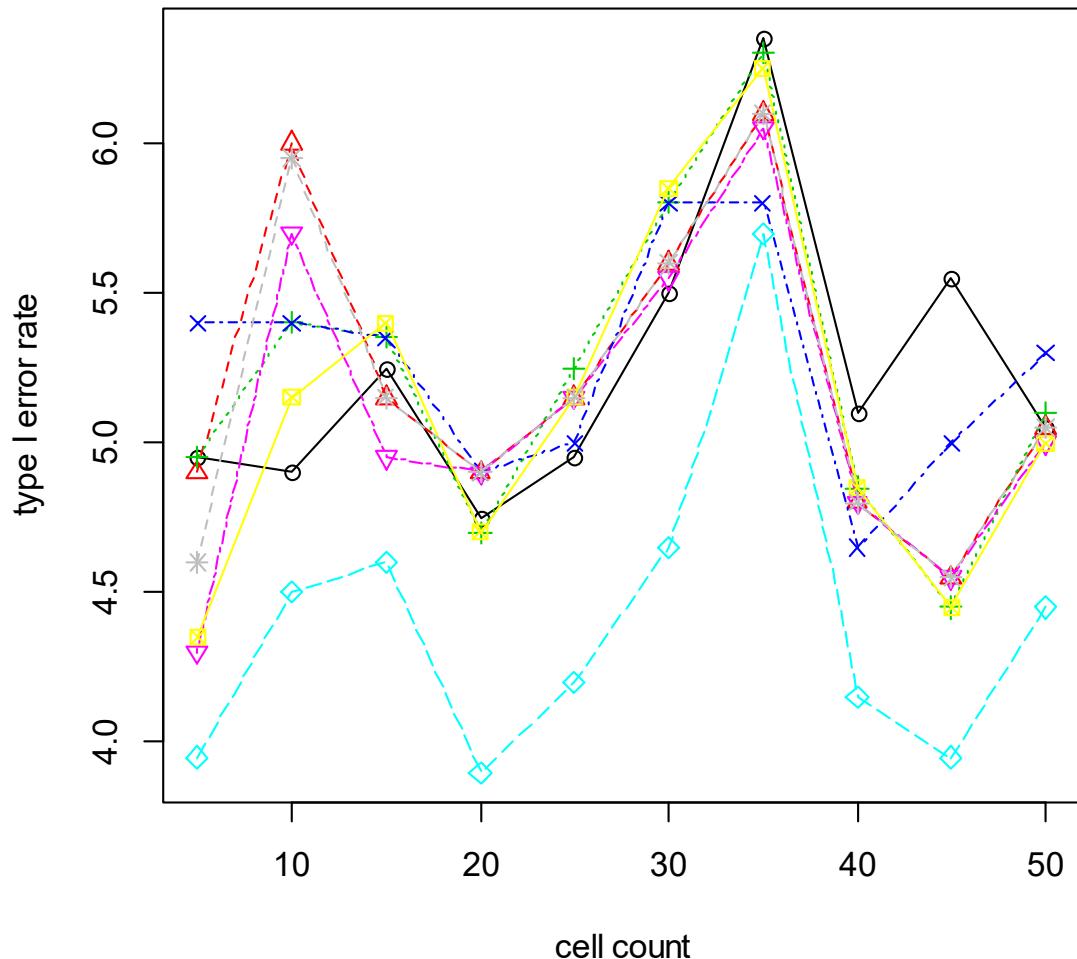
2. 1. 6   exponential distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.80	4.85	5.05	5.05	4.80	5.50	6.35	4.95	5.45	4.95
RT	4.60	5.50	4.90	4.25	4.90	6.05	6.20	4.60	4.70	4.70
INT	4.75	5.55	5.00	4.55	5.15	5.30	6.50	4.90	5.00	4.90
ART	5.45	5.90	6.30	6.20	6.65	6.75	8.35	7.20	8.05	8.15
ART+INT	4.35	4.70	5.15	4.80	6.15	5.95	6.85	6.80	7.30	8.00
Puri & Sen	4.10	5.30	4.80	4.30	4.90	5.85	6.25	4.45	4.70	4.65
v.d.Waerden	4.55	5.20	5.10	4.50	5.15	5.15	6.50	4.85	5.00	4.95
ATS	4.30	5.50	4.90	4.25	4.90	6.05	6.20	4.60	4.70	4.70
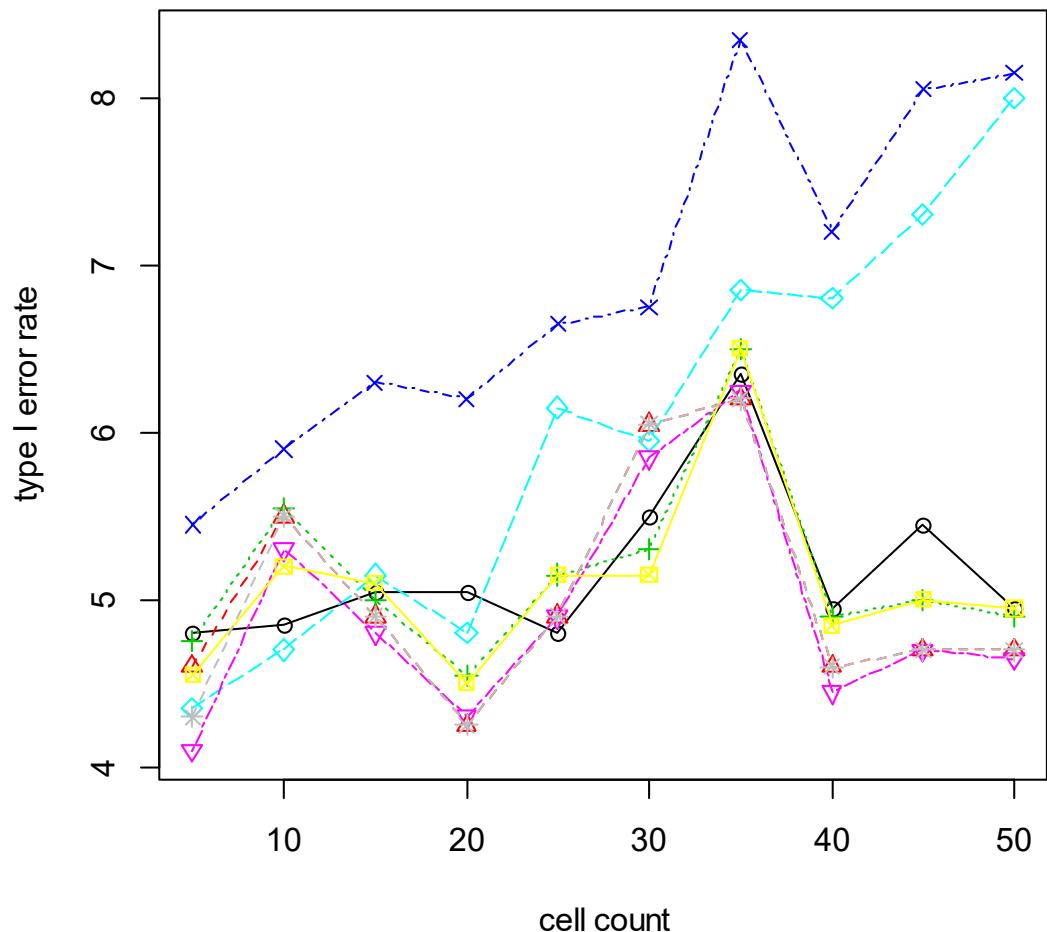
2. 1. 7 lognormal distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.85	4.80	4.75	4.30	5.40	4.40	5.65	5.45	4.75	5.00
RT	4.50	4.20	4.50	4.50	5.40	4.25	5.10	5.60	4.60	5.15
INT	4.70	4.45	4.65	4.45	5.05	4.25	5.75	5.55	4.50	5.25
ART	5.25	4.35	4.30	4.65	5.40	4.70	4.95	5.55	4.70	5.35
ART+INT	4.80	4.75	4.60	4.50	5.00	4.25	5.75	5.50	4.55	5.05
Puri & Sen	4.55	3.85	4.40	4.45	5.10	4.20	5.10	5.60	4.55	5.10
v.d.Waerden	4.45	4.10	4.55	4.40	5.10	4.25	5.65	5.55	4.45	5.20
ATS	4.35	4.00	4.45	4.45	5.30	4.20	5.10	5.60	4.55	5.15
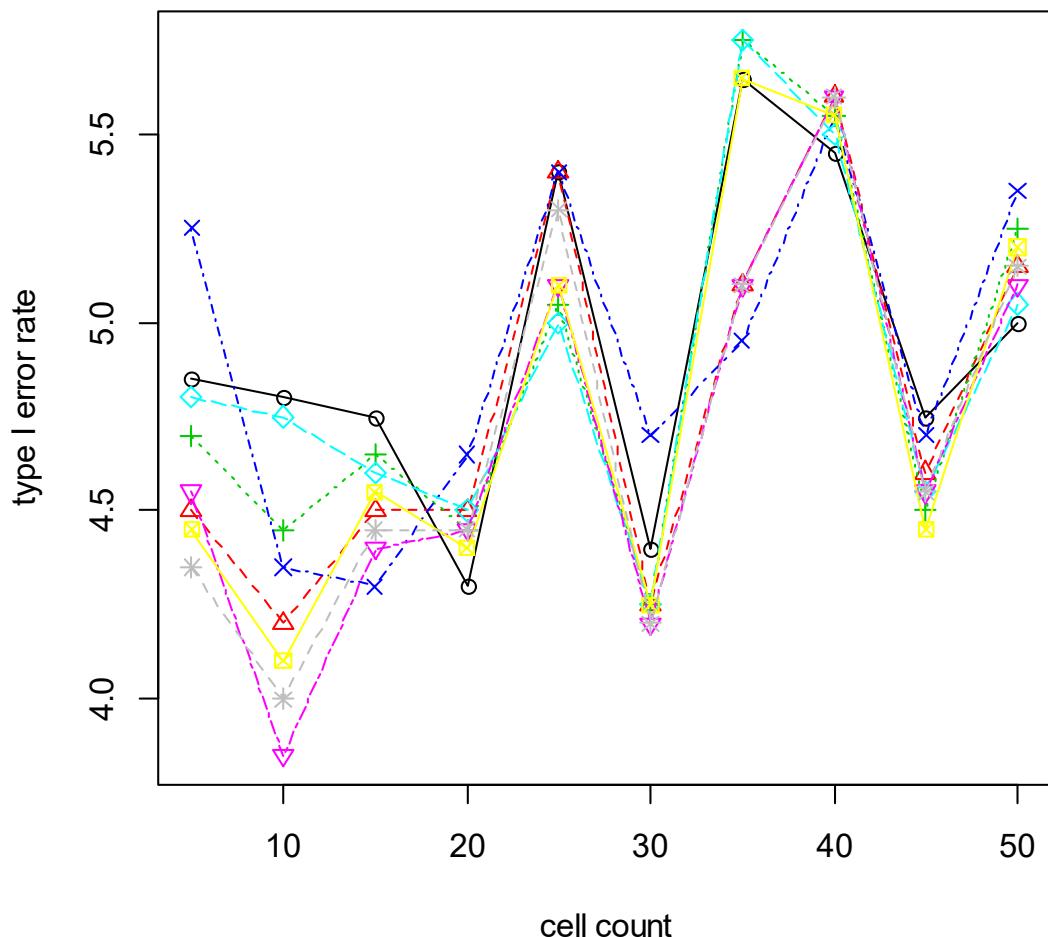
2. 1. 8   uniform distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.45	5.70	5.35	4.55	4.75	4.80	4.30	4.15	5.95	4.95
RT	4.95	5.80	5.40	4.40	4.65	5.00	4.40	4.15	5.95	5.05
INT	4.95	5.80	5.00	4.70	4.35	4.60	4.35	4.35	6.00	4.75
ART	5.05	5.40	5.40	4.75	4.65	5.05	4.40	4.20	5.75	5.15
ART+INT	5.20	5.50	4.95	4.70	4.45	4.75	4.45	4.55	5.70	5.05
Puri & Sen	4.95	5.55	5.25	4.55	4.60	5.10	4.40	4.15	5.85	5.10
v.d.Waerden	4.85	5.65	4.95	4.55	4.35	4.45	4.40	4.35	6.05	4.85
ATS	4.95	5.80	5.40	4.40	4.65	5.00	4.40	4.15	5.95	5.05
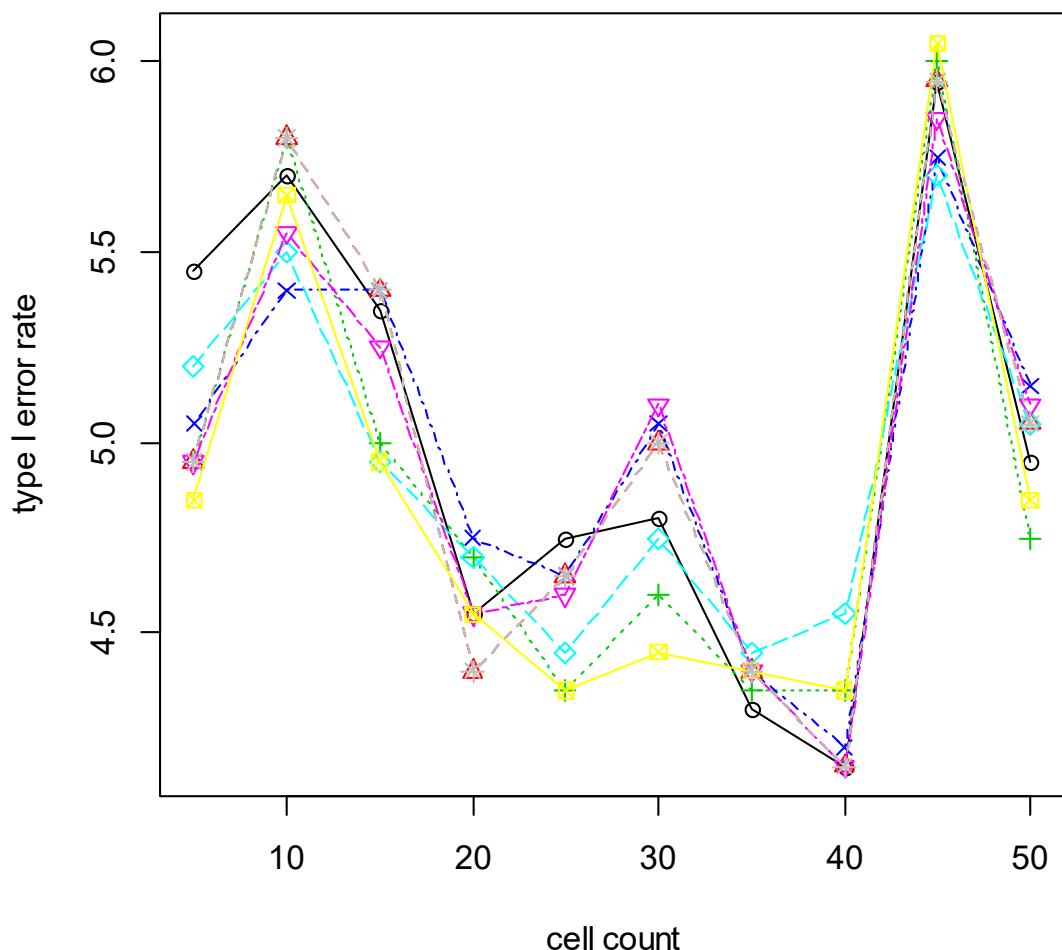
2. 1. 9 uniform distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.85	5.35	5.15	4.65	4.80	5.05	4.55	4.70	5.35	4.95
RT	5.05	5.10	5.15	4.75	4.75	5.05	4.55	4.70	5.30	4.95
INT	4.90	5.10	5.20	4.35	4.80	4.90	4.50	4.55	5.20	4.85
ART	5.40	6.05	6.10	5.65	6.30	7.00	6.75	7.70	7.05	7.95
ART+INT	5.10	5.70	6.05	6.35	6.35	7.75	8.45	8.50	9.25	9.65
Puri & Sen	5.00	4.95	5.30	4.60	4.65	5.10	4.60	4.80	5.40	5.00
v.d.Waerden	4.75	4.95	5.35	4.35	4.75	4.85	4.45	4.55	5.10	4.85
ATS	4.75	5.00	5.15	4.75	4.75	5.05	4.55	4.70	5.30	4.95
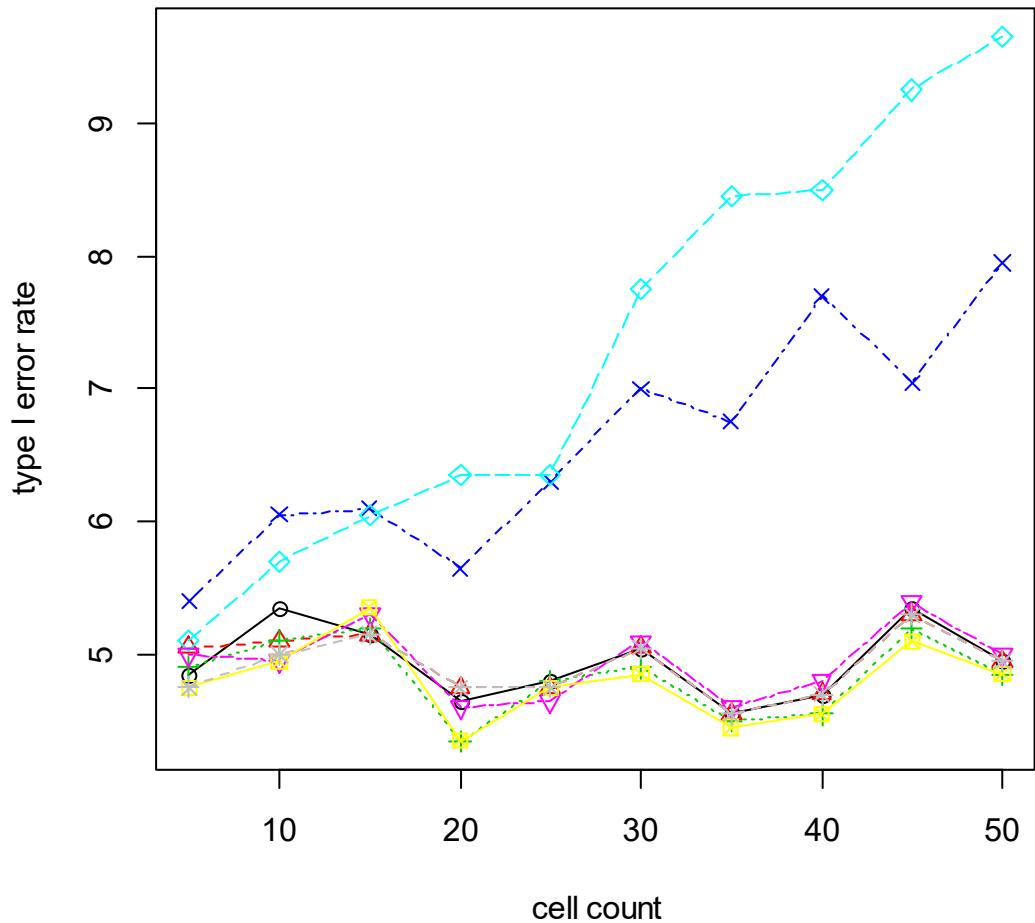
2. 1. 10   left/right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.65	4.35	4.90	4.75	4.65	4.60	4.70	4.05	5.10	4.35
RT	5.20	4.25	4.85	4.80	4.90	4.60	4.75	3.85	5.05	4.30
INT	5.15	4.40	4.70	5.25	4.60	4.40	5.10	4.30	5.25	4.50
ART	5.35	4.30	5.05	5.00	4.75	4.80	4.65	4.30	5.15	4.35
ART+INT	5.20	4.45	4.90	4.95	4.65	4.45	4.65	4.35	5.40	4.35
Puri & Sen	5.25	4.35	4.85	4.75	4.90	4.60	4.70	3.80	5.15	4.30
v.d.Waerden	5.10	4.40	4.65	5.20	4.80	4.35	5.00	4.40	5.25	4.50
ATS	4.95	4.25	4.85	4.75	4.90	4.60	4.75	3.85	5.05	4.30
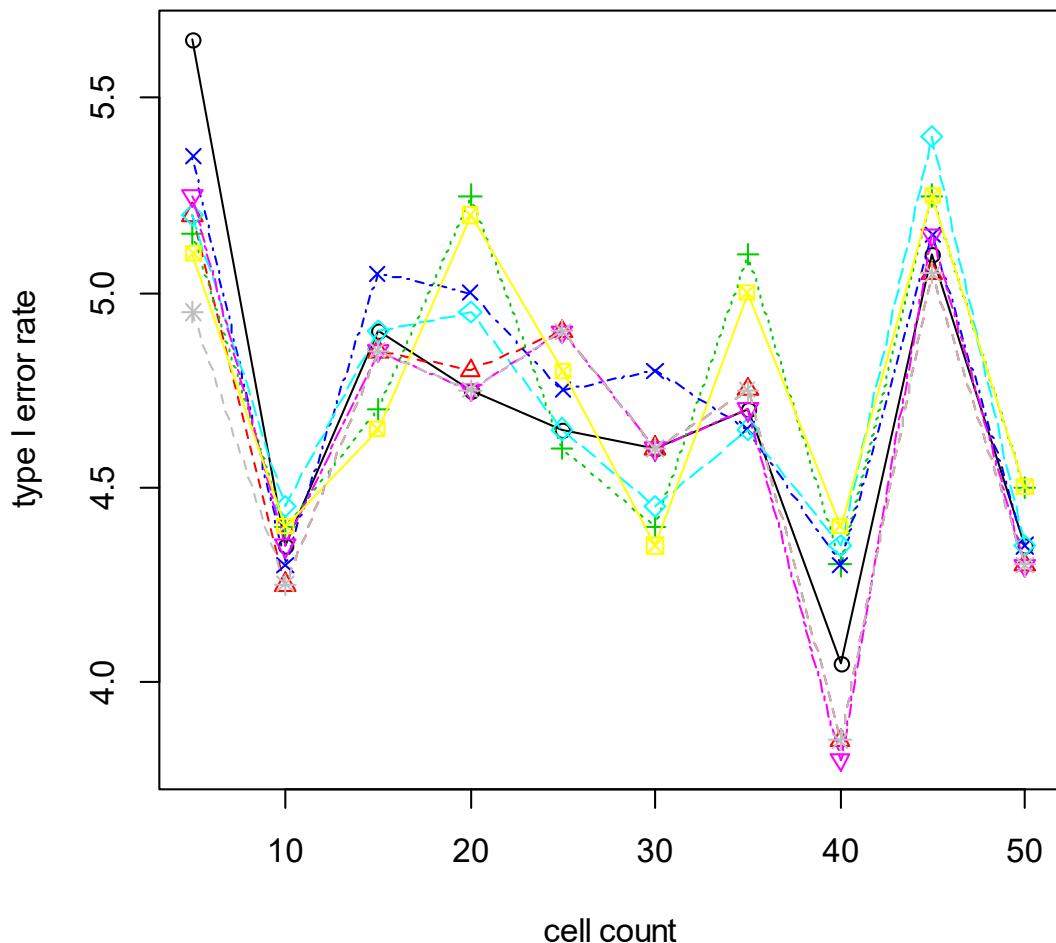
2. 1. 11　left skewed distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.65	5.65	5.75	4.95	4.95	4.75	4.65	4.70	5.65	4.90
RT	5.30	5.70	5.80	4.70	4.90	4.80	4.40	4.55	5.65	5.40
INT	5.60	5.60	5.80	4.80	5.10	4.80	4.35	4.75	5.55	5.50
ART	7.15	7.55	7.60	6.70	7.30	7.00	6.95	6.90	7.75	7.80
ART+INT	5.90	6.00	5.75	4.95	4.85	4.85	4.15	4.40	5.10	4.65
Puri & Sen	5.35	5.30	5.70	4.70	4.80	4.75	4.45	4.40	5.55	5.30
v.d.Waerden	5.55	5.50	5.55	4.85	4.85	4.85	4.25	4.75	5.50	5.45
ATS	5.15	5.60	5.70	4.65	4.90	4.80	4.40	4.40	5.65	5.30
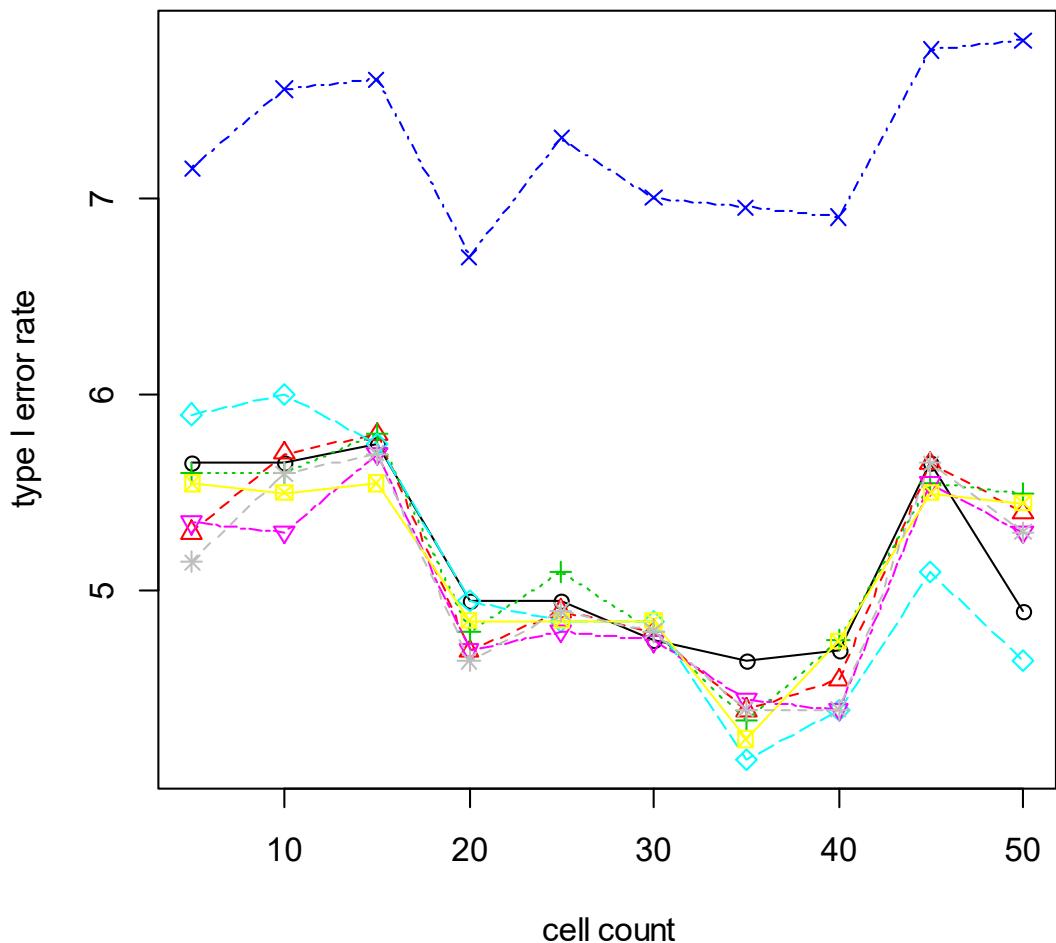
2. 1. 12   left skewed distribution - unequal variances (on A and B)

method	5	10	15	20	25	30	35	40	45	50
					cell count					
parametric	5.70	5.45	5.25	5.35	4.90	4.75	4.50	4.75	5.30	5.15
RT	5.40	5.70	5.80	4.95	5.00	5.60	4.90	4.90	5.60	5.65
INT	5.05	5.30	5.40	4.90	4.60	4.75	4.10	4.30	5.15	5.15
ART	6.85	7.75	7.55	7.00	7.25	7.85	6.70	7.65	7.55	8.35
ART+INT	5.60	5.95	5.75	5.45	5.35	5.55	5.05	5.35	5.95	6.20
Puri & Sen	5.35	5.40	5.55	5.00	4.95	5.60	4.85	4.95	5.55	5.65
v.d.Waerden	5.00	5.15	5.45	4.75	4.35	4.70	4.05	4.30	5.15	4.95
ATS	5.15	5.60	5.70	4.90	5.00	5.60	4.85	4.90	5.60	5.65
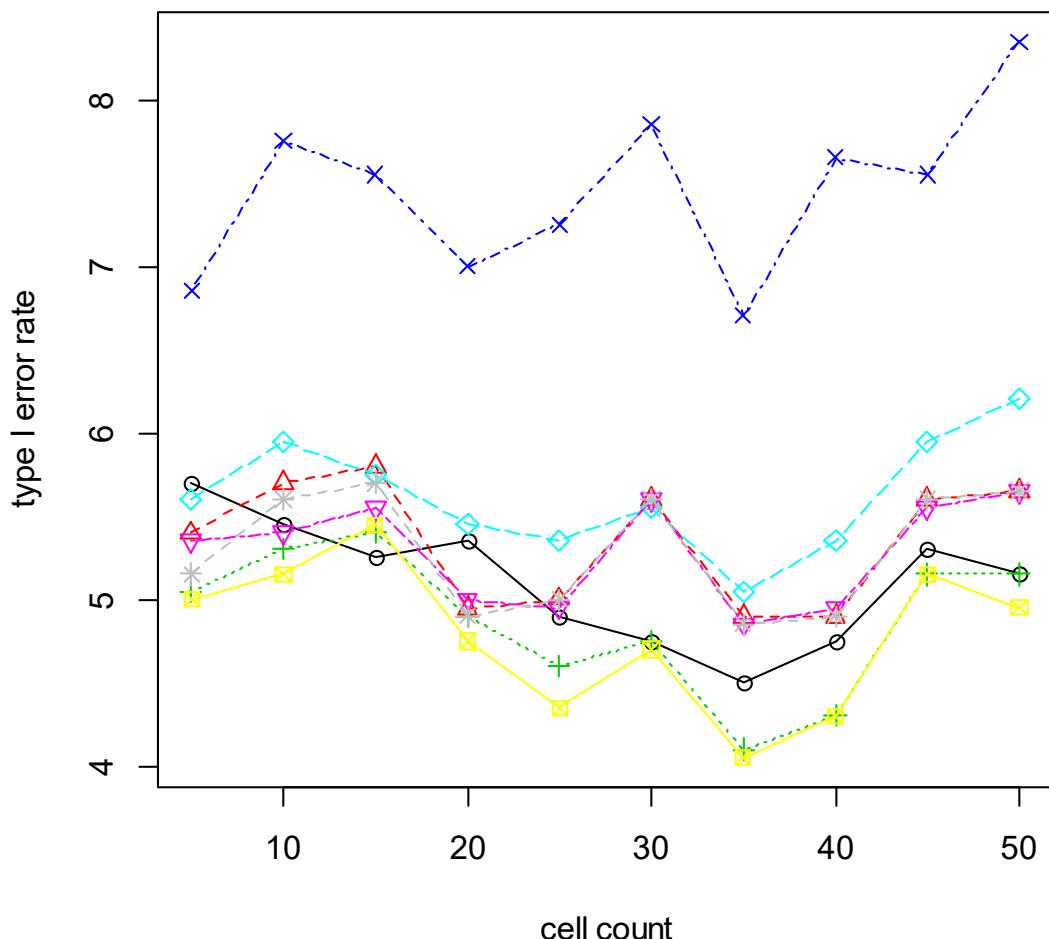
2. 2.   Main effect A - null model (unequal n_i / # levels = 4*5)

2. 2. 1   normal distribution - equal variances

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.70	4.90	4.95	5.05	4.30	4.50	4.65	4.85	4.60	5.10
RT	4.50	5.20	5.10	5.20	4.70	4.35	5.05	4.75	4.45	4.75
INT	4.70	4.95	4.95	5.15	4.40	3.95	4.55	4.90	4.55	5.05
ART	2.90	3.15	2.00	2.60	2.25	1.65	2.30	1.95	2.45	2.25
ART+INT	2.55	2.50	2.05	2.25	2.05	1.60	2.10	1.90	1.90	2.10
Puri & Sen	4.40	5.20	5.10	5.00	4.65	4.35	5.15	4.70	4.55	4.75
v.d.Waerden	4.60	4.75	5.00	5.05	4.30	3.90	4.45	4.90	4.50	5.05
ATS	3.95	5.10	5.15	4.85	4.60	4.40	4.85	4.65	4.55	5.05
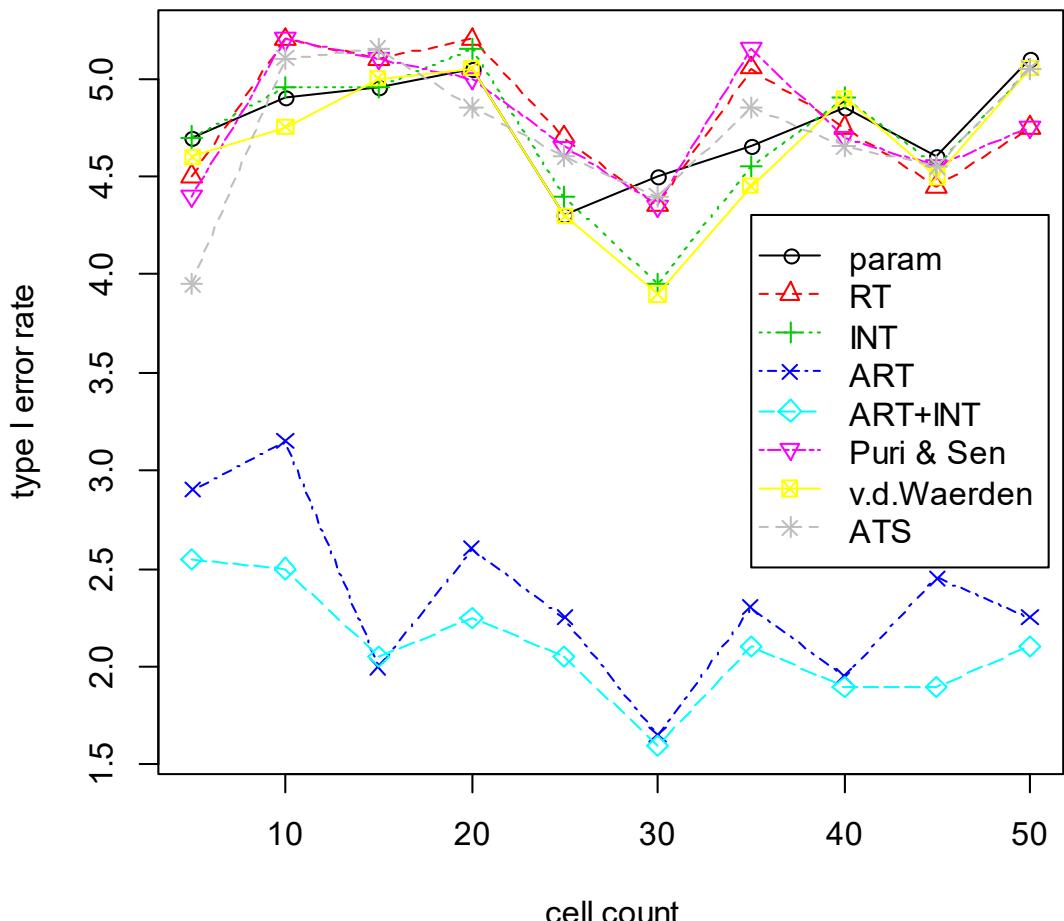
2. 2. 2   normal distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	3.25	3.55	3.50	3.45	2.90	2.80	3.05	3.50	3.60	3.50
RT	3.70	4.05	4.20	4.25	4.00	3.90	4.15	3.85	3.85	4.30
INT	3.55	3.55	3.70	3.75	3.25	2.90	3.55	3.25	3.80	3.80
ART	4.55	5.25	4.05	5.00	3.85	3.70	3.90	3.65	4.30	4.40
ART+INT	3.25	3.60	2.40	3.35	2.50	2.50	2.95	2.30	2.50	2.85
Puri & Sen	3.75	4.00	4.10	4.25	3.85	3.75	4.20	3.85	3.75	4.30
v.d.Waerden	3.25	3.40	3.65	3.70	3.25	2.95	3.40	3.30	3.85	3.80
ATS	3.65	4.55	4.95	4.75	4.20	4.05	4.55	4.55	4.65	4.85
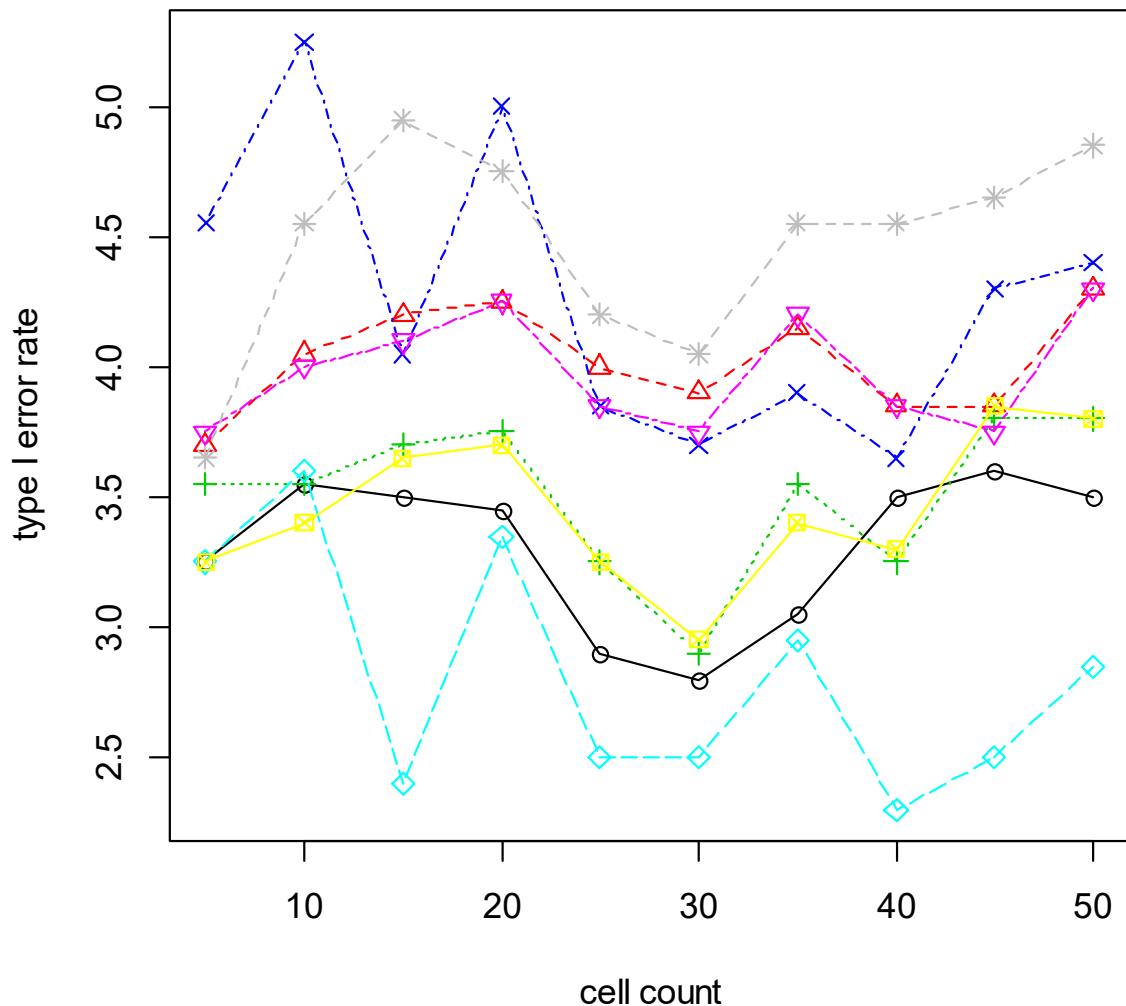
2. 2. 3   normal distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.35	6.20	6.40	6.30	5.45	6.25	6.35	6.40	7.15	6.80
RT	4.50	5.10	5.45	5.60	4.75	4.80	5.10	4.85	4.80	4.90
INT	5.00	5.25	5.40	5.75	5.10	5.30	5.00	5.35	5.70	5.65
ART	3.50	3.60	3.00	3.45	2.90	2.95	3.05	2.45	3.25	3.10
ART+INT	2.75	2.85	2.05	2.60	2.25	2.60	2.25	1.85	2.05	2.60
Puri & Sen	4.45	5.00	5.25	5.50	4.70	4.85	5.15	4.90	4.80	5.10
v.d.Waerden	4.70	4.90	5.30	5.60	4.90	5.25	5.00	5.30	5.65	5.60
ATS	3.65	4.70	4.80	5.05	4.80	4.60	4.90	4.80	4.20	5.05
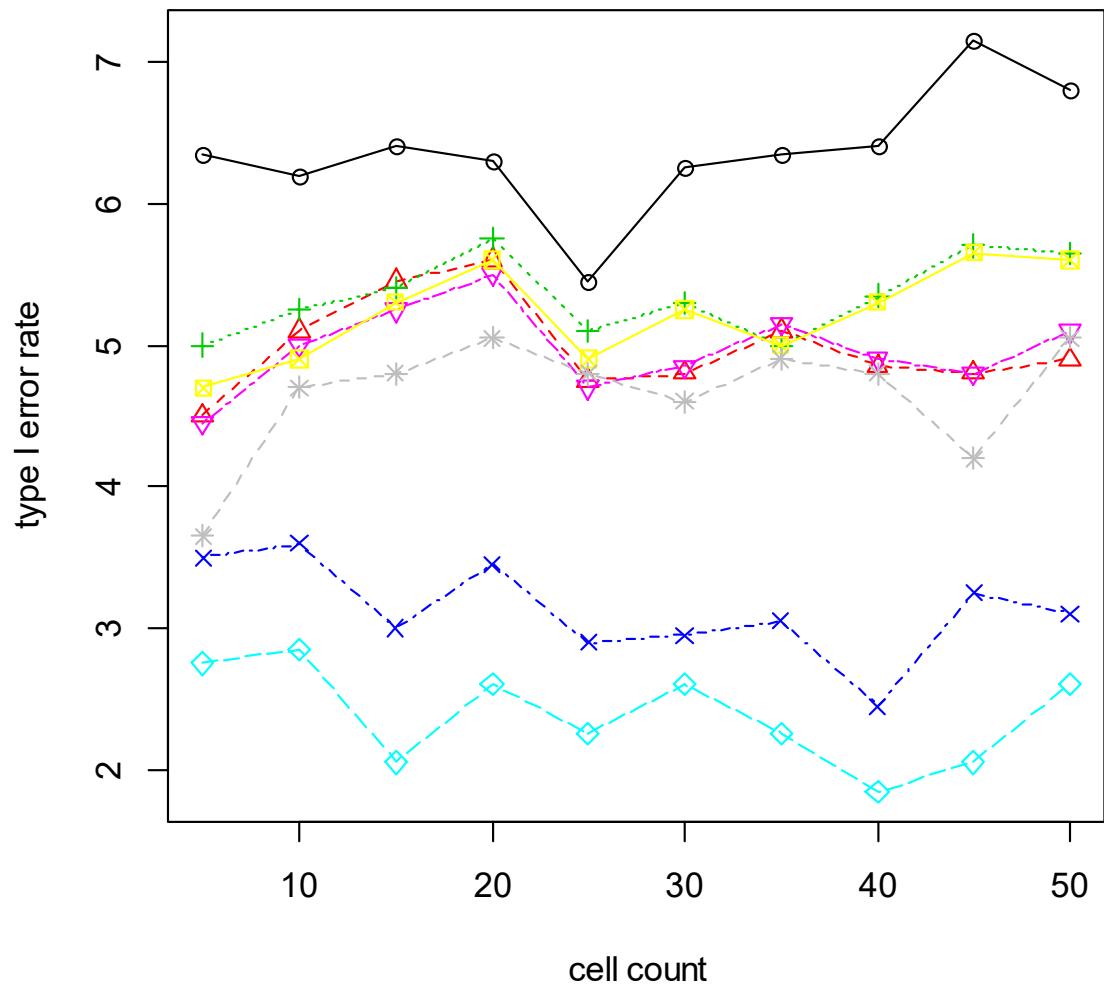
2. 2. 4   right skewed distribution

method	5	10	15	20	25	30	35	40	45	50
parametric	4.35	5.15	5.15	4.85	4.95	4.60	4.95	5.55	4.65	4.85
RT	5.15	4.90	5.10	4.60	5.10	5.50	4.55	5.65	4.80	5.05
INT	5.05	4.85	4.90	4.85	5.00	4.90	5.05	5.20	4.70	5.00
ART	2.50	2.70	2.60	2.35	2.50	2.95	2.65	3.40	2.80	2.65
ART+INT	2.40	2.20	2.50	2.35	2.70	2.85	2.40	3.10	2.50	3.30
Puri & Sen	4.40	4.70	5.20	4.50	5.10	5.45	4.50	5.65	4.75	5.00
v.d.Waerden	4.15	4.80	4.80	4.75	5.00	4.90	5.05	5.25	4.60	5.00
ATS	4.40	4.60	5.05	4.50	4.90	6.00	4.90	5.90	4.85	4.65

The table header "cell count" spans columns 5 through 50.
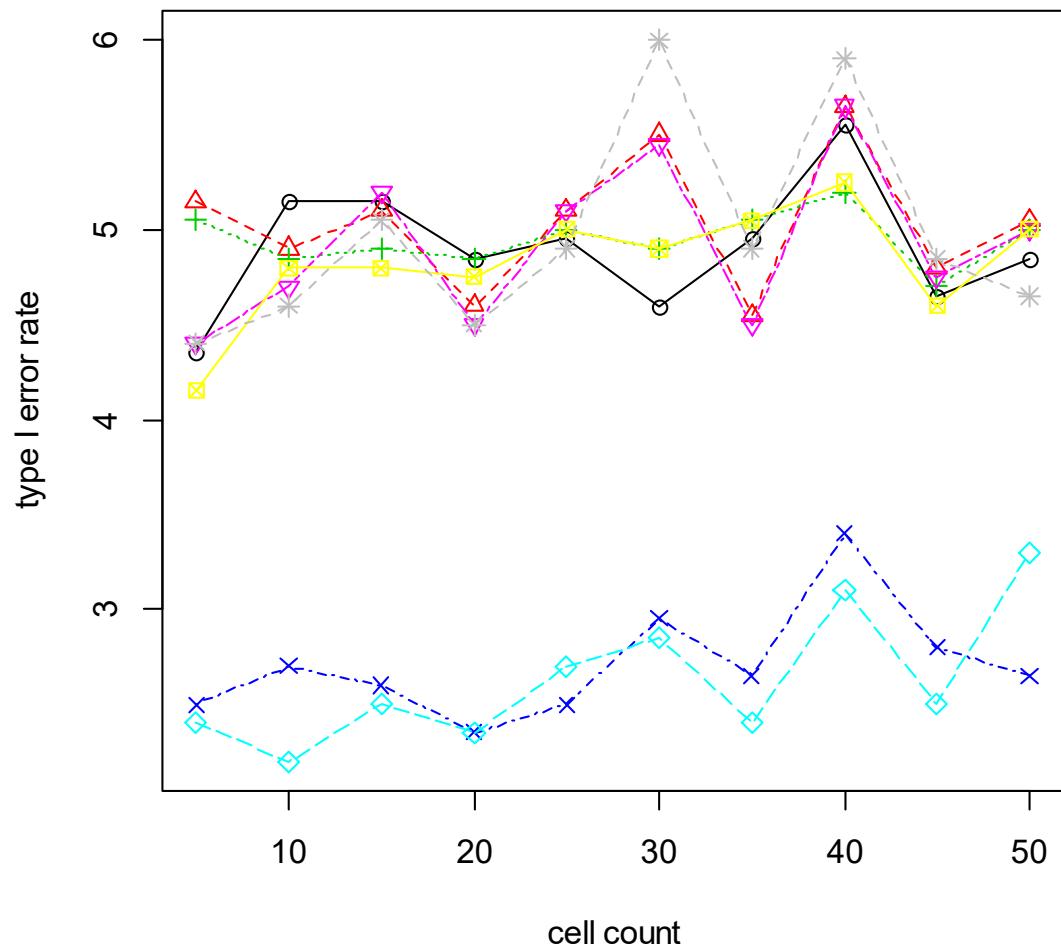
2. 2. 5   exponential distribution - continuous

method	5	10	15	20	25	30	35	40	45	50
				cell count						
parametric	5.40	4.00	4.95	5.10	5.05	4.60	4.40	4.85	5.15	4.65
RT	5.20	4.70	5.00	4.90	4.85	4.80	4.60	4.80	4.50	5.00
INT	5.05	4.55	5.20	5.20	4.90	5.00	4.90	4.65	5.00	4.90
ART	4.15	3.05	3.70	2.65	3.95	3.45	3.50	3.60	3.20	4.05
ART+INT	2.50	1.90	2.75	2.25	2.95	3.20	2.95	3.15	3.15	3.80
Puri & Sen	4.90	4.50	5.00	4.85	4.90	4.85	4.50	4.70	4.60	4.95
v.d.Waerden	5.10	4.40	4.95	5.20	4.75	4.95	4.70	4.60	5.00	4.85
ATS	4.00	4.55	5.15	4.75	4.90	4.90	4.65	4.45	4.25	5.05
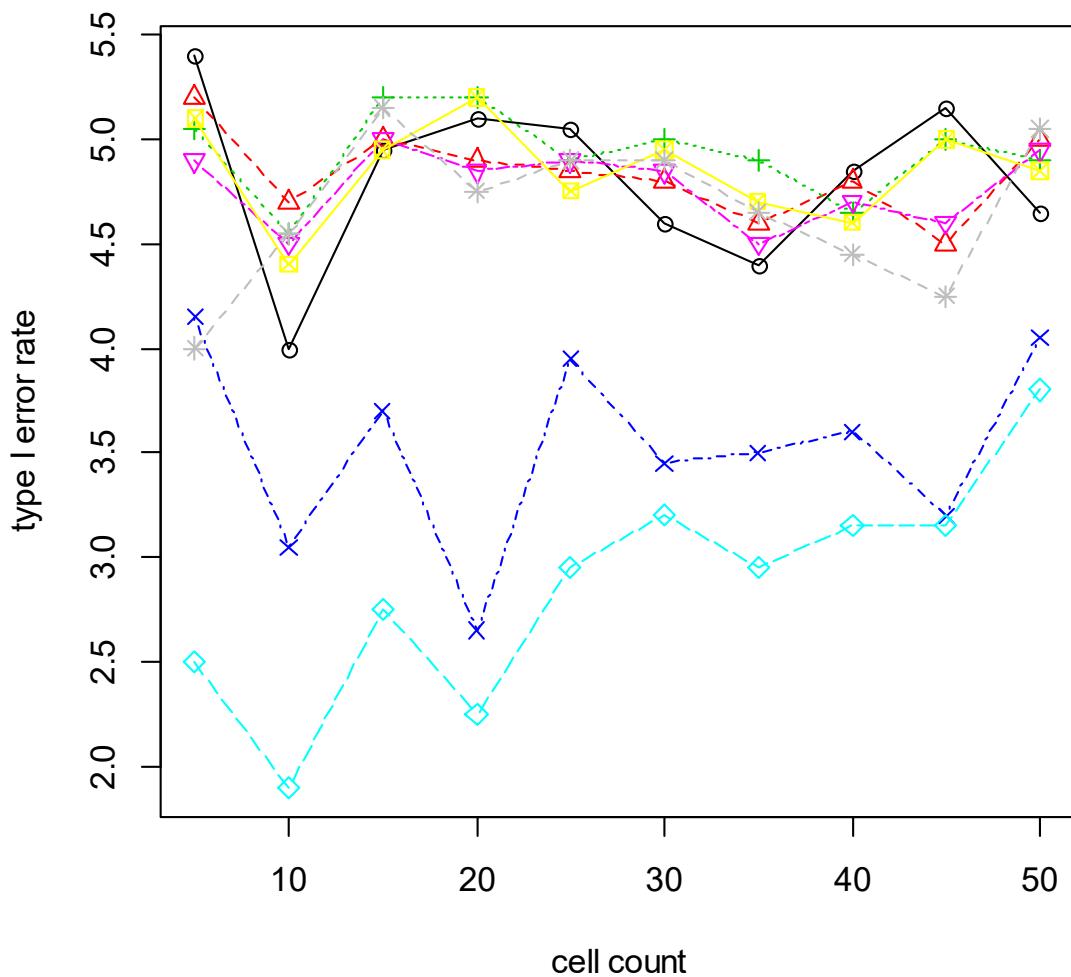
2. 2. 6   exponential distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.40	4.10	4.90	5.10	4.75	4.70	4.25	5.10	5.20	4.25
RT	4.70	4.85	5.45	4.90	5.00	5.15	4.40	4.90	4.60	4.95
INT	5.30	4.50	5.55	4.75	5.20	5.10	4.30	4.65	4.85	5.15
ART	4.25	3.50	4.40	3.70	4.95	5.20	5.15	5.90	5.65	6.50
ART+INT	2.35	2.10	2.80	3.00	4.00	4.60	4.10	5.60	5.80	7.30
Puri & Sen	4.60	4.55	5.45	4.80	4.95	5.05	4.30	4.70	4.65	4.90
v.d.Waerden	4.75	4.35	5.50	4.60	5.15	5.05	4.45	4.60	4.75	5.10
ATS	4.50	4.90	5.30	4.55	5.05	5.10	4.25	4.75	4.70	4.90
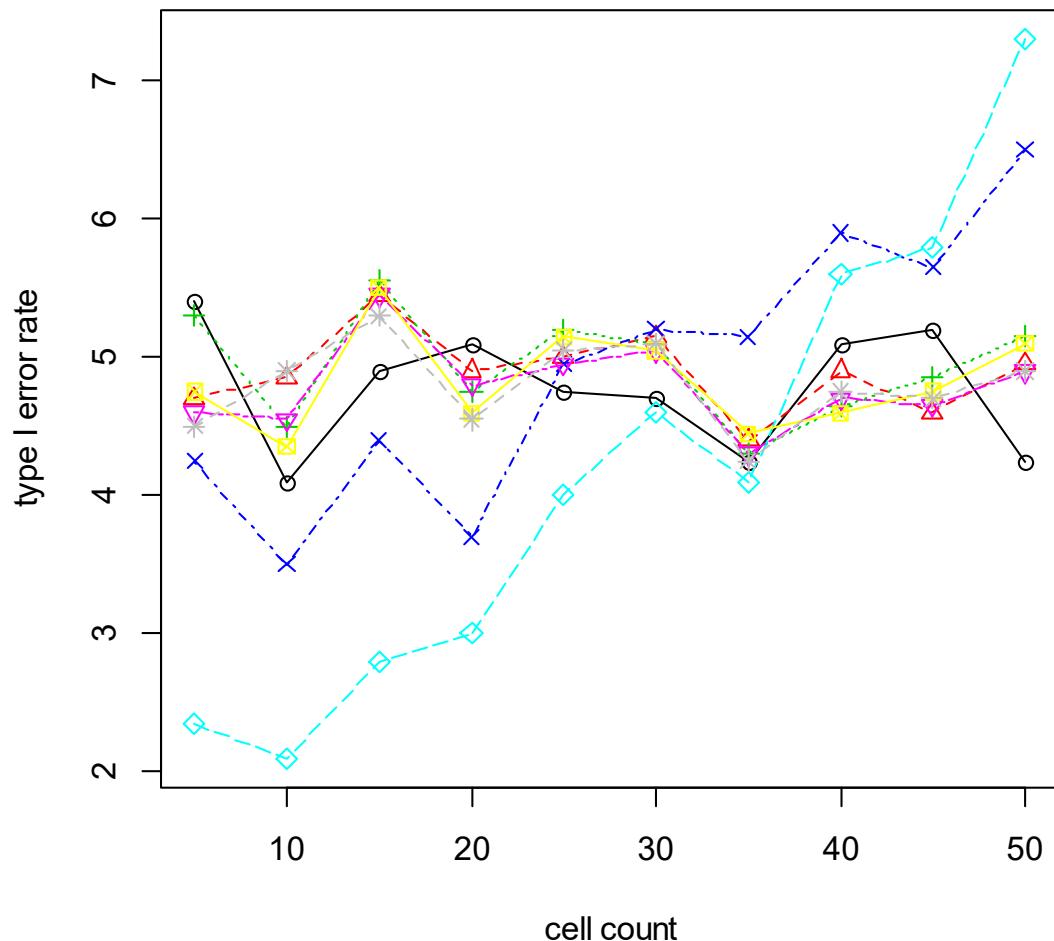
2. 2. 7   lognormal distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.50	5.05	4.00	3.90	4.50	4.60	5.20	4.95	5.55	5.15
RT	5.20	5.35	4.60	4.35	4.60	4.65	4.85	5.05	5.30	5.10
INT	5.20	5.35	4.40	3.80	4.50	4.70	4.95	5.00	4.80	5.20
ART	3.15	2.55	2.85	2.00	2.65	2.10	2.40	3.45	3.10	2.85
ART+INT	2.70	2.45	2.20	1.85	2.30	1.80	2.30	2.95	2.55	2.85
Puri & Sen	5.00	5.30	4.50	4.40	4.45	4.45	4.85	4.95	5.15	5.15
v.d.Waerden	4.85	5.15	4.20	3.75	4.40	4.70	4.90	4.90	4.75	5.15
ATS	3.95	5.35	4.65	4.35	3.80	4.10	4.60	4.75	5.05	5.05
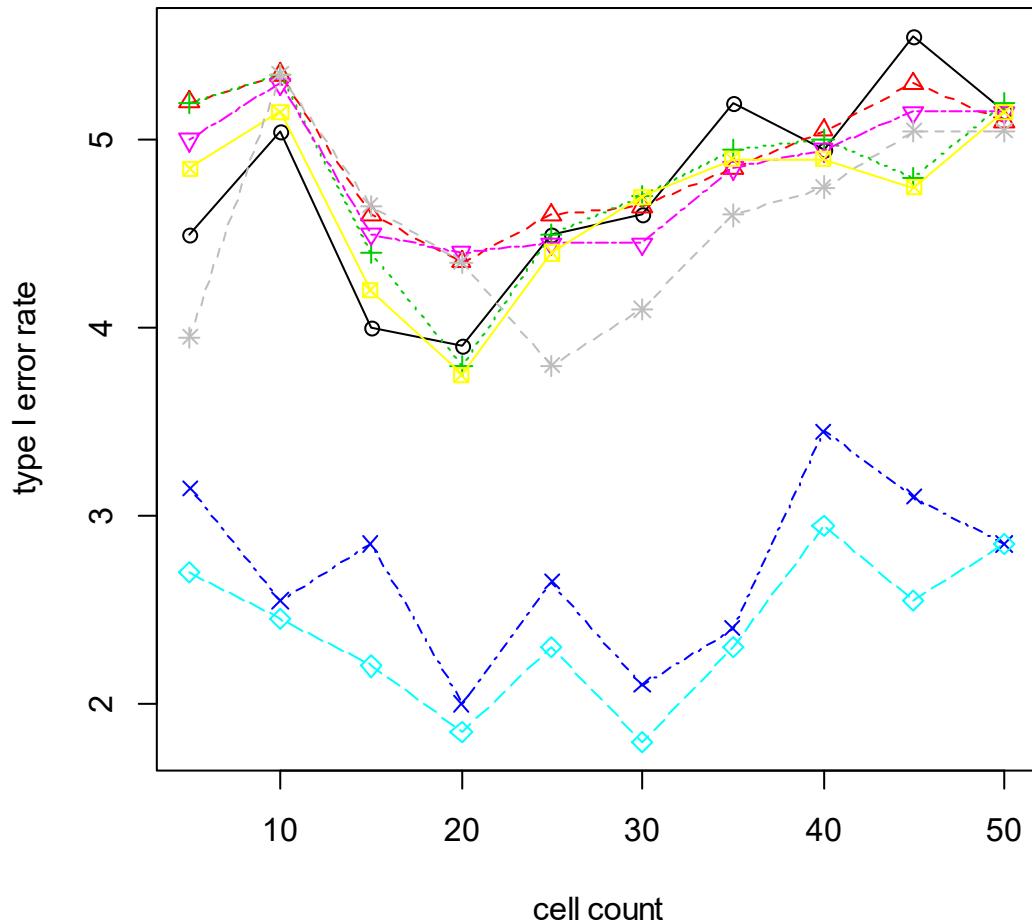
2. 2. 8   uniform distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.65	4.50	5.45	4.55	5.00	5.40	4.75	5.55	4.70	5.15
RT	5.15	4.90	5.10	4.60	5.10	5.50	4.55	5.65	4.80	5.05
INT	5.05	4.85	4.90	4.85	5.00	4.90	5.05	5.20	4.70	5.00
ART	2.70	2.30	2.60	2.25	2.60	2.55	2.35	2.90	2.30	2.40
ART+INT	2.85	2.60	2.80	2.55	2.45	2.90	2.80	2.95	2.45	2.65
Puri & Sen	4.40	4.70	5.20	4.50	5.10	5.45	4.50	5.65	4.75	5.00
v.d.Waerden	4.15	4.80	4.80	4.75	5.00	4.90	5.05	5.25	4.60	5.00
ATS	4.40	4.60	5.05	4.50	4.90	6.00	4.90	5.90	4.85	4.65
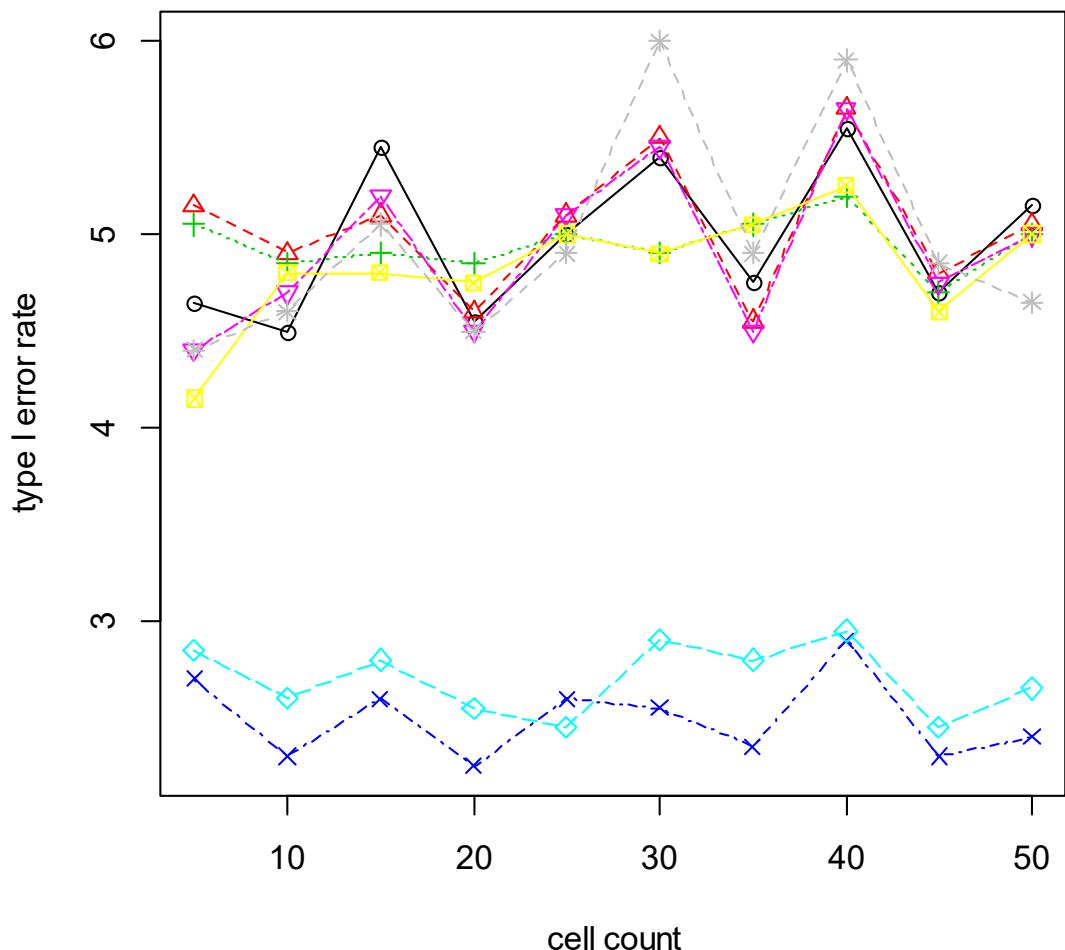
2. 2. 9   uniform distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.05	4.50	5.45	4.95	4.85	5.55	5.45	5.30	4.55	4.85
RT	5.25	4.70	5.50	5.10	4.70	5.40	5.55	5.45	4.85	4.70
INT	5.05	4.55	5.70	4.90	4.90	5.30	5.65	5.60	4.80	4.65
ART	2.85	2.40	3.40	3.10	3.30	3.90	4.30	4.90	4.85	5.05
ART+INT	2.70	2.70	3.70	4.35	4.35	5.50	6.25	7.30	7.80	8.75
Puri & Sen	4.50	4.25	5.35	5.10	4.60	5.30	5.40	5.45	4.75	4.60
v.d.Waerden	4.60	4.30	5.80	4.80	4.75	5.20	5.60	5.50	4.75	4.65
ATS	4.55	4.65	5.60	5.20	4.70	5.75	5.30	5.35	5.10	4.55
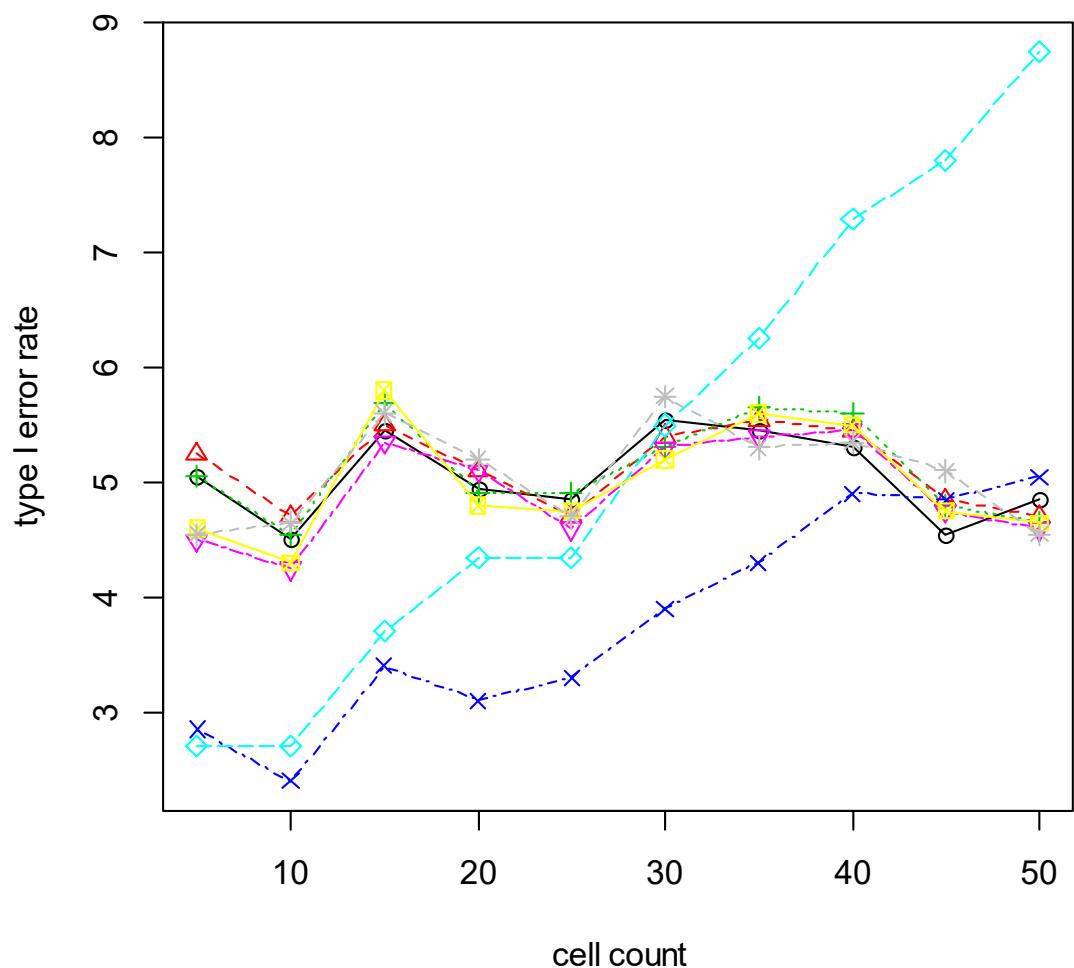
2. 2. 10   left/right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.95	4.95	5.60	5.10	4.45	4.70	4.40	4.90	3.85	4.00
RT	5.00	4.85	5.40	5.20	4.35	4.55	4.25	5.05	4.00	4.25
INT	5.60	5.10	5.45	5.05	4.50	4.55	3.85	4.70	3.75	4.15
ART	2.80	2.80	2.70	2.55	2.20	2.50	2.30	2.65	2.30	2.35
ART+INT	2.95	2.65	2.60	2.50	2.55	2.35	1.90	2.70	2.45	2.40
Puri & Sen	4.80	4.90	5.20	5.10	4.35	4.50	4.30	5.00	4.05	4.20
v.d.Waerden	4.75	4.70	5.35	5.05	4.45	4.55	3.80	4.65	3.75	4.15
ATS	4.40	5.10	5.45	5.50	4.45	4.55	4.20	4.65	4.15	4.25
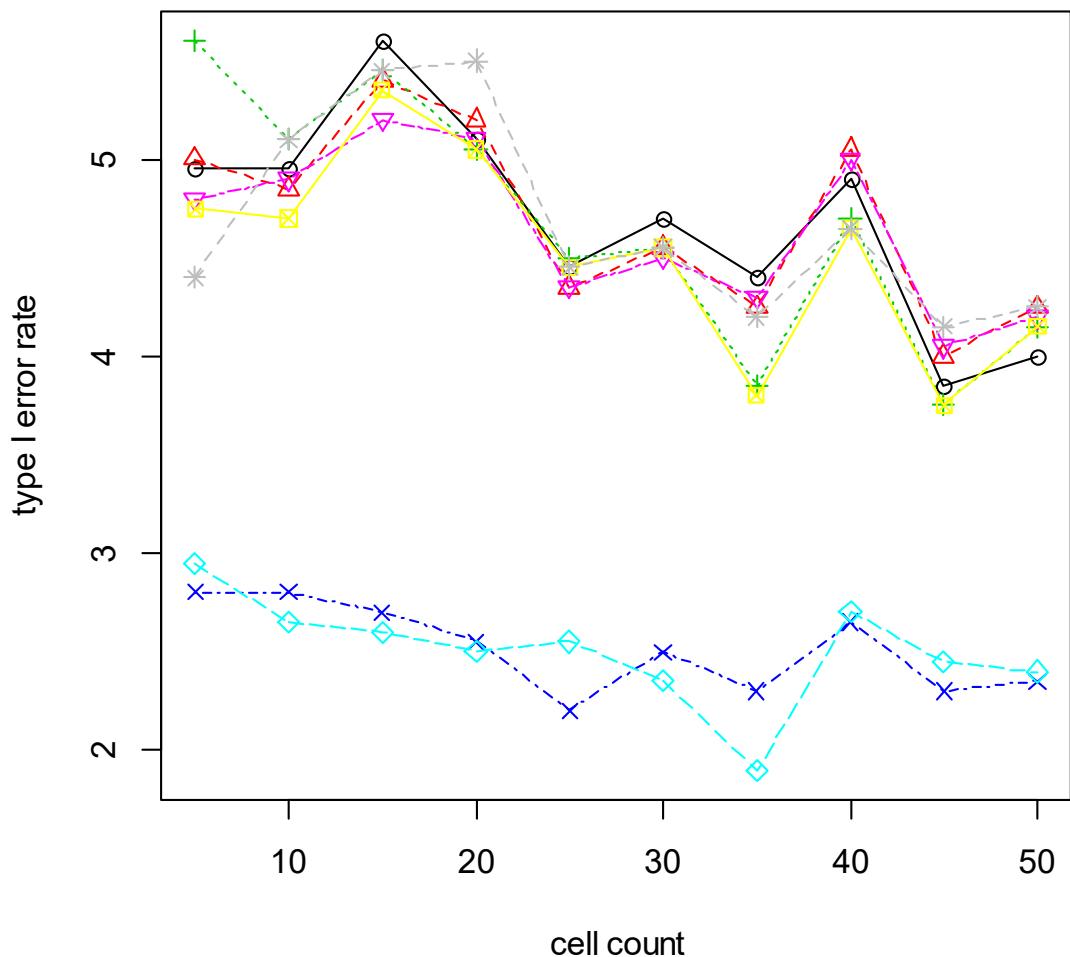
2. 2. 11   left skewed distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	3.60	3.85	4.05	3.40	3.30	4.00	3.35	3.80	3.90	3.05
RT	3.80	4.40	4.30	4.05	3.85	4.50	3.95	4.15	4.00	3.55
INT	3.80	4.10	4.00	3.25	3.25	3.95	3.50	3.20	3.90	3.05
ART	4.45	4.75	4.55	4.60	5.35	4.90	4.70	5.80	5.30	4.55
ART+INT	3.15	2.60	1.95	1.80	2.35	2.40	2.40	2.50	1.85	2.15
Puri & Sen	3.35	4.15	4.15	3.85	3.85	4.35	3.80	4.10	4.00	3.45
v.d.Waerden	3.15	3.60	4.00	3.05	3.10	3.90	3.40	3.15	3.90	2.90
ATS	3.55	4.60	4.55	4.75	4.10	5.20	4.80	4.75	4.55	4.00
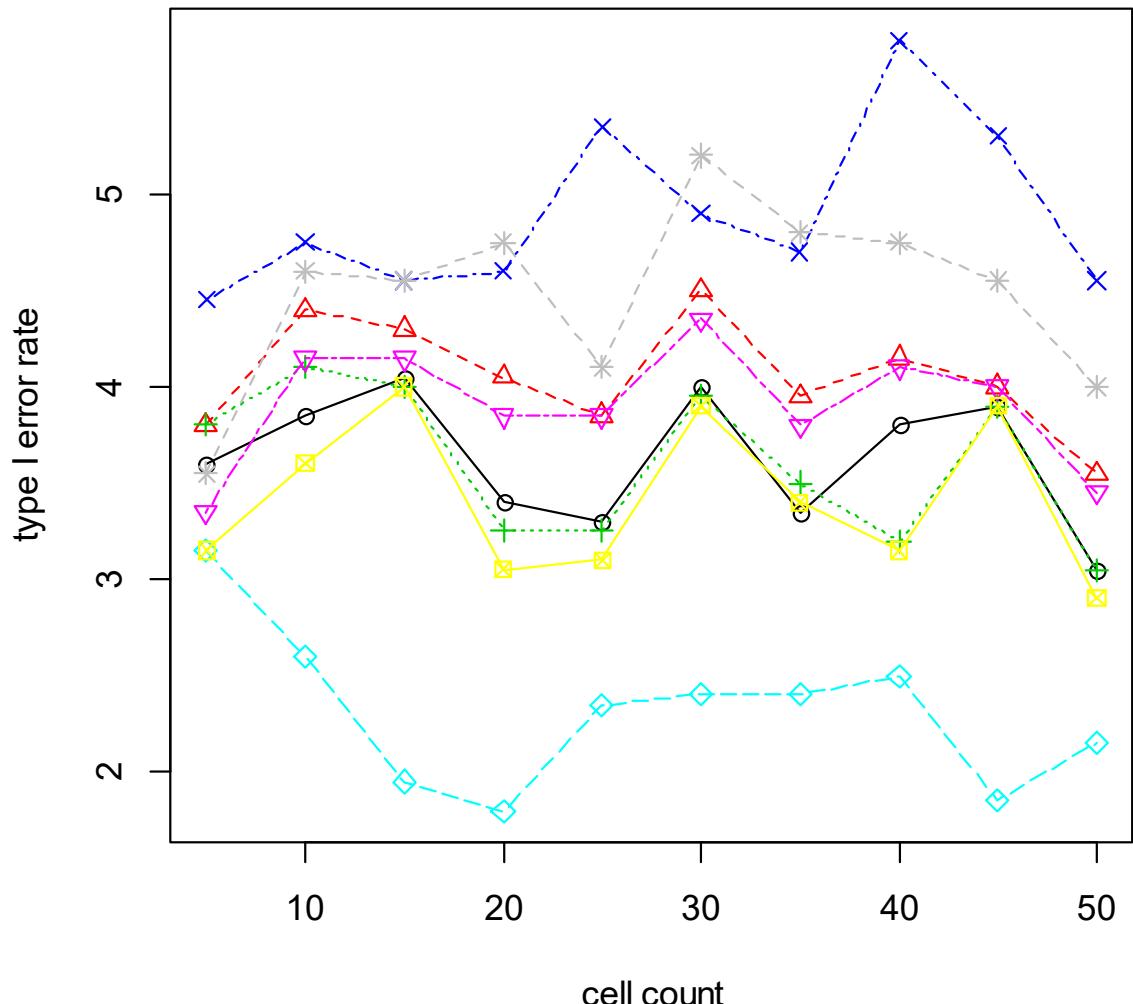
2. 2. 12   left skewed distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.90	6.55	6.45	6.25	6.30	6.60	6.50	6.20	6.35	6.15
RT	4.85	5.55	5.85	5.65	5.85	6.20	5.95	6.60	5.65	5.60
INT	5.90	5.85	5.80	6.30	6.70	6.55	7.60	6.80	6.75	6.95
ART	3.30	3.10	4.10	3.80	4.30	4.35	4.30	4.75	4.50	4.35
ART+INT	2.75	2.65	2.55	3.15	3.70	3.75	3.70	4.10	3.90	3.75
Puri & Sen	4.50	5.30	5.75	5.60	5.80	5.95	5.85	6.50	5.65	5.55
v.d.Waerden	5.25	5.65	5.65	6.20	6.40	6.45	7.50	6.80	6.85	6.85
ATS	3.80	4.55	5.10	5.05	5.40	5.80	5.35	6.00	5.45	5.10
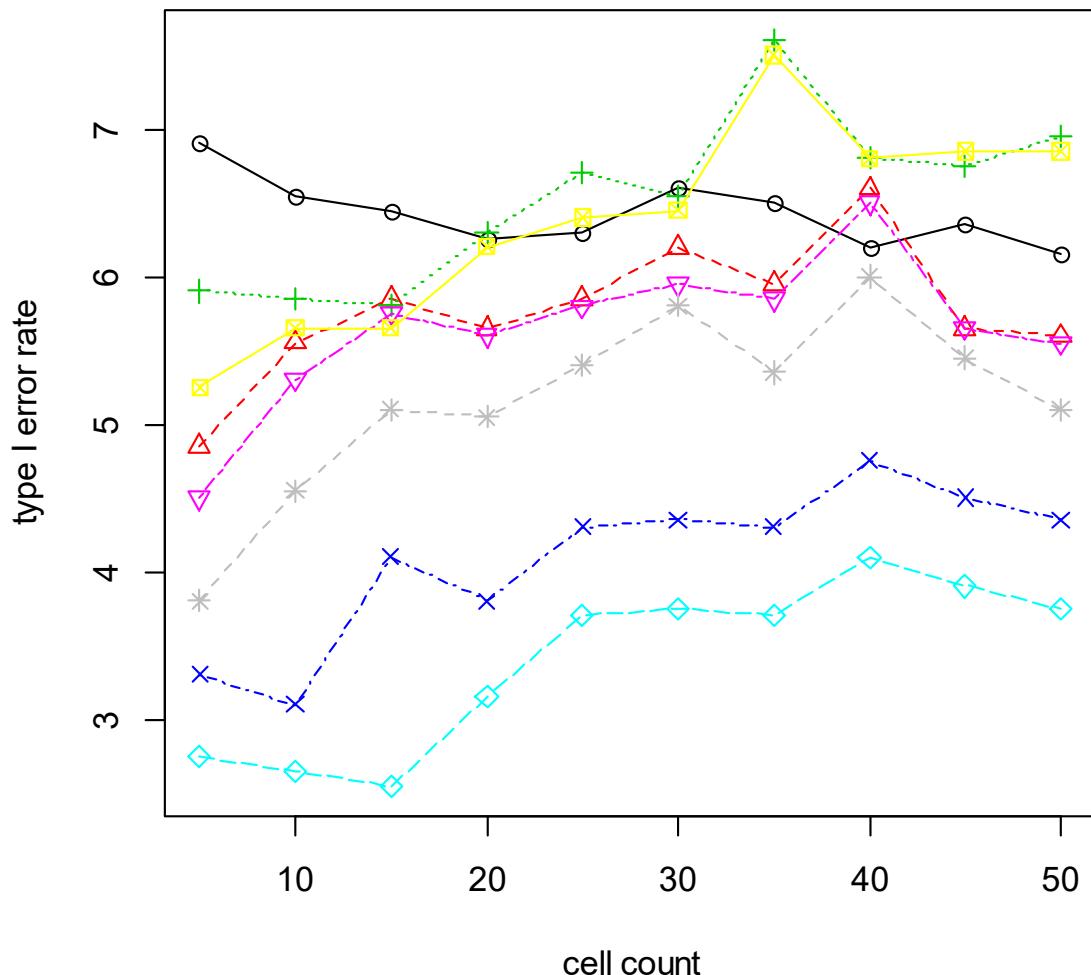
2. 2. 13   normal distribution - unequal variances (small n$_i$ ~ small s$_i$)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	1.00	1.15	0.80	0.85	0.95	0.90	1.00	0.75	0.85	0.85
RT	1.95	2.05	1.95	2.20	1.95	1.40	2.35	1.70	1.80	2.30
INT	1.30	1.45	1.05	1.00	1.25	0.90	1.25	0.85	0.95	1.15
ART	3.55	4.20	3.55	3.65	3.20	2.90	3.65	3.15	3.45	2.95
ART+INT	2.45	2.75	2.15	2.60	2.40	1.95	2.10	1.80	1.95	2.10
Puri & Sen	1.95	1.90	1.90	2.10	1.95	1.40	2.40	1.70	1.80	2.30
v.d.Waerden	1.30	1.45	1.15	1.05	1.15	0.95	1.25	0.85	1.00	1.15
ATS	4.05	5.50	5.60	5.10	4.80	4.00	4.95	4.85	4.90	4.75
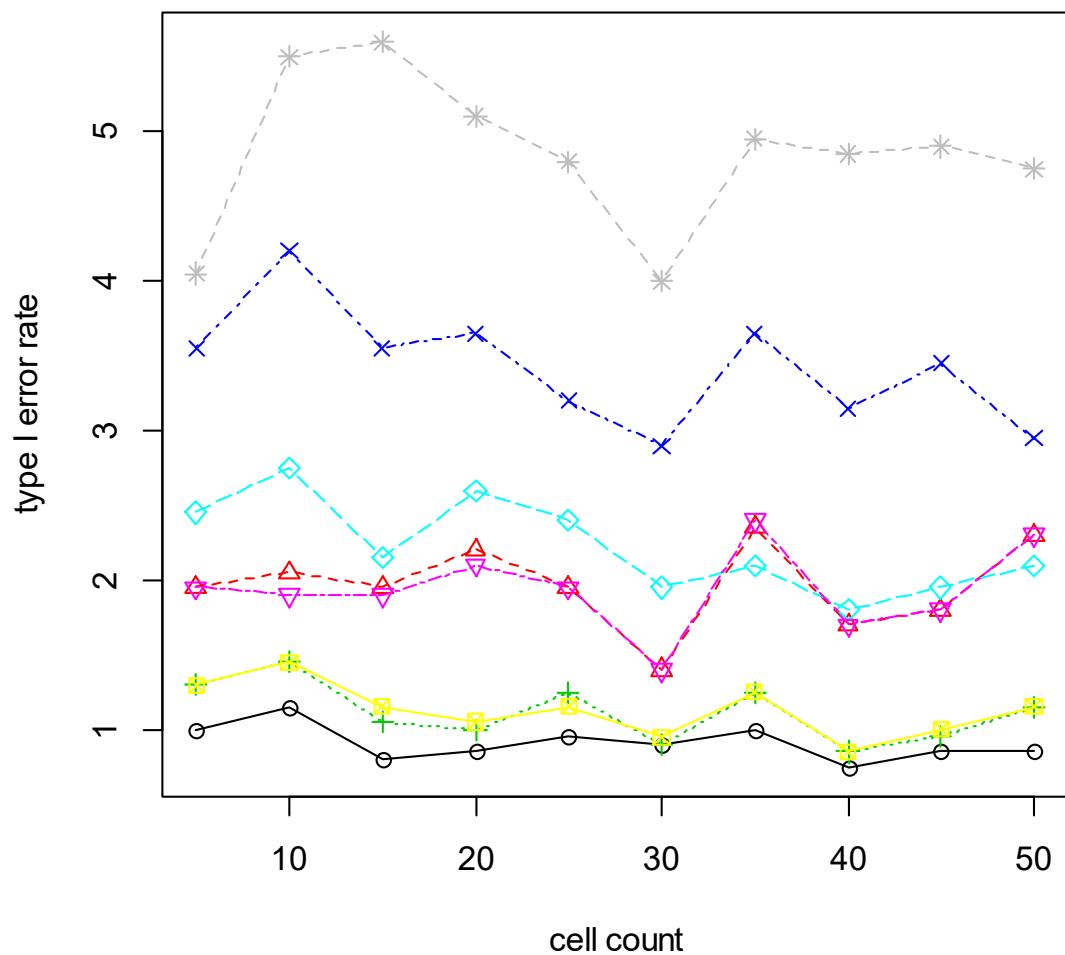
2. 2. 14   normal distribution - unequal variances (small n$_i$ ~ large s$_i$)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	18.25	16.30	17.00	16.45	16.30	15.75	16.55	16.65	17.00	17.85
RT	9.55	9.75	9.65	10.00	9.20	8.70	8.70	9.35	9.95	10.25
INT	14.35	13.40	14.50	13.35	13.80	12.75	13.85	14.15	14.75	15.50
ART	3.35	3.40	3.15	3.25	2.60	1.90	2.80	2.80	3.10	2.85
ART+INT	3.40	3.20	2.80	2.85	2.45	1.70	2.50	3.05	2.40	2.55
Puri & Sen	9.15	9.55	9.55	9.80	8.95	8.80	8.70	9.25	9.95	10.15
v.d.Waerden	12.80	12.65	14.25	13.15	13.50	12.35	13.40	14.05	14.70	15.45
ATS	4.50	4.85	5.05	4.80	5.05	4.80	5.05	4.50	4.70	5.05
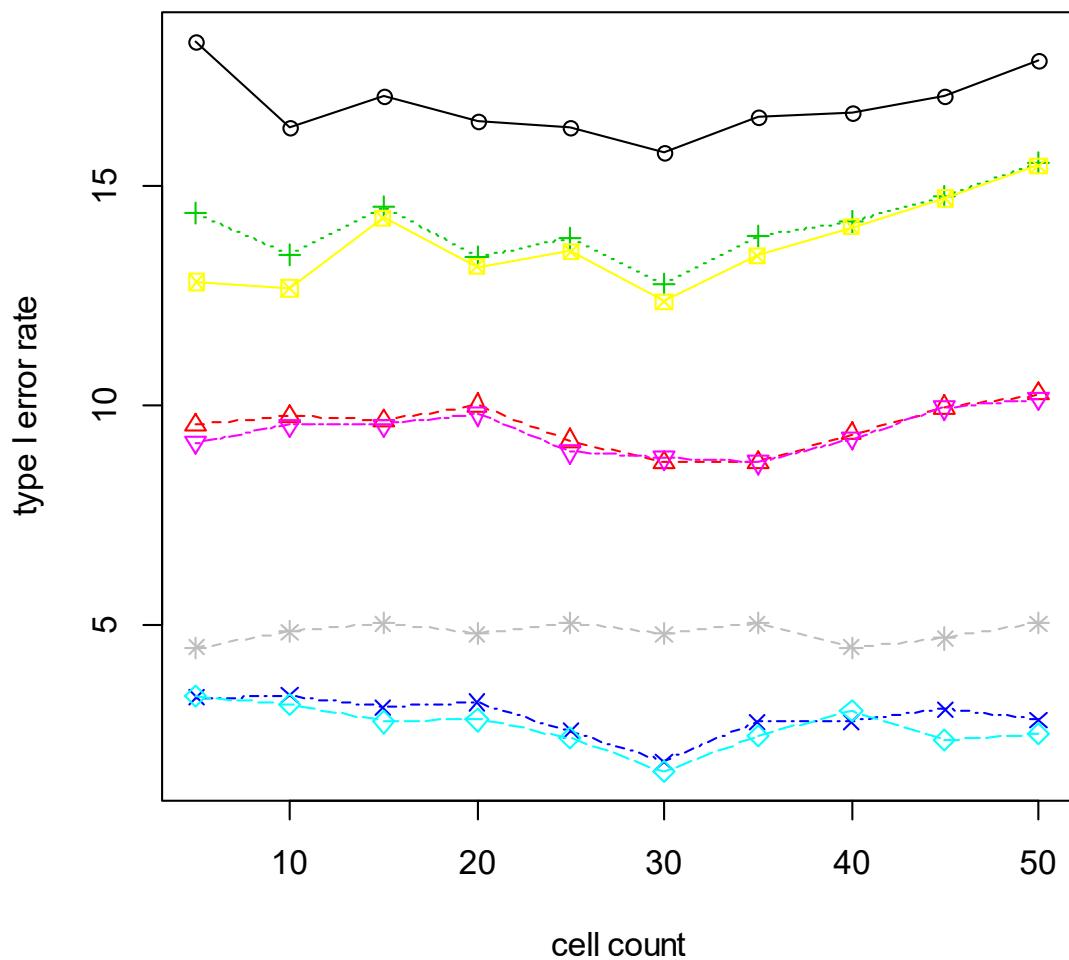
2. 2. 15   left skewed distribution - unequal variances (small n$_i$ ~ small s$_i$)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	1.00	1.10	0.95	0.65	1.00	1.55	1.00	0.95	0.85	1.05
RT	1.15	1.20	1.45	1.10	1.80	1.85	1.55	1.75	1.75	1.85
INT	0.95	0.80	0.70	0.45	0.60	0.95	0.90	0.85	0.90	1.00
ART	3.30	2.95	3.35	3.20	3.15	3.50	3.50	4.05	3.55	4.05
ART+INT	1.75	1.55	1.95	1.35	1.20	1.60	1.60	2.00	1.80	1.95
Puri & Sen	1.20	1.25	1.45	1.00	1.75	1.80	1.60	1.75	1.75	1.85
v.d.Waerden	0.90	0.75	0.65	0.40	0.60	0.90	0.90	0.85	0.90	1.10
ATS	4.45	4.60	5.65	5.15	5.50	5.80	4.95	6.45	5.40	5.55
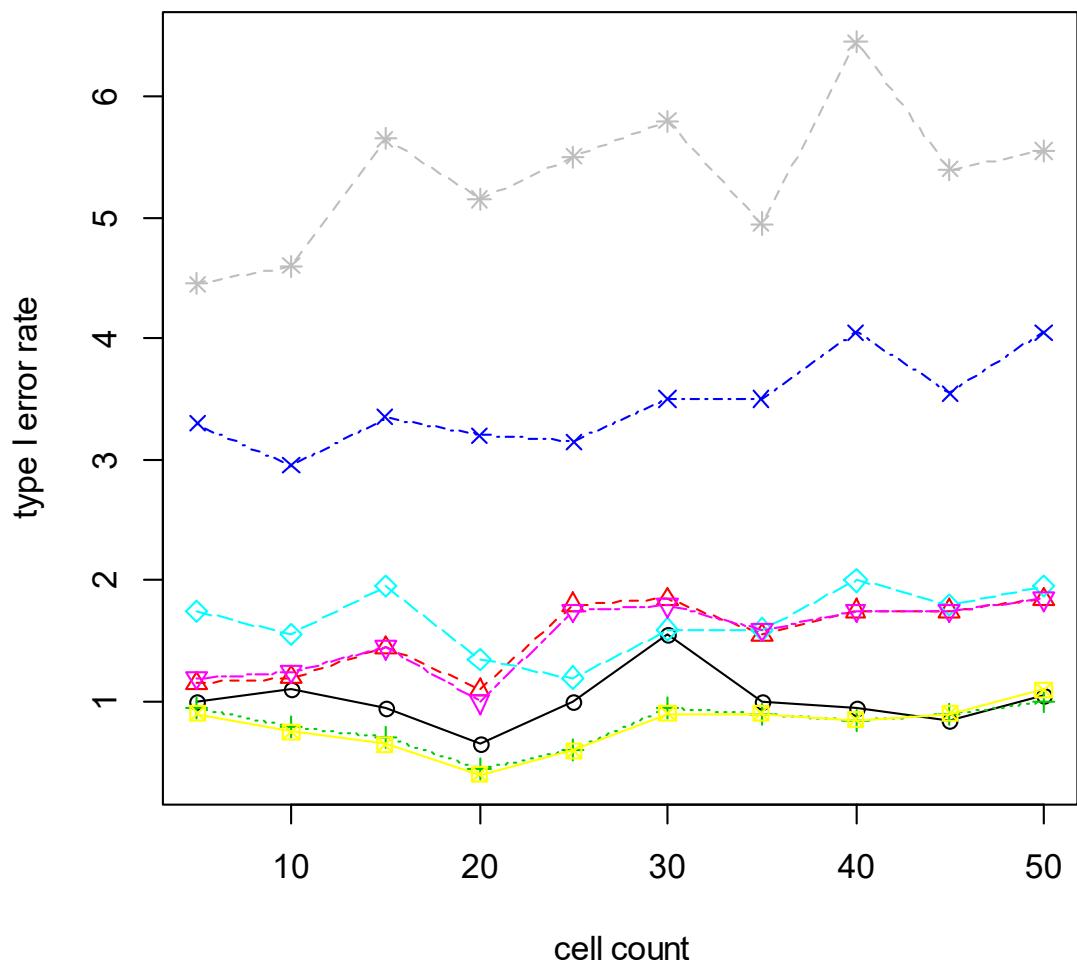
2. 2. 16   left skewed distribution - unequal variances (small n_i ~ large s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	17.20	18.00	16.75	16.45	16.65	15.90	17.90	16.35	17.15	16.25
RT	11.50	11.95	11.60	11.05	12.10	12.05	12.50	11.85	11.75	11.80
INT	19.15	20.00	19.60	19.50	20.35	20.80	21.00	21.05	21.70	19.90
ART	3.05	3.85	4.15	4.15	4.35	4.80	4.45	5.40	4.45	4.10
ART+INT	3.80	3.00	3.75	3.30	2.90	3.10	3.10	3.75	2.85	2.75
Puri & Sen	10.50	11.30	11.15	10.85	11.60	11.90	12.15	11.75	11.50	11.60
v.d.Waerden	16.30	19.30	18.45	18.80	20.10	20.35	20.80	20.65	20.95	19.70
ATS	4.50	4.60	5.35	4.90	5.15	5.55	5.50	5.90	4.50	4.65
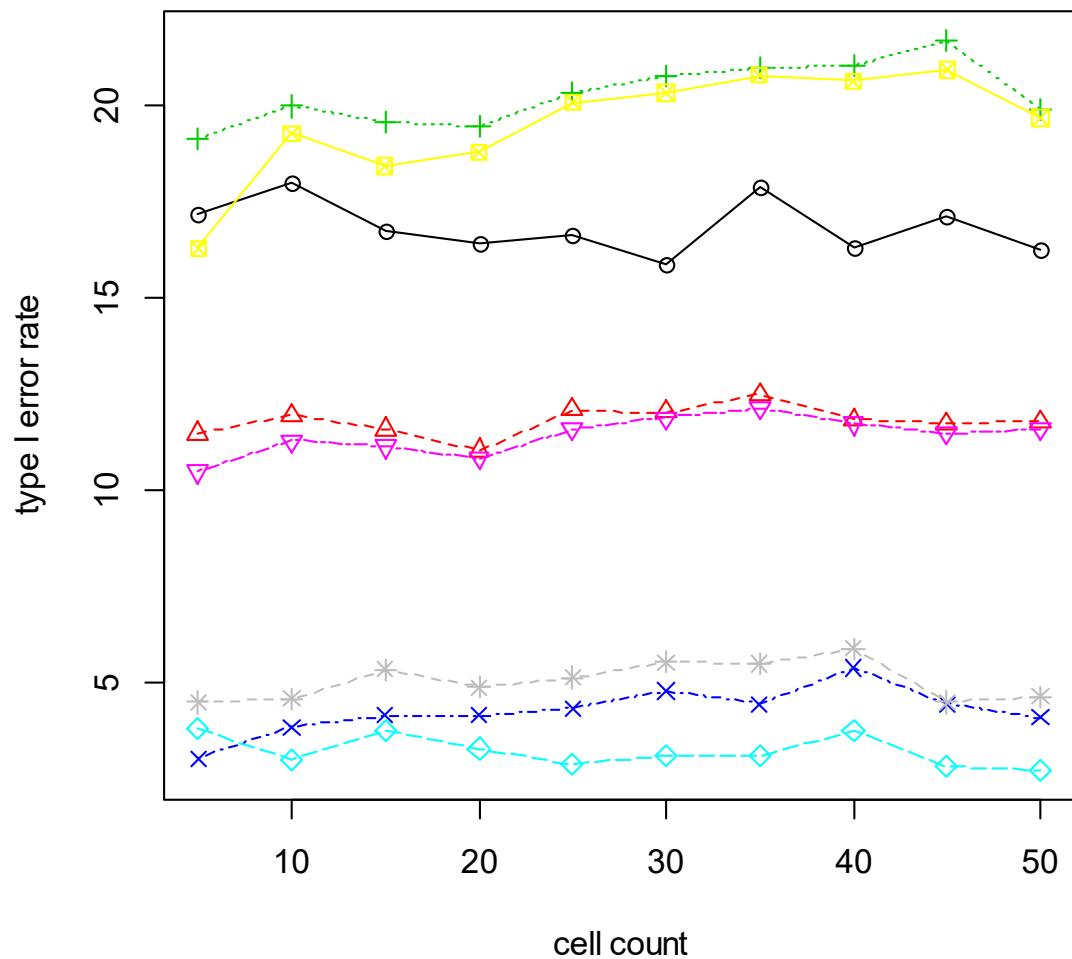
2. 3.   Main effect B - A significant
(effects a_i = 0.6*s / equal n_i / # levels = 2*4)

2. 3. 1   normal distribution - equal variances

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.55	4.50	4.20	5.10	4.35	4.55	4.40	4.20	4.40	4.55
RT	5.45	4.30	4.25	5.55	4.70	4.65	4.60	4.30	4.65	4.65
INT	5.40	4.50	4.25	5.00	4.55	4.40	4.60	4.20	4.40	4.55
ART	5.40	4.80	4.15	5.50	4.70	4.80	4.80	4.50	4.70	4.60
ART+INT	5.55	4.55	4.15	5.40	4.50	4.40	4.55	4.45	4.55	4.80
Puri & Sen	3.35	3.00	3.25	3.65	2.85	3.15	3.50	3.20	3.35	3.35
v.d.Waerden	3.30	3.10	2.80	3.35	2.90	2.70	3.45	2.95	3.20	3.35
ATS	4.50	3.95	4.15	5.40	4.65	4.60	4.50	4.30	4.65	4.60
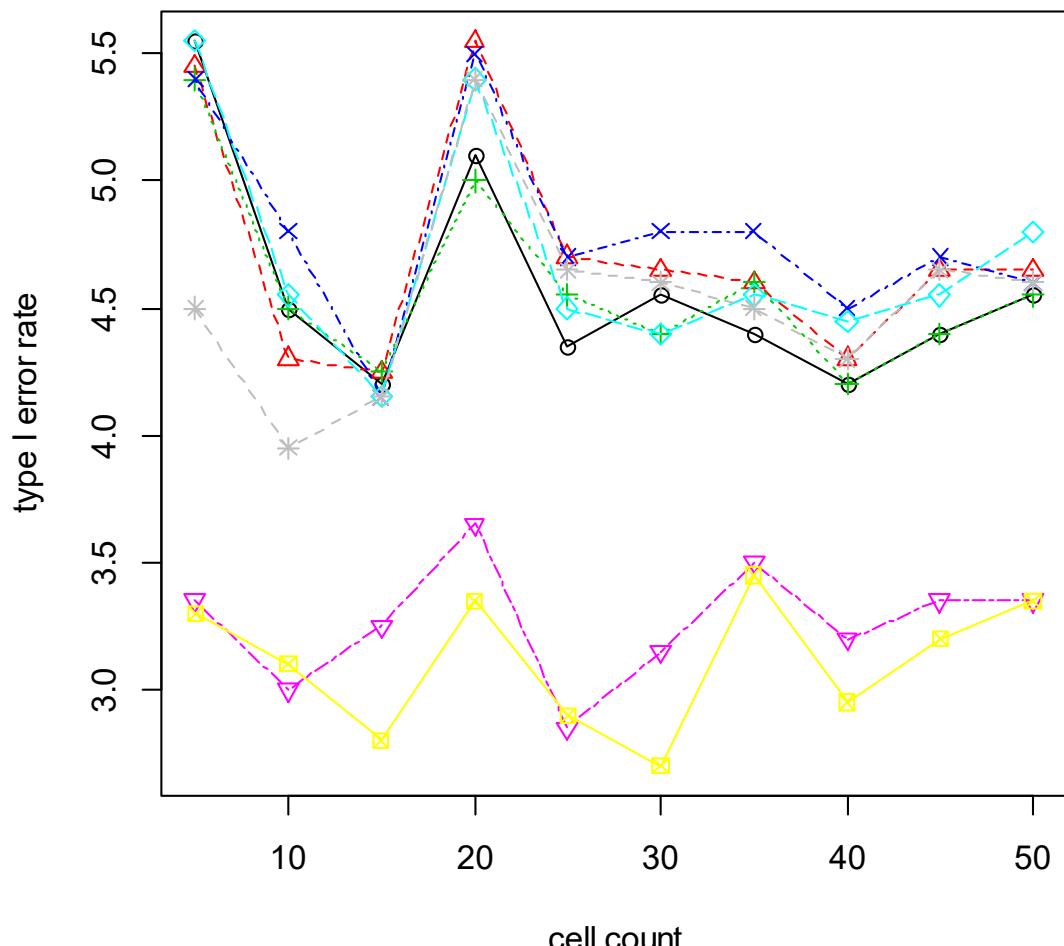
2. 3. 2   normal distribution - unequal variances (on B)

	cell count									
method	5	10	15	20	25	30	35	40	45	50
parametric	7.00	6.10	5.85	6.20	6.20	6.10	5.80	5.85	5.85	6.05
RT	6.10	5.75	6.00	6.65	5.45	5.80	5.15	5.85	5.30	5.40
INT	6.10	5.20	5.55	5.90	5.45	5.30	5.00	5.20	4.60	4.50
ART	5.70	5.60	5.60	6.55	5.50	5.60	5.50	5.55	5.30	5.85
ART+INT	5.45	5.05	5.20	5.80	5.30	5.05	4.90	5.15	4.35	4.60
Puri & Sen	3.80	3.80	4.10	4.50	3.55	4.20	4.05	3.90	3.60	3.85
v.d.Waerden	4.15	3.60	4.05	4.05	3.75	3.95	3.75	3.75	3.25	3.50
ATS	5.15	4.90	5.55	5.90	4.95	5.30	4.90	5.15	4.70	4.80
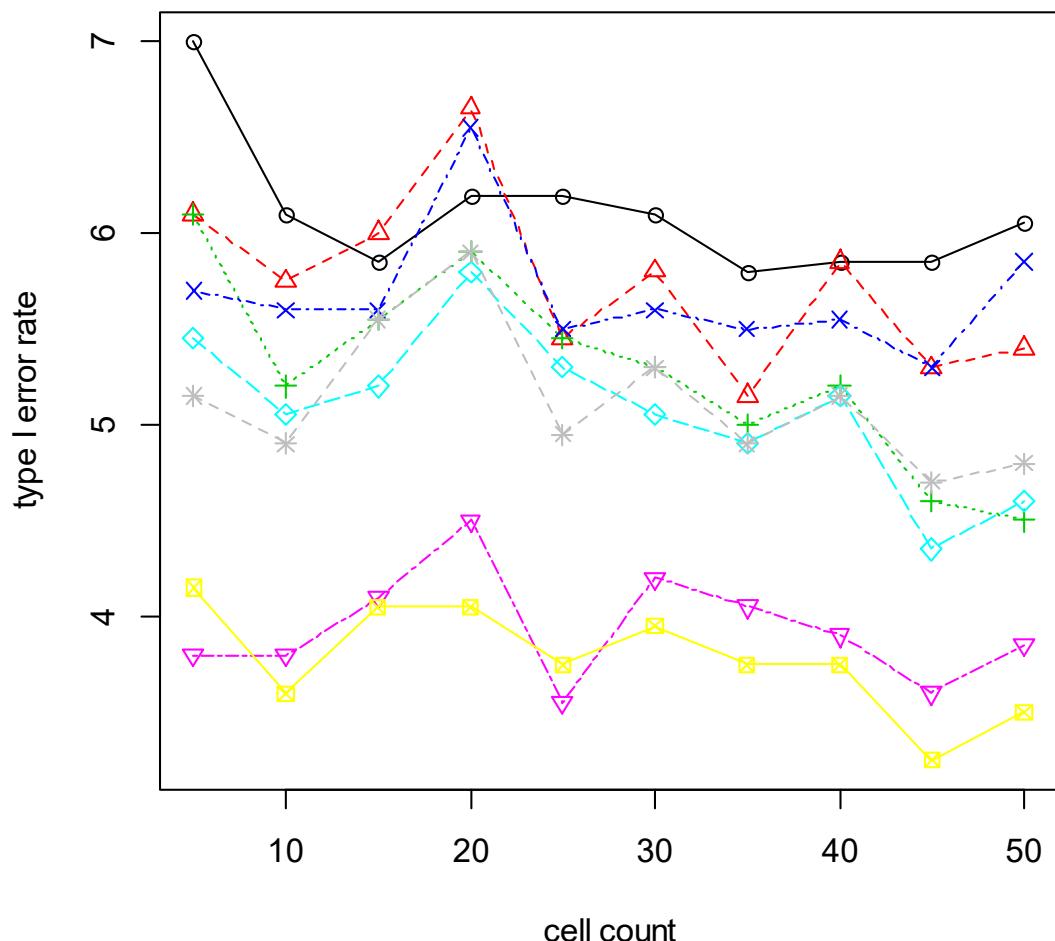
2. 3. 3　　normal distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.50	5.80	6.05	6.30	5.55	5.65	5.55	5.70	5.50	6.05
RT	6.00	5.60	5.65	6.40	6.00	6.05	5.85	5.90	5.80	5.60
INT	5.80	5.15	5.80	5.65	5.50	5.25	5.35	5.40	4.60	5.15
ART	6.15	5.80	6.35	6.95	5.85	6.10	6.00	5.75	5.75	5.75
ART+INT	5.65	5.30	5.75	6.30	5.05	5.30	5.25	5.65	4.85	5.65
Puri & Sen	3.60	3.55	4.00	4.75	4.10	4.30	4.60	4.00	3.75	3.55
v.d.Waerden	3.95	3.55	4.20	4.45	3.70	4.20	3.95	3.60	3.55	3.80
ATS	4.95	4.90	5.10	5.90	5.60	5.65	5.40	5.60	5.25	5.25
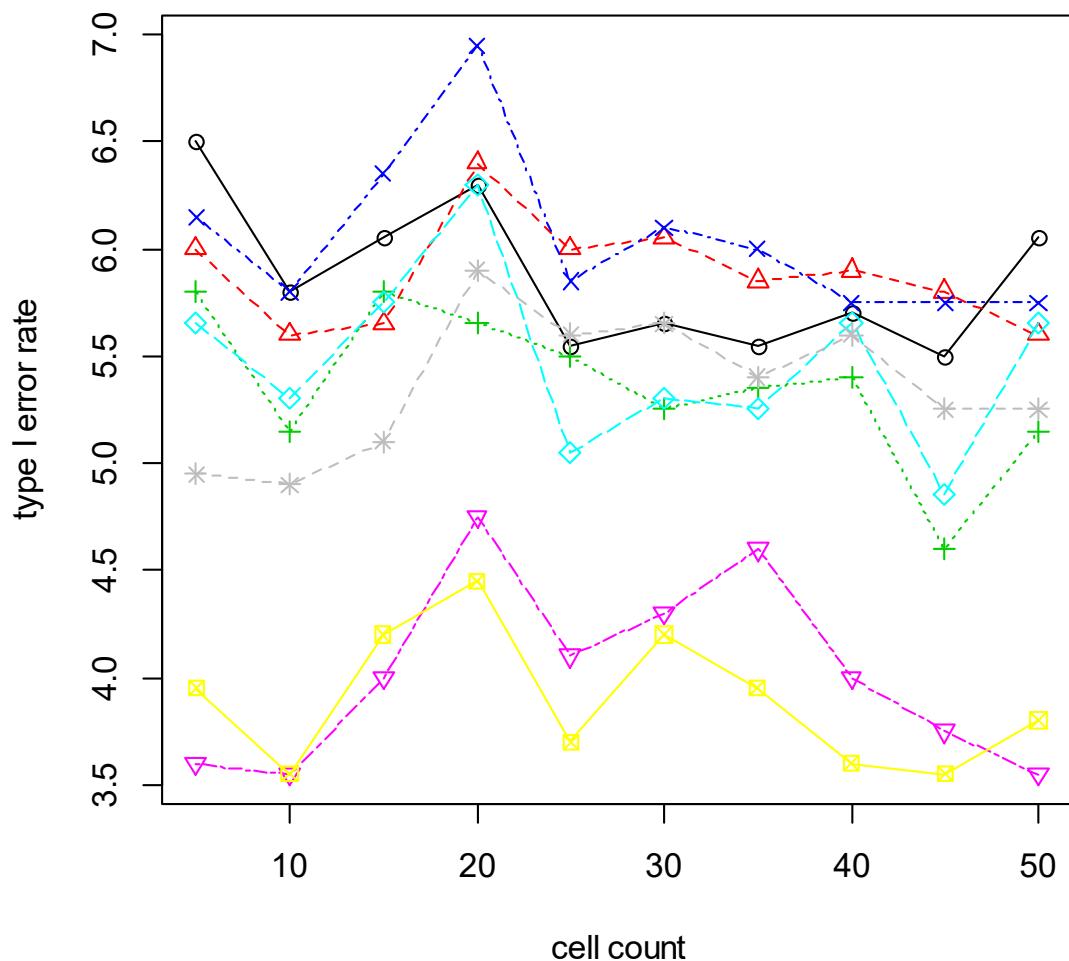
2. 3. 4　right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.20	4.55	4.45	4.75	4.85	5.20	5.15	4.40	3.95	5.25
RT	3.95	4.60	4.25	4.55	5.05	5.55	4.85	4.80	4.05	4.95
INT	4.45	4.75	4.20	4.50	5.05	5.65	4.85	4.95	4.85	5.20
ART	4.55	5.00	4.30	4.60	5.40	5.90	5.25	5.25	4.40	5.40
ART+INT	3.65	4.10	3.90	4.30	4.15	5.00	4.45	4.40	3.90	4.50
Puri & Sen	2.40	3.05	2.70	3.25	2.95	3.70	3.55	3.35	2.85	3.85
v.d.Waerden	2.10	2.75	2.60	2.80	2.90	3.15	3.05	2.80	2.65	3.65
ATS	3.05	4.35	4.05	4.50	5.05	5.50	4.80	4.80	4.05	4.90
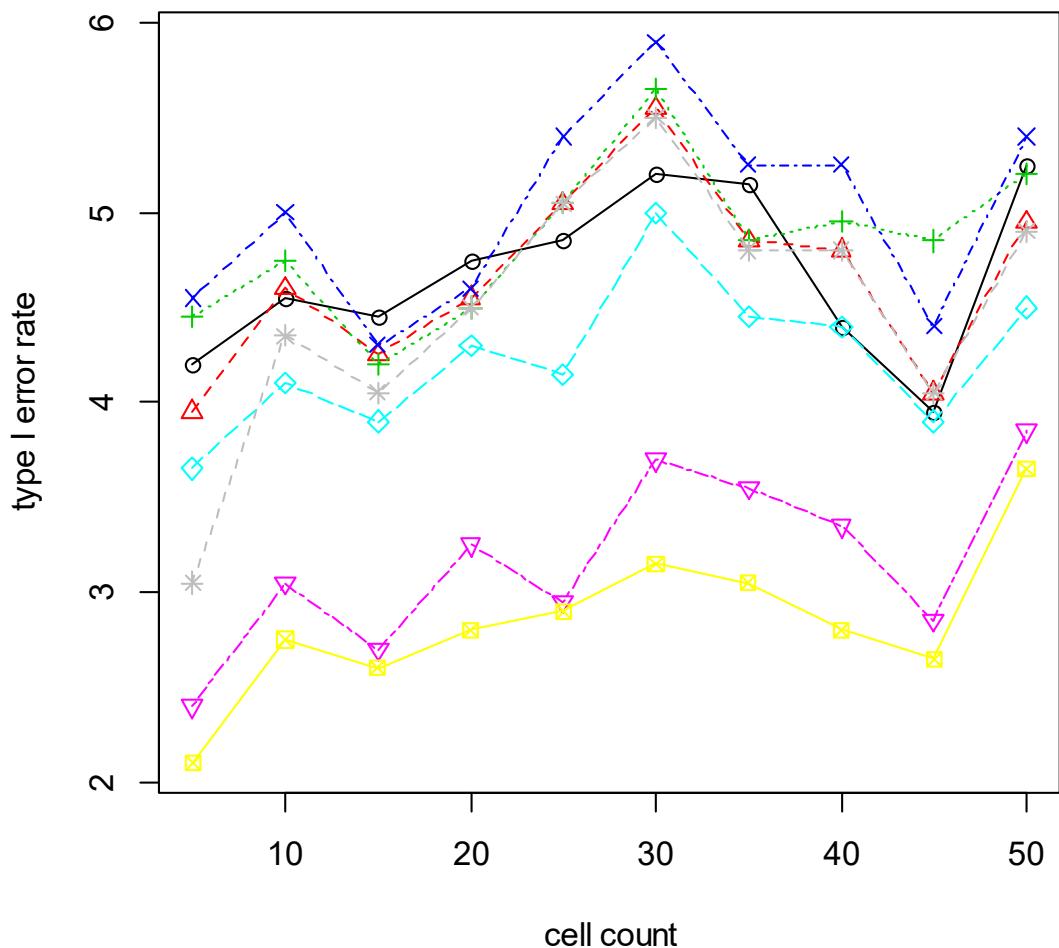
2. 3. 5   exponential distribution - continuous

	cell count									
method	5	10	15	20	25	30	35	40	45	50
parametric	4.50	4.65	4.90	5.25	5.70	4.75	4.15	4.25	5.00	5.15
RT	4.95	5.50	4.70	5.30	5.70	5.25	4.00	4.75	5.30	5.55
INT	4.80	4.95	4.50	4.55	5.25	5.45	4.30	4.65	5.35	5.30
ART	6.00	7.05	7.70	7.70	7.20	7.60	6.40	6.90	8.40	8.90
ART+INT	4.25	3.80	3.95	4.25	4.00	3.70	2.95	3.15	3.30	3.50
Puri & Sen	3.65	4.35	4.10	4.35	5.10	4.40	3.30	3.90	4.40	4.75
v.d.Waerden	3.45	3.75	3.60	3.90	4.75	4.45	3.40	3.70	4.30	4.55
ATS	4.05	5.25	4.60	5.20	5.65	5.20	4.00	4.75	5.30	5.55
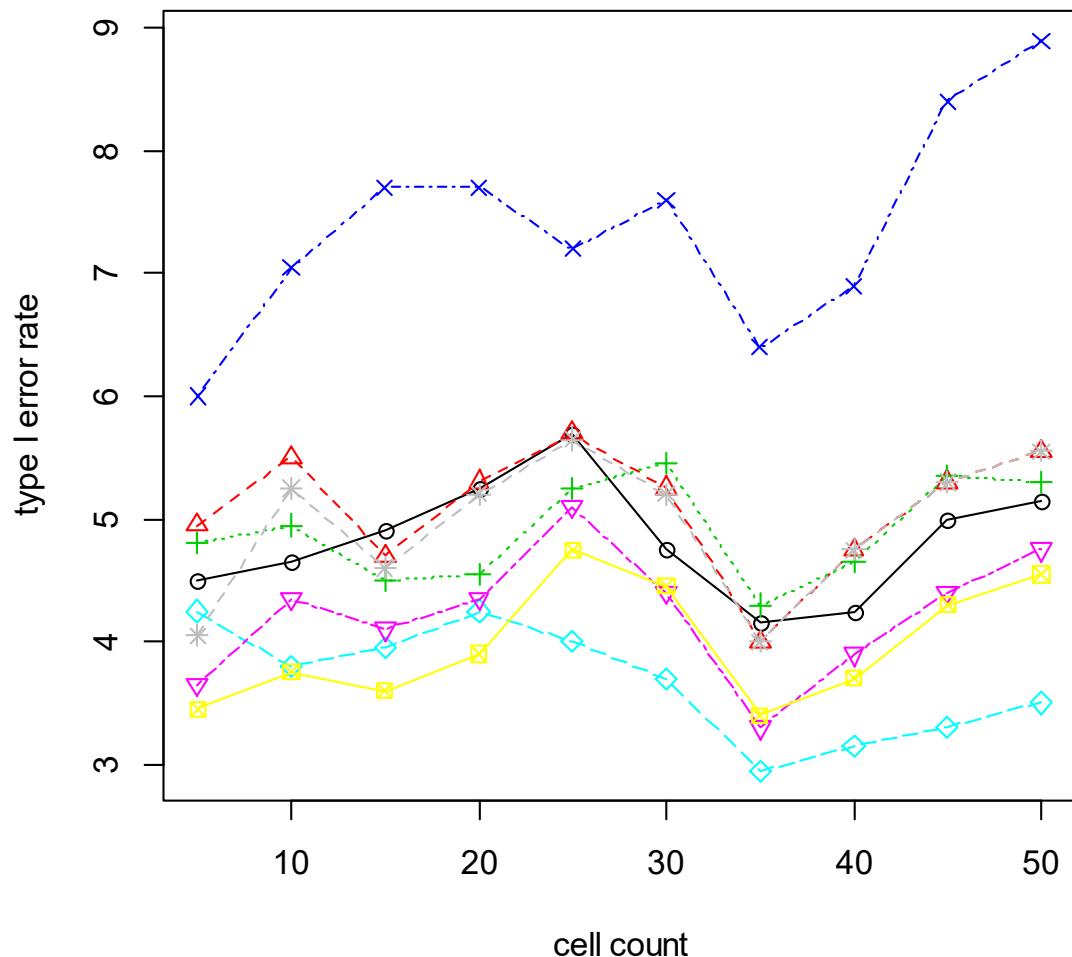
2. 3. 6   exponential distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.00	4.45	4.75	5.55	5.50	4.70	4.50	4.05	4.85	5.35
RT	4.80	5.45	4.95	5.80	5.40	5.70	4.85	4.55	5.20	5.35
INT	4.75	5.25	5.00	5.50	5.50	5.50	4.25	4.55	5.25	5.25
ART	6.25	7.25	7.80	7.90	7.85	7.95	7.30	7.35	8.70	9.15
ART+INT	3.45	3.30	3.70	4.15	3.45	3.45	2.85	2.65	3.40	3.45
Puri & Sen	3.55	4.15	3.85	4.70	4.65	4.55	3.90	3.60	4.35	4.60
v.d.Waerden	3.30	4.15	3.85	4.75	4.40	4.80	3.65	3.45	4.40	4.50
ATS	3.65	5.30	4.85	5.60	5.35	5.55	4.75	4.55	5.15	5.30
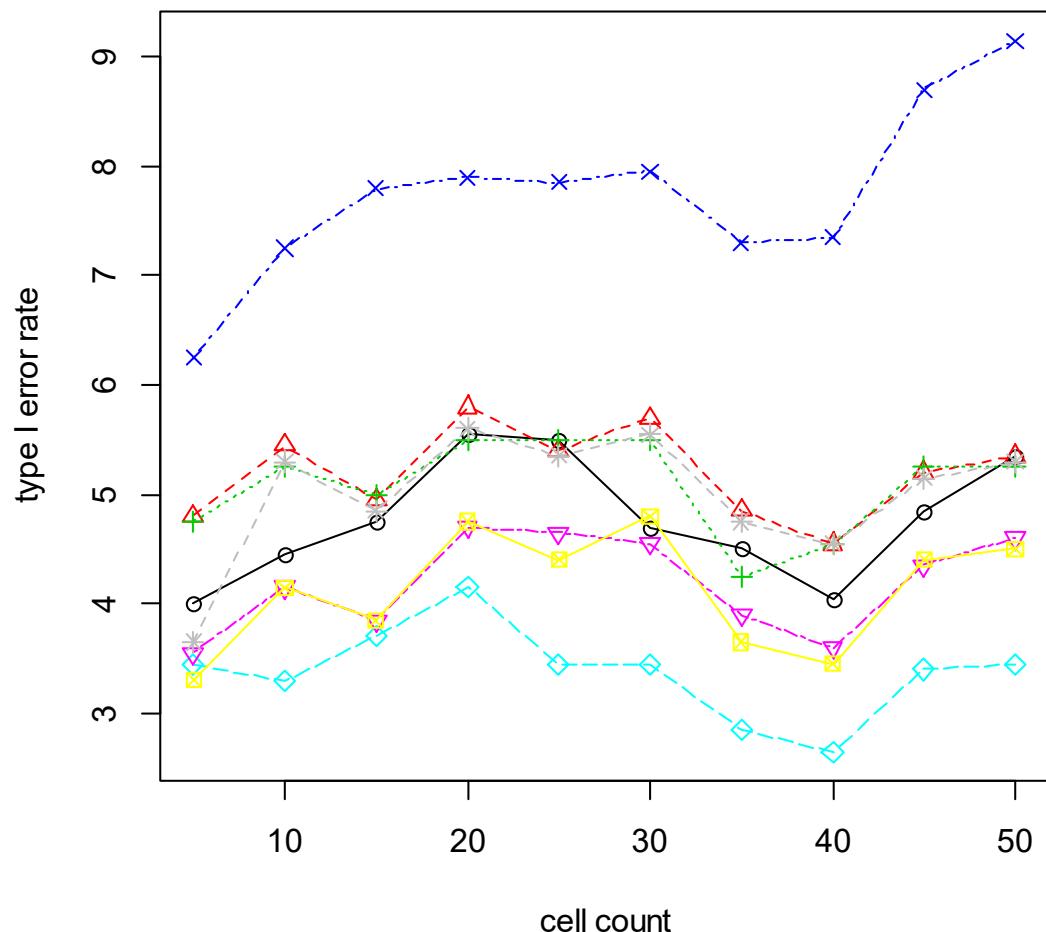
2. 3. 7   lognormal distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.55	4.70	5.00	4.70	5.35	4.50	5.05	4.20	4.30	4.55
RT	5.70	5.90	5.30	4.95	5.45	4.70	4.90	4.10	4.35	4.65
INT	5.60	5.10	4.95	5.30	5.35	4.65	5.10	3.95	4.25	4.75
ART	5.75	5.00	5.60	5.10	5.00	4.65	4.85	4.50	4.10	4.75
ART+INT	5.70	4.85	5.00	5.25	5.50	4.65	5.30	4.25	4.15	4.65
Puri & Sen	3.65	3.60	3.70	3.50	3.90	3.15	3.55	3.05	3.05	3.45
v.d.Waerden	3.30	3.35	3.25	3.75	4.00	3.20	4.00	2.60	2.70	3.30
ATS	4.70	5.60	5.05	4.90	5.30	4.65	4.85	4.05	4.25	4.65
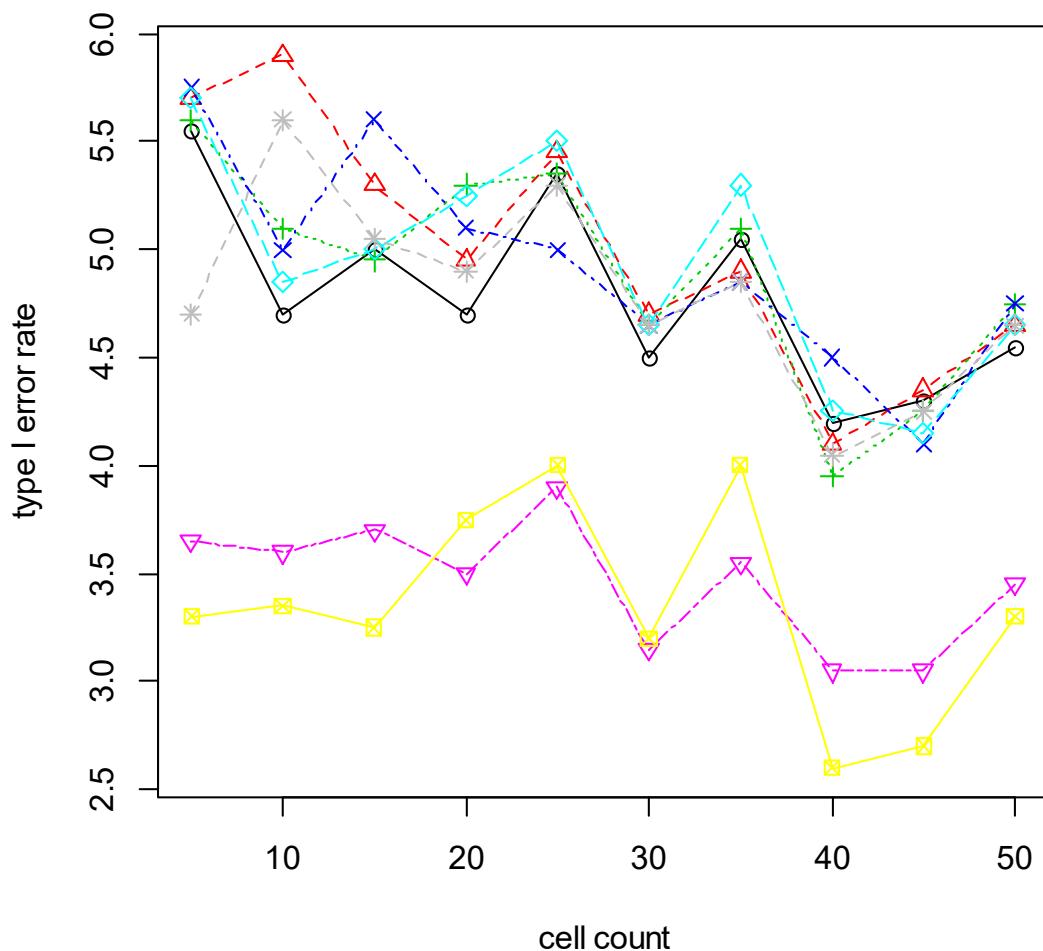
2. 3. 8   uniform distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.40	4.40	4.15	4.75	4.55	5.45	5.25	4.70	4.15	5.10
RT	4.45	4.60	4.15	4.65	4.65	5.55	5.20	4.80	3.80	5.15
INT	4.20	4.60	4.15	4.70	4.80	5.15	4.80	4.90	3.70	4.70
ART	4.60	4.55	4.00	4.65	4.60	5.55	5.40	4.65	4.00	5.05
ART+INT	4.15	4.60	4.30	4.30	4.75	5.00	4.75	5.15	4.00	4.65
Puri & Sen	3.20	4.05	3.90	4.15	4.30	5.10	4.80	4.55	3.65	4.75
v.d.Waerden	3.30	3.75	3.80	4.00	4.05	4.75	4.40	4.40	3.35	4.40
ATS	3.55	4.50	4.10	4.65	4.65	5.50	5.20	4.80	3.75	5.15
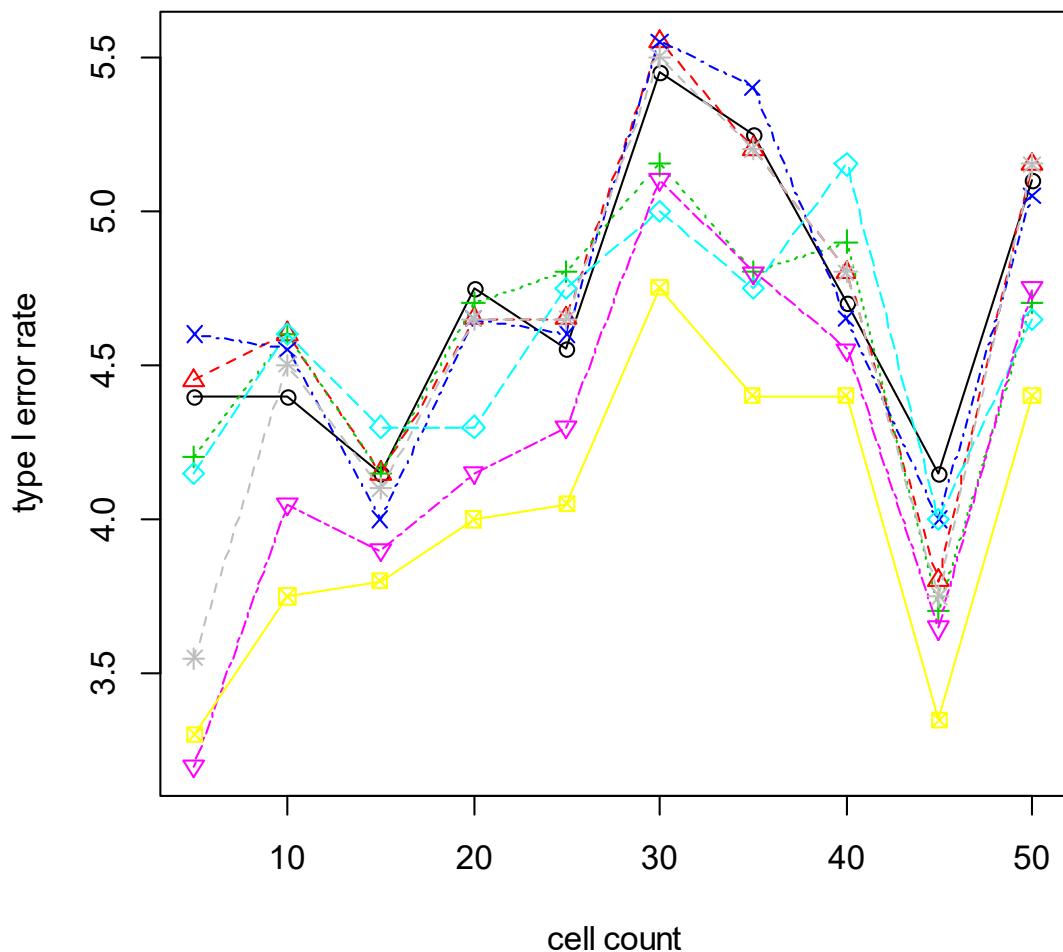
2. 3. 9   uniform distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	3.95	4.00	3.90	5.05	4.80	5.25	4.80	5.00	4.40	5.35
RT	4.35	4.25	3.90	4.95	5.00	5.15	4.80	5.05	4.45	5.25
INT	4.20	4.25	3.75	4.90	4.95	4.90	4.80	4.90	4.10	5.05
ART	4.40	4.50	4.30	4.65	5.05	5.40	5.00	5.10	4.55	5.70
ART+INT	4.10	4.20	3.70	4.65	4.35	4.55	4.20	4.05	4.00	4.50
Puri & Sen	2.50	3.10	2.70	3.50	3.55	4.05	3.55	3.65	3.15	4.00
v.d.Waerden	2.30	2.90	2.40	3.45	3.15	3.70	3.15	3.05	2.90	3.50
ATS	3.45	4.15	3.75	4.85	4.90	5.15	4.70	5.05	4.45	5.20
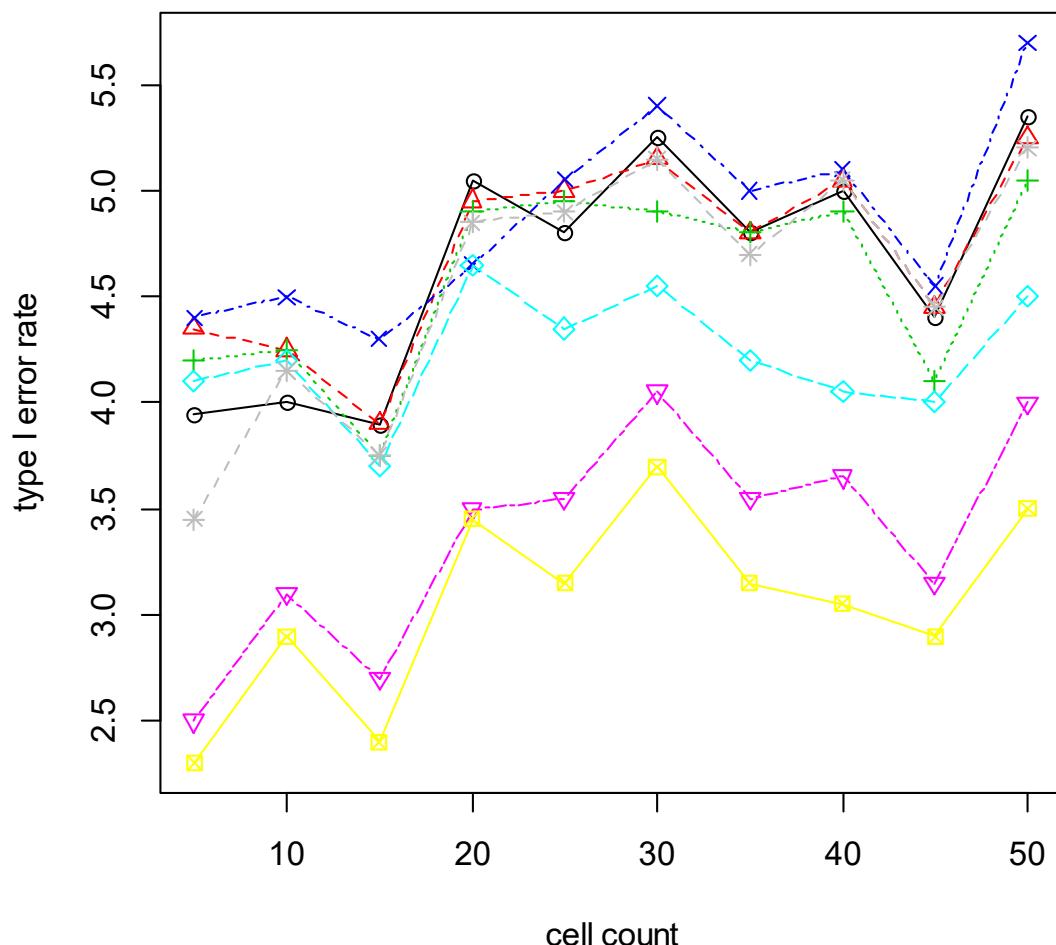
2. 3. 10   left/right skewed distribution

	cell count									
method	5	10	15	20	25	30	35	40	45	50
parametric	4.55	4.45	4.10	5.05	4.65	5.35	5.05	4.65	4.10	4.90
RT	3.75	4.50	3.70	3.80	3.95	5.00	4.70	4.25	3.50	4.45
INT	4.40	4.75	4.75	5.60	5.55	6.45	5.80	6.45	5.85	6.30
ART	3.75	4.50	3.75	3.80	4.60	4.90	4.95	4.40	3.60	4.50
ART+INT	3.95	4.75	5.05	5.90	6.50	7.45	6.95	7.70	8.00	8.05
Puri & Sen	2.55	2.85	2.90	2.85	3.10	3.65	3.55	3.25	2.55	3.50
v.d.Waerden	2.85	3.55	3.10	3.75	3.85	4.45	4.25	4.45	3.95	4.60
ATS	3.45	4.30	3.60	3.75	3.90	4.95	4.70	4.20	3.50	4.40
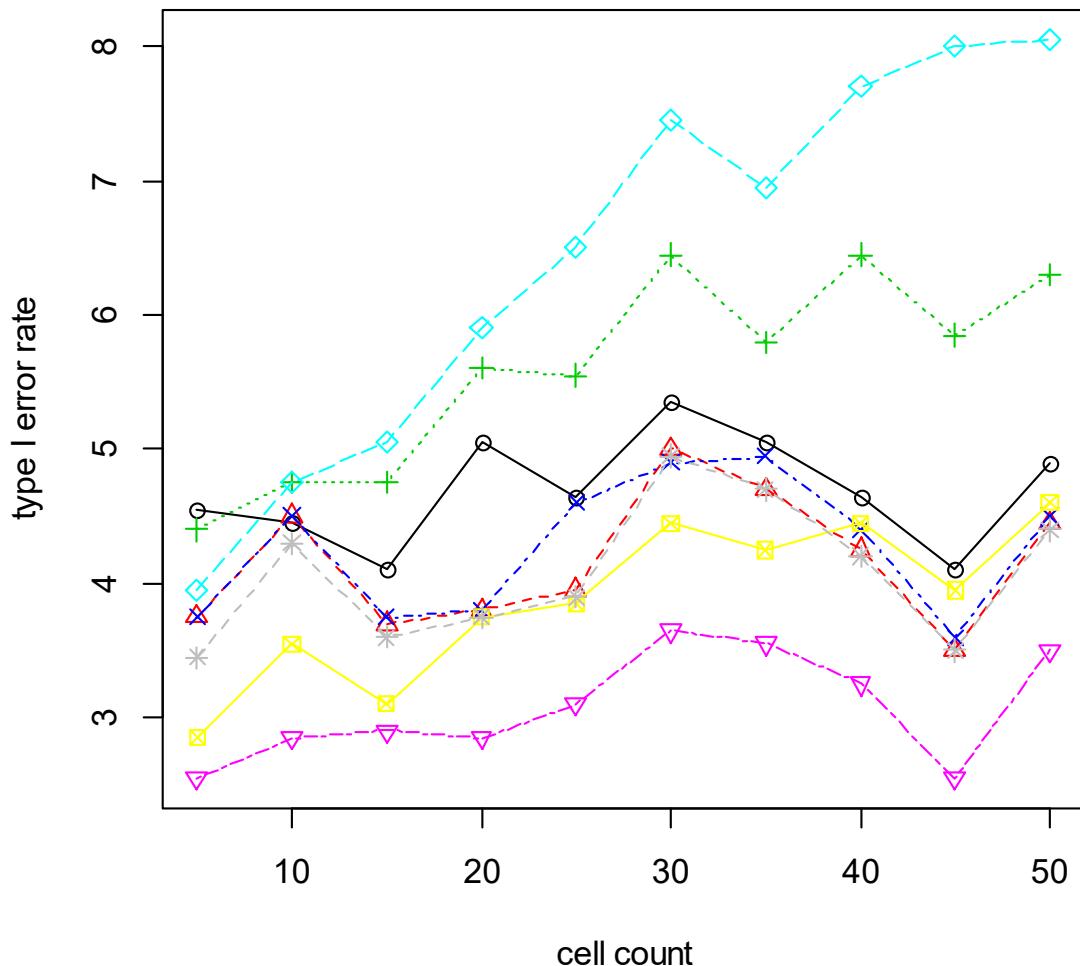
2. 3. 11   left skewed distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.05	5.20	5.00	4.75	5.25	5.85	5.65	5.20	4.75	6.25
RT	4.70	5.50	5.60	5.55	6.00	6.40	6.55	6.90	6.40	6.80
INT	4.20	4.95	4.90	4.70	5.20	5.40	5.70	5.70	4.90	5.90
ART	4.50	4.95	5.30	5.80	6.10	6.95	6.65	6.55	6.50	7.80
ART+INT	4.35	4.40	4.70	4.60	5.10	5.55	6.10	5.50	5.00	6.10
Puri & Sen	2.85	3.90	4.10	4.25	4.65	5.00	5.20	4.90	4.50	5.60
v.d.Waerden	2.95	3.65	3.30	3.55	3.90	4.05	4.15	3.90	3.70	4.25
ATS	3.50	4.85	4.95	5.10	5.15	6.00	6.00	6.15	5.65	6.20
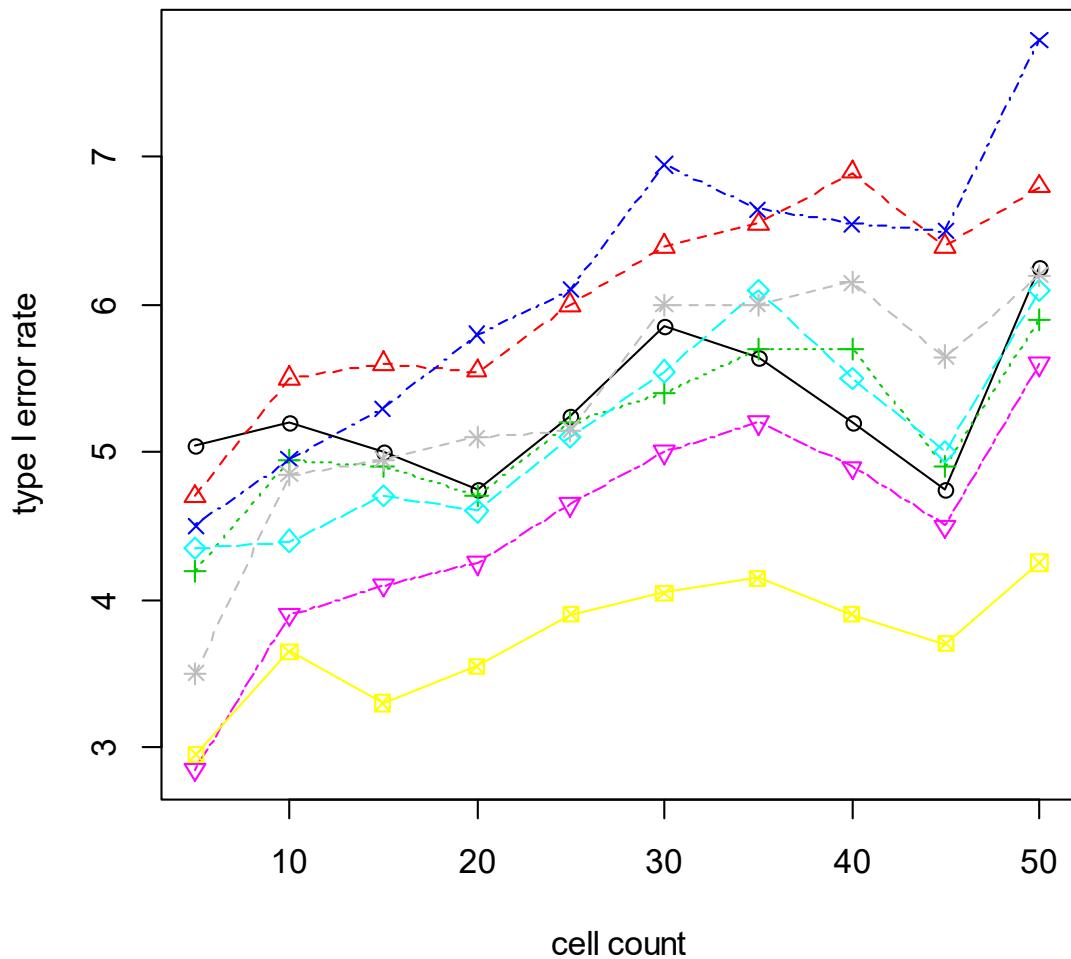
2. 3. 12   left skewed distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.55	5.05	4.60	4.80	5.00	5.75	5.60	5.20	5.00	5.65
RT	4.70	5.10	4.60	5.30	5.05	5.65	5.60	5.25	5.15	5.70
INT	4.65	4.85	4.55	4.60	4.50	5.00	5.05	4.25	4.50	5.20
ART	4.90	5.55	6.00	6.25	7.45	7.15	7.30	7.40	7.25	8.25
ART+INT	4.55	5.25	5.00	5.25	5.65	5.80	6.10	5.55	5.65	6.05
Puri & Sen	3.15	3.30	3.15	3.95	3.85	4.30	4.00	3.95	3.35	4.35
v.d.Waerden	3.25	3.35	3.40	3.60	3.25	3.60	3.75	3.55	3.35	3.95
ATS	3.65	4.55	4.25	4.80	4.65	5.20	5.00	4.90	4.55	5.30
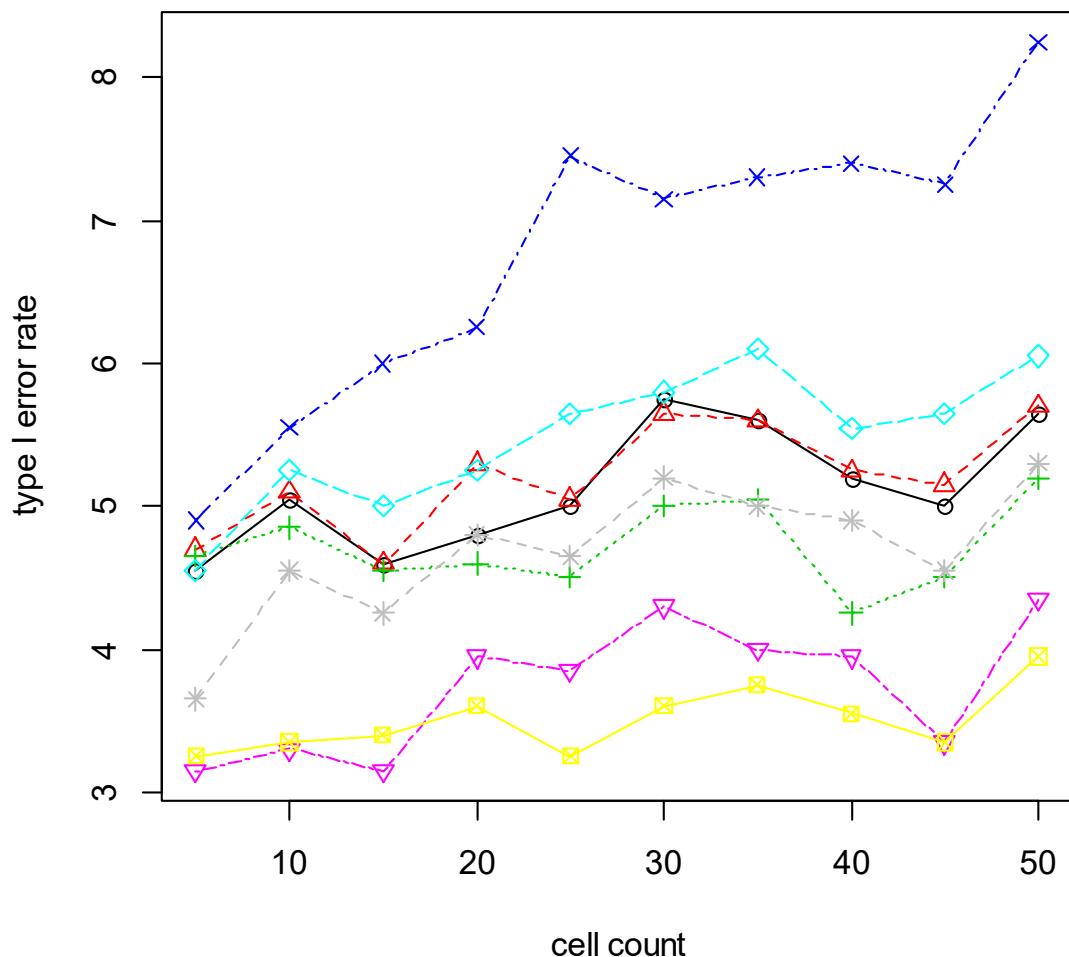
2. 4. Main effect B - A significant (effects a$_i$ = 0.6*s / unequal n$_i$ / # levels = 4*5)

2. 4. 1   normal distribution - equal variances

	cell count									
method	5	10	15	20	25	30	35	40	45	50
parametric	5.85	4.40	4.15	4.95	5.45	5.10	5.60	4.00	5.55	5.10
RT	5.70	4.20	4.15	5.25	5.25	4.95	5.50	4.00	4.85	4.65
INT	5.90	4.40	4.30	4.70	5.50	5.00	5.45	3.95	5.25	5.05
ART	4.55	4.25	4.30	5.55	6.05	7.00	7.40	9.20	10.45	10.50
ART+INT	3.90	3.95	4.85	5.75	6.10	7.15	7.65	9.50	10.95	11.25
Puri & Sen	4.00	3.05	2.70	3.85	3.85	3.90	3.75	2.70	3.35	3.50
v.d.Waerden	3.90	3.20	2.60	3.45	3.85	3.50	3.75	2.80	3.75	3.65
ATS	4.70	4.05	4.65	4.60	5.10	5.25	5.60	4.10	5.15	5.15
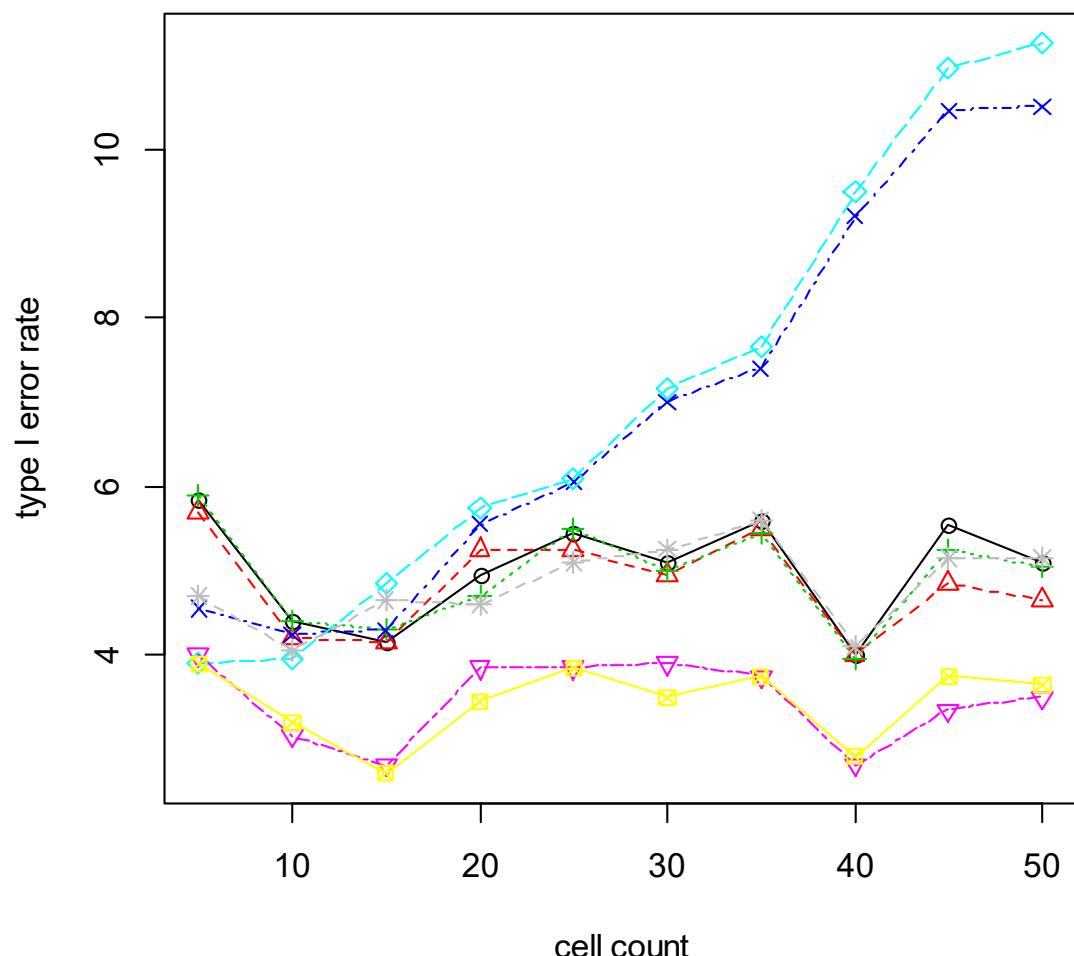
2. 4. 2   normal distribution - unequal variances (on B)

	cell count									
method	5	10	15	20	25	30	35	40	45	50
parametric	6.45	4.95	4.75	5.10	5.20	5.75	5.35	5.00	5.75	5.25
RT	5.65	4.45	4.30	5.30	4.80	5.30	5.80	5.35	4.80	5.35
INT	5.55	4.25	3.95	4.70	3.80	4.10	4.65	4.40	4.45	4.25
ART	4.70	4.45	5.05	6.60	6.80	8.30	9.20	10.95	12.45	12.30
ART+INT	4.35	3.65	4.25	5.05	5.25	6.00	7.30	8.60	10.40	10.00
Puri & Sen	3.80	3.05	2.85	3.05	3.05	3.80	4.00	3.40	2.85	3.55
v.d.Waerden	3.60	3.40	2.65	3.40	2.45	3.30	3.15	2.80	2.80	3.25
ATS	3.95	4.25	4.50	4.80	4.95	5.15	5.70	4.65	5.20	5.35
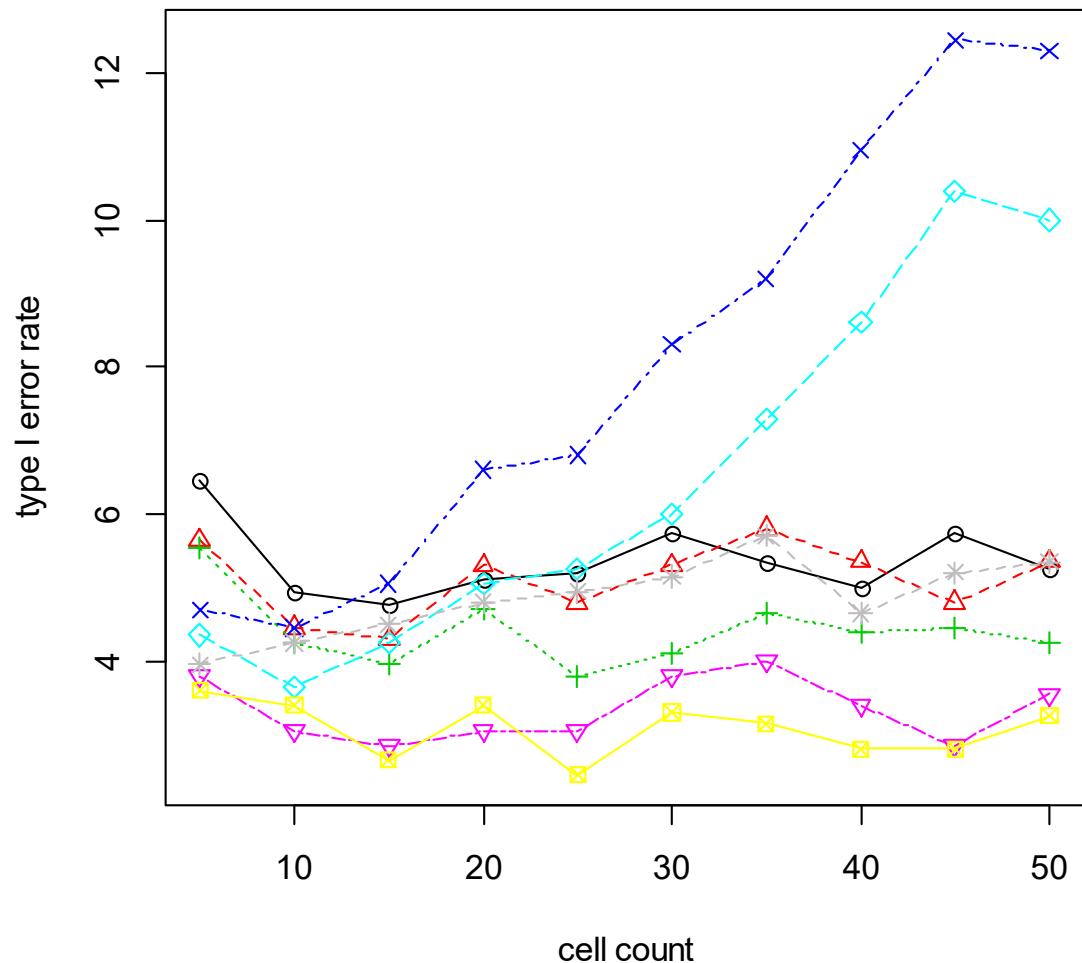
2. 4. 3   normal distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	7.85	6.55	6.25	7.25	7.35	6.85	6.40	6.40	6.60	6.35
RT	6.30	5.15	5.35	6.30	6.35	7.05	7.00	6.75	7.20	6.25
INT	7.20	5.20	4.80	6.15	6.30	6.25	6.45	5.55	6.25	5.25
ART	5.70	4.95	5.60	7.55	7.65	9.15	9.70	11.00	13.45	12.15
ART+INT	5.25	4.30	4.70	6.15	6.15	7.75	8.20	9.50	11.60	10.95
Puri & Sen	3.85	3.30	3.45	4.05	4.15	4.75	4.95	4.25	4.75	4.15
v.d.Waerden	4.65	3.75	3.30	4.15	4.20	4.45	4.25	3.95	4.55	3.95
ATS	4.35	4.15	5.25	5.15	5.55	6.45	6.30	5.45	6.60	6.05
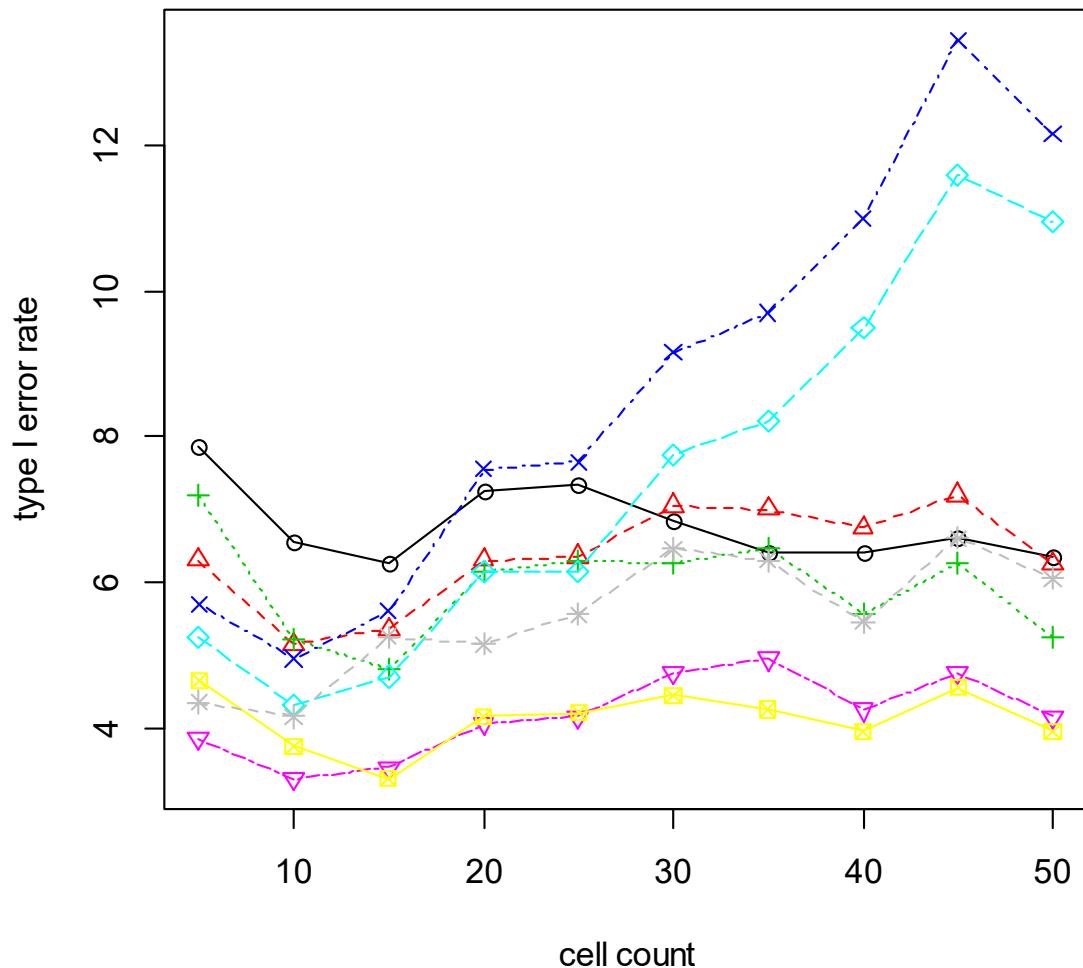
2. 4. 4   right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.30	5.20	6.20	4.80	5.30	5.35	4.45	5.95	4.50	4.80
RT	5.65	6.10	6.80	5.80	6.00	6.45	6.00	6.55	5.95	6.40
INT	6.05	6.30	7.50	6.35	6.00	6.55	5.80	6.75	5.45	6.65
ART	4.25	5.30	6.70	7.15	9.10	10.70	11.35	15.05	15.80	17.95
ART+INT	3.40	4.50	6.45	8.05	11.30	14.35	16.65	20.25	22.90	27.75
Puri & Sen	3.85	3.70	4.65	3.75	3.80	4.20	3.40	4.40	3.65	4.40
v.d.Waerden	3.65	3.55	4.35	3.40	3.30	3.90	3.10	3.85	3.40	3.75
ATS	4.20	4.85	5.50	5.45	4.85	5.55	5.15	5.15	5.35	5.55
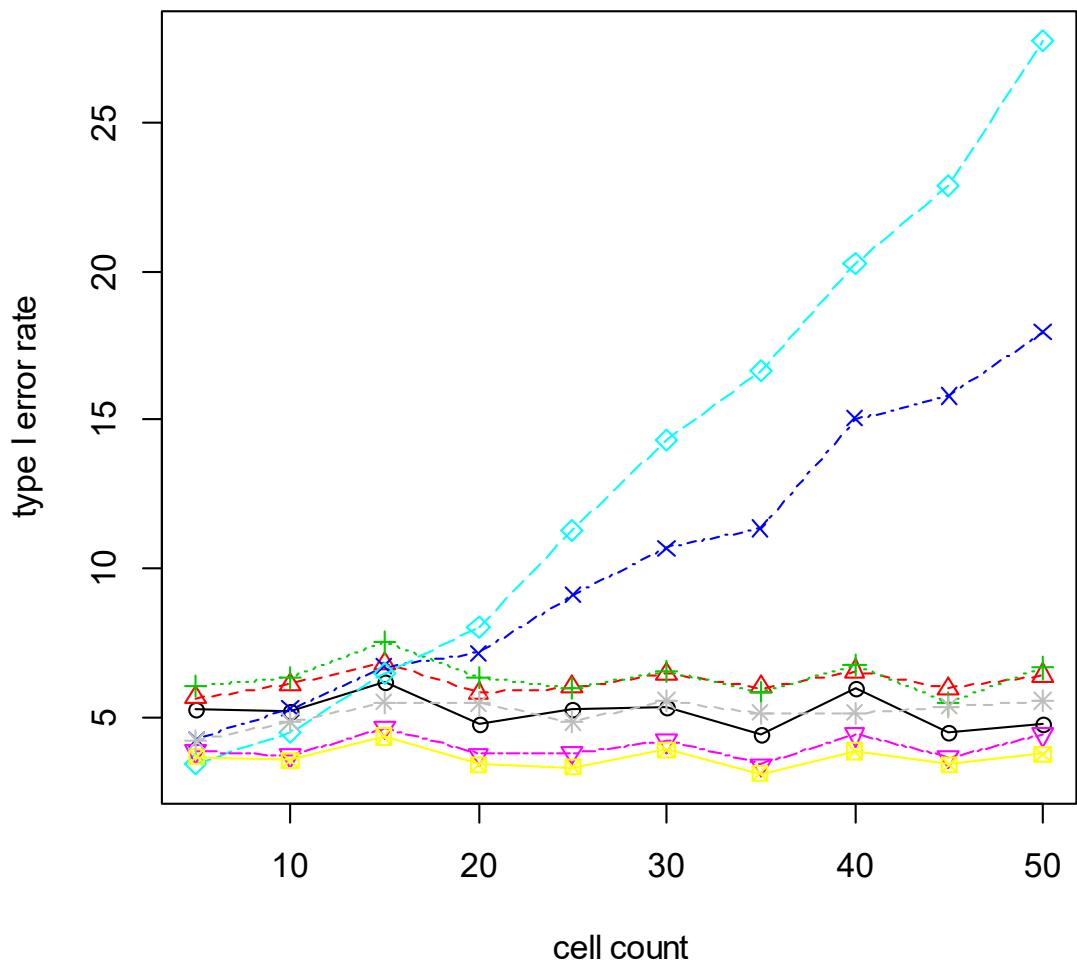
2. 4. 5   exponential distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	3.90	3.85	3.10	2.85	3.55	3.15	3.45	3.20	3.50	3.30
RT	4.35	5.10	4.10	4.45	5.60	4.45	4.45	5.40	5.15	4.60
INT	4.35	4.70	4.35	4.50	5.20	3.95	4.55	5.00	4.55	4.55
ART	6.45	7.60	8.00	10.50	13.20	13.65	15.50	17.45	18.25	19.50
ART+INT	2.90	3.60	4.20	5.75	7.00	7.75	9.00	10.95	11.55	14.90
Puri & Sen	3.50	4.00	3.50	3.50	4.55	3.95	3.70	4.50	4.45	3.50
v.d.Waerden	3.60	3.95	3.55	3.65	4.60	3.65	3.75	4.50	3.75	3.70
ATS	4.10	5.45	4.65	4.70	5.90	4.35	4.55	5.70	5.65	4.80
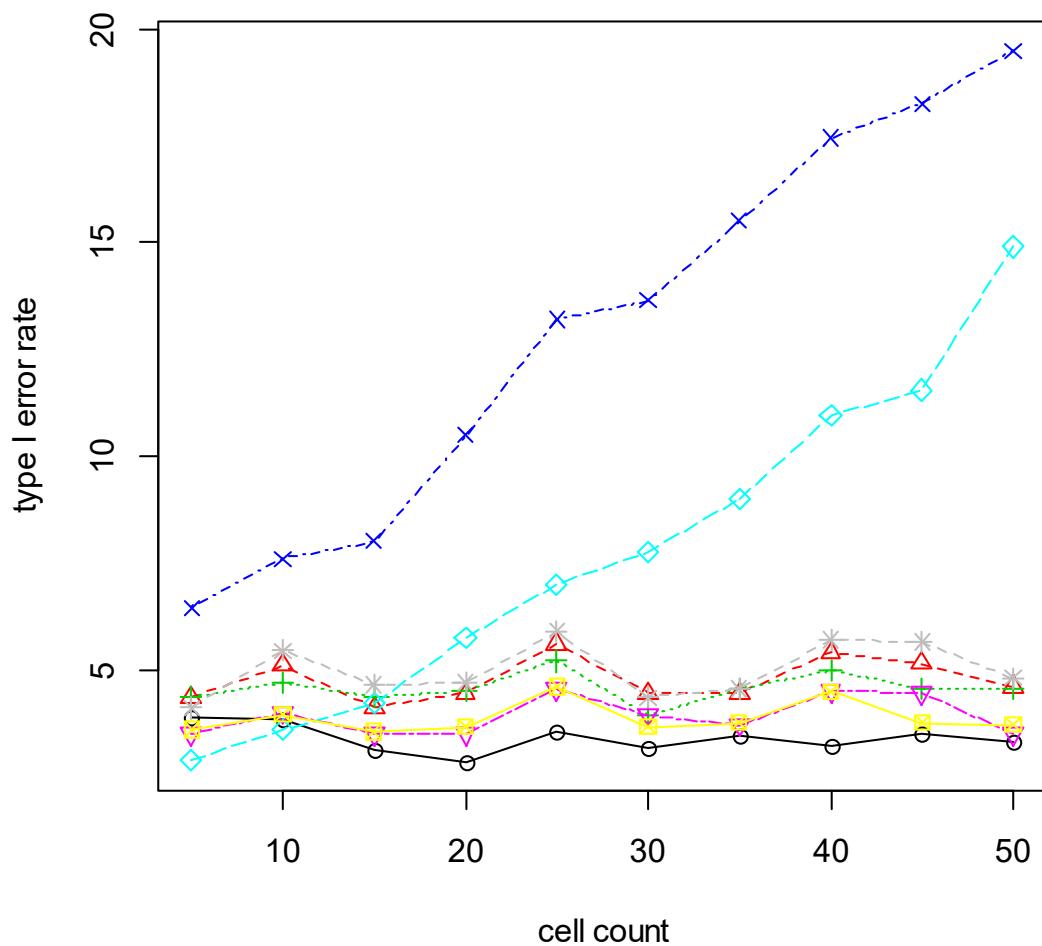
2. 4. 6   exponential distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.35	4.15	3.00	3.10	3.50	3.30	3.40	3.15	3.25	3.35
RT	4.40	5.05	4.15	4.35	4.95	4.30	4.10	5.35	4.50	4.55
INT	3.95	4.60	3.70	3.90	4.35	4.10	4.15	5.05	4.10	4.15
ART	6.60	8.40	8.35	11.70	13.90	15.40	16.65	20.00	20.85	22.50
ART+INT	3.15	3.90	3.90	5.30	7.80	9.35	9.95	13.15	13.60	16.85
Puri & Sen	3.55	4.15	3.55	3.80	4.30	3.70	3.30	4.30	3.75	3.65
v.d.Waerden	3.05	3.55	2.75	3.30	3.60	3.45	3.55	4.05	3.40	3.55
ATS	5.10	5.65	4.35	4.45	5.50	4.75	4.35	5.85	6.05	5.20
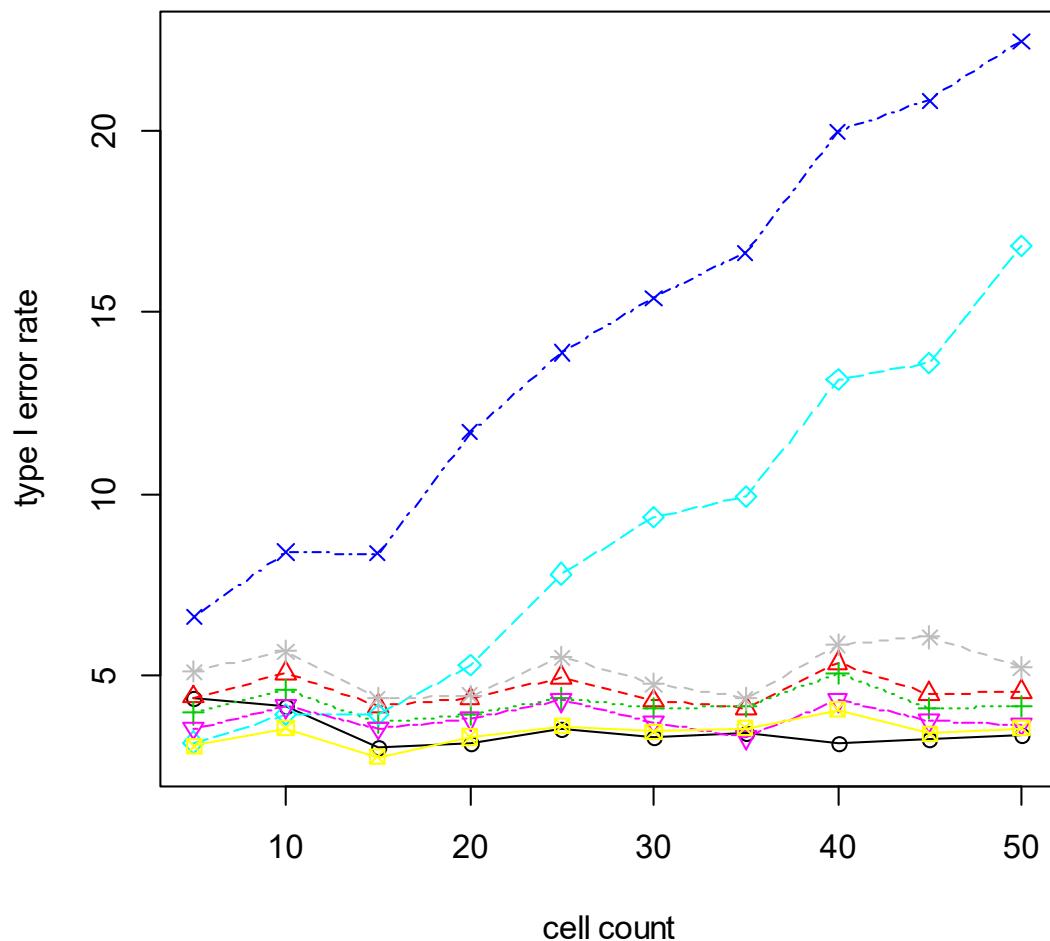
2. 4. 7 lognormal distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.65	5.25	4.85	4.90	5.90	4.95	4.70	5.10	5.35	5.65
RT	4.60	5.20	4.55	5.25	5.25	5.35	5.25	5.10	5.60	5.25
INT	4.95	5.50	5.05	5.20	6.25	5.20	5.15	5.20	5.80	5.80
ART	4.20	4.55	4.65	6.15	7.60	8.90	8.70	10.40	11.15	12.55
ART+INT	3.30	4.15	4.65	5.95	7.85	8.80	8.50	10.15	10.15	13.00
Puri & Sen	2.80	3.70	2.95	3.40	3.65	3.85	3.10	3.15	3.70	3.55
v.d.Waerden	2.90	3.70	3.45	3.40	4.40	3.55	3.50	3.25	3.95	3.55
ATS	3.90	4.80	3.90	4.55	5.05	4.80	4.80	5.00	5.45	5.55
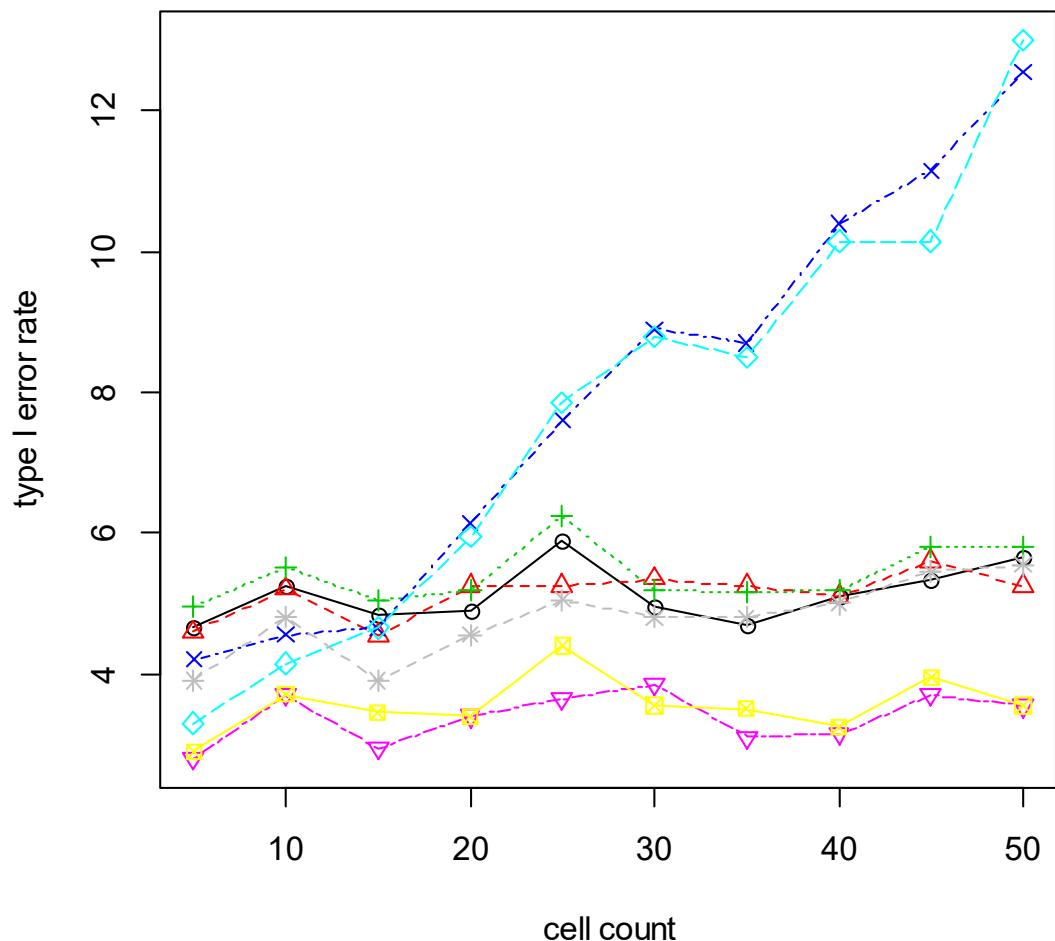
2. 4. 8   uniform distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.45	4.80	6.25	4.85	5.20	5.30	4.95	5.65	4.70	5.50
RT	5.45	4.75	6.25	4.75	5.10	4.85	4.70	5.65	4.90	5.45
INT	5.45	5.40	6.25	4.35	5.30	5.50	4.90	5.30	5.05	5.45
ART	3.50	4.20	4.80	5.10	7.15	7.80	9.00	8.90	9.55	11.05
ART+INT	3.40	4.40	5.80	7.25	10.45	11.45	13.50	15.80	17.65	21.55
Puri & Sen	3.80	3.35	4.75	3.35	3.65	3.75	3.20	4.10	3.45	4.35
v.d.Waerden	3.25	3.35	4.10	2.80	3.40	3.20	2.75	3.30	2.80	3.35
ATS	4.35	4.45	5.75	5.05	4.55	5.65	5.25	5.40	5.10	5.70
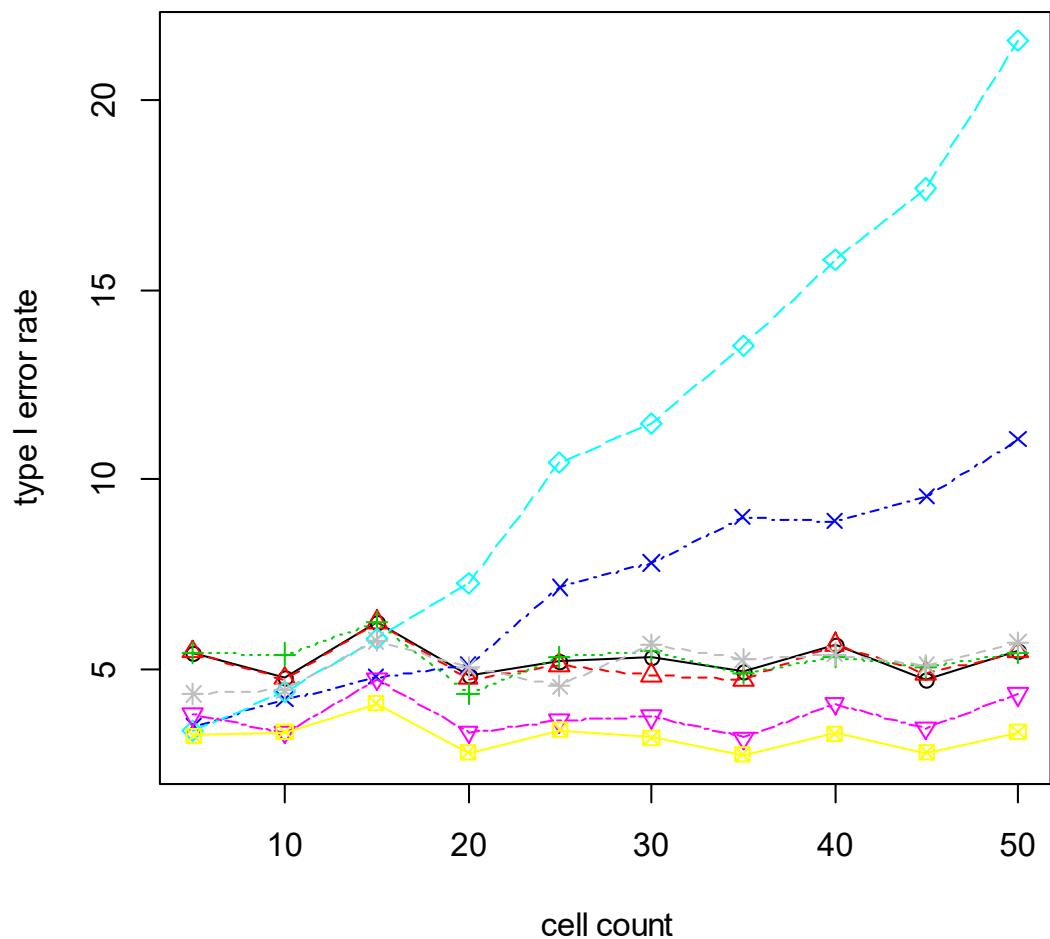
2. 4. 9   uniform distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.40	4.75	5.80	4.35	5.40	5.50	5.50	5.95	4.80	5.40
RT	5.65	4.80	6.35	4.50	5.40	5.55	5.70	6.05	4.60	5.35
INT	5.45	4.65	5.70	4.50	5.40	5.45	5.30	5.85	4.70	5.60
ART	3.75	4.65	6.25	7.10	10.05	12.20	15.75	22.25	25.10	32.80
ART+INT	3.70	5.05	7.70	10.80	16.05	21.25	28.15	36.40	43.10	51.80
Puri & Sen	3.55	3.55	4.35	3.35	4.05	4.15	3.80	3.95	3.45	4.05
v.d.Waerden	3.05	3.10	4.05	3.20	3.80	3.80	3.00	3.70	3.15	3.40
ATS	4.50	4.70	5.35	5.00	5.25	5.85	5.45	5.90	5.05	6.00
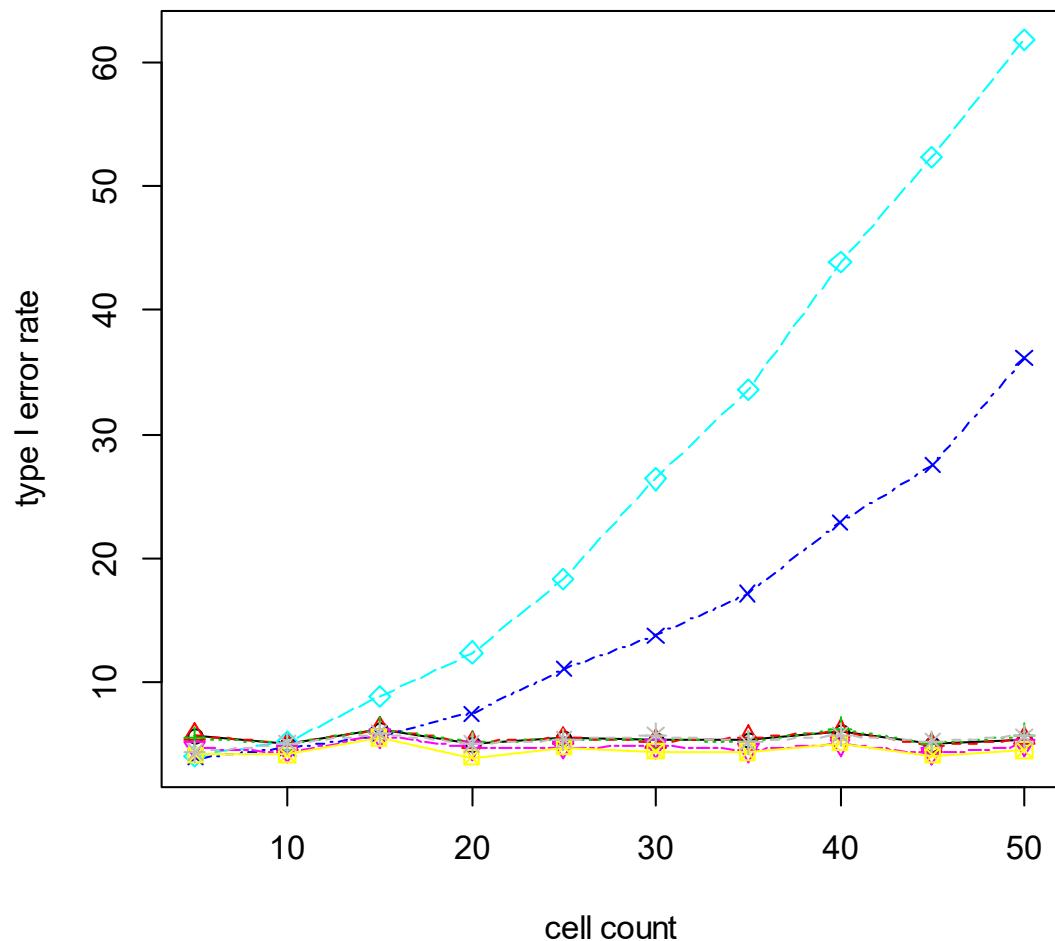
2. 4. 10   left/right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.30	5.20	5.60	4.95	4.95	5.15	4.40	5.20	4.80	5.45
RT	4.85	4.55	4.85	4.20	4.65	4.70	4.50	4.90	4.45	5.15
INT	6.05	6.35	7.15	6.50	7.40	8.40	6.65	8.35	8.25	8.75
ART	3.60	4.35	4.65	5.20	7.80	8.30	8.70	11.55	11.55	13.20
ART+INT	3.75	4.10	5.70	5.85	8.20	9.70	10.65	11.85	12.40	15.00
Puri & Sen	3.40	3.60	3.65	2.75	3.20	3.45	3.15	3.50	3.15	4.10
v.d.Waerden	4.00	4.50	5.00	4.35	4.75	5.60	4.40	5.85	5.75	6.70
ATS	4.50	4.25	5.20	4.60	4.50	5.40	5.00	5.15	5.15	5.65
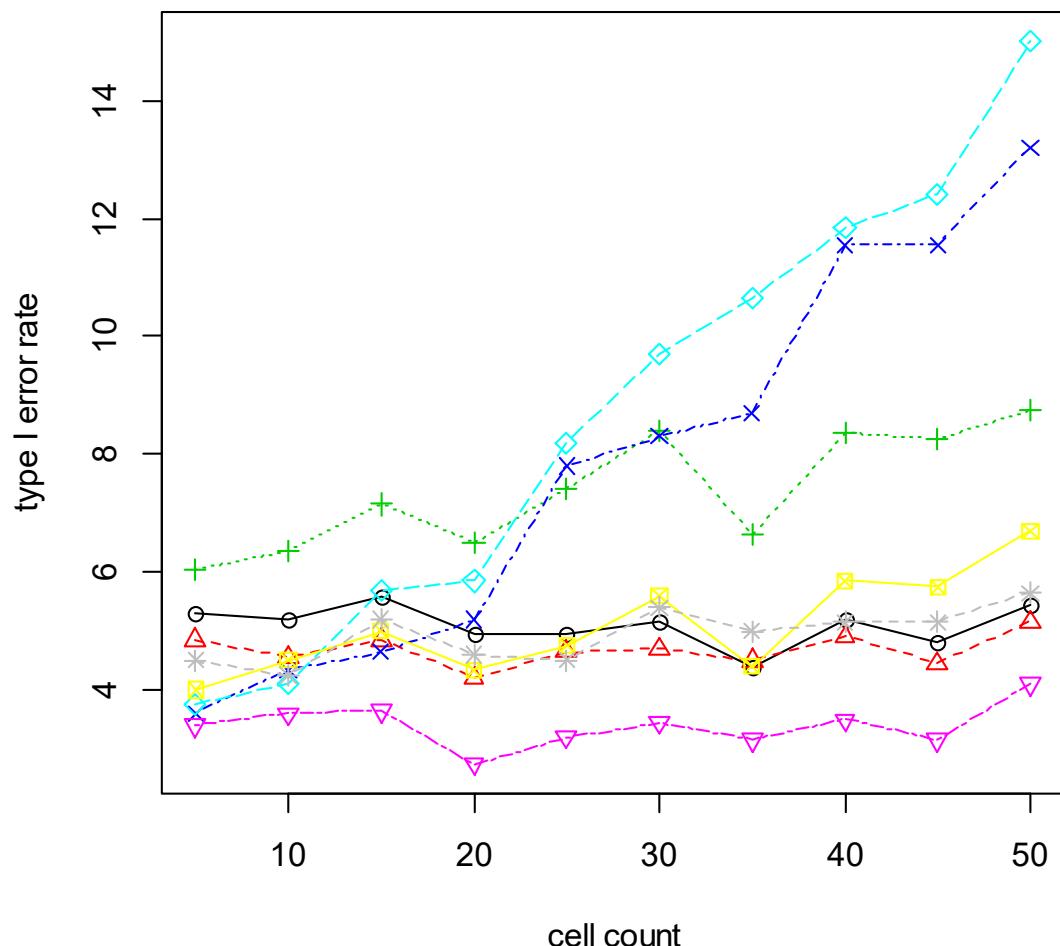
2. 4. 11   left skewed distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.10	5.75	6.55	5.35	5.60	5.50	5.60	6.55	5.30	5.50
RT	5.90	6.15	7.90	7.55	7.45	8.10	9.10	10.45	9.50	10.10
INT	5.85	5.65	6.65	5.90	6.05	6.45	7.30	8.10	7.25	8.00
ART	3.65	4.45	5.50	6.35	7.20	7.80	8.70	10.05	10.55	13.65
ART+INT	3.40	3.80	5.00	6.15	6.70	7.65	8.85	10.45	10.80	13.90
Puri & Sen	4.65	4.85	6.05	5.40	5.95	5.95	6.80	8.45	7.40	8.25
v.d.Waerden	4.25	4.20	5.10	4.80	4.55	5.15	5.60	6.75	5.65	6.05
ATS	4.45	5.90	7.40	7.25	7.70	7.75	8.50	10.20	9.05	10.45
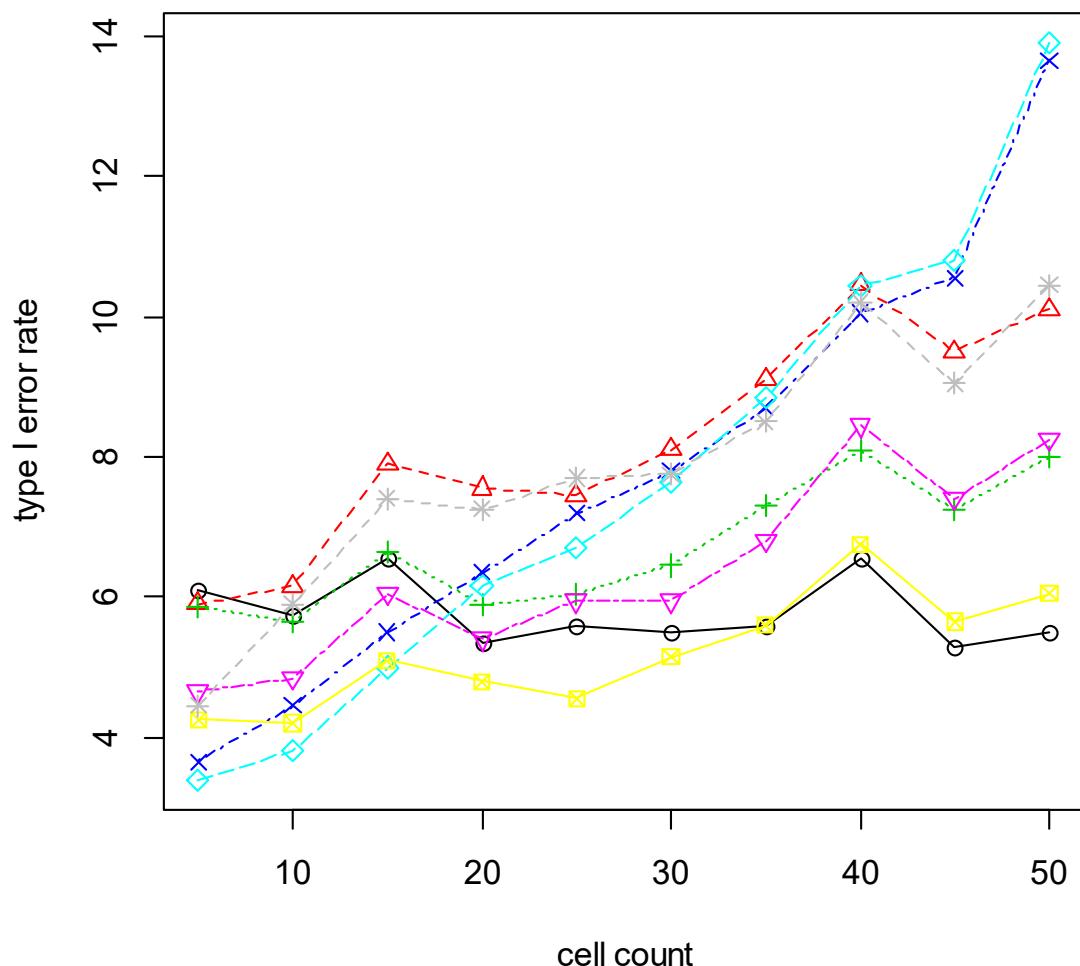
2. 4. 12   left skewed distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	8.50	7.65	8.35	7.80	7.15	7.10	7.85	7.95	6.50	6.95
RT	6.10	5.80	6.30	5.80	5.60	6.25	6.10	6.35	5.55	6.50
INT	7.45	6.75	7.75	7.65	6.75	6.95	7.10	7.50	5.80	6.45
ART	4.65	5.35	6.15	7.05	8.25	8.80	9.55	10.20	10.80	12.60
ART+INT	4.10	4.85	4.85	6.15	6.15	7.45	7.80	8.80	9.45	11.70
Puri & Sen	4.15	4.15	4.55	4.10	4.45	4.50	4.35	4.50	3.80	4.70
v.d.Waerden	4.50	4.60	5.50	5.00	4.70	5.40	5.10	5.55	4.50	5.00
ATS	4.30	5.15	5.85	5.00	5.60	5.70	5.70	5.95	5.60	6.25
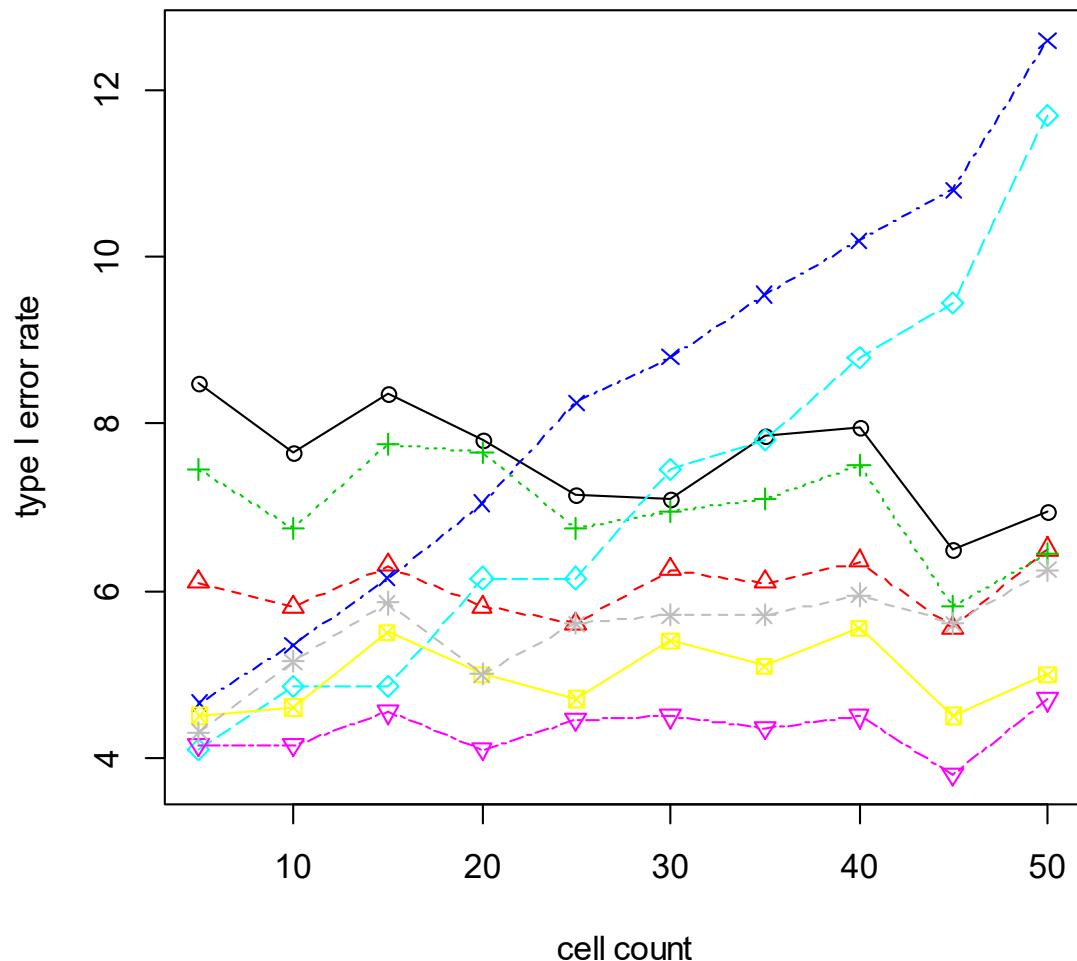
2. 4. 13   normal distribution - unequal variances (small n_i ~ small s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	1.30	1.00	0.65	1.10	1.00	1.30	1.15	0.90	1.20	1.20
RT	2.10	1.75	1.60	2.10	2.35	2.55	2.35	1.95	2.30	2.40
INT	1.35	1.15	0.90	1.10	1.05	1.50	1.45	1.15	1.30	1.20
ART	5.75	6.60	7.50	9.20	9.80	10.55	11.90	14.45	15.40	14.80
ART+INT	4.00	4.20	4.85	5.75	6.30	7.00	8.05	9.90	11.40	11.20
Puri & Sen	1.35	1.15	0.80	1.15	1.50	1.80	1.40	1.05	1.20	1.65
v.d.Waerden	0.85	0.65	0.55	0.85	0.85	0.95	0.70	0.80	0.90	1.00
ATS	4.35	4.25	4.35	5.25	5.40	5.35	5.65	4.95	5.75	5.20
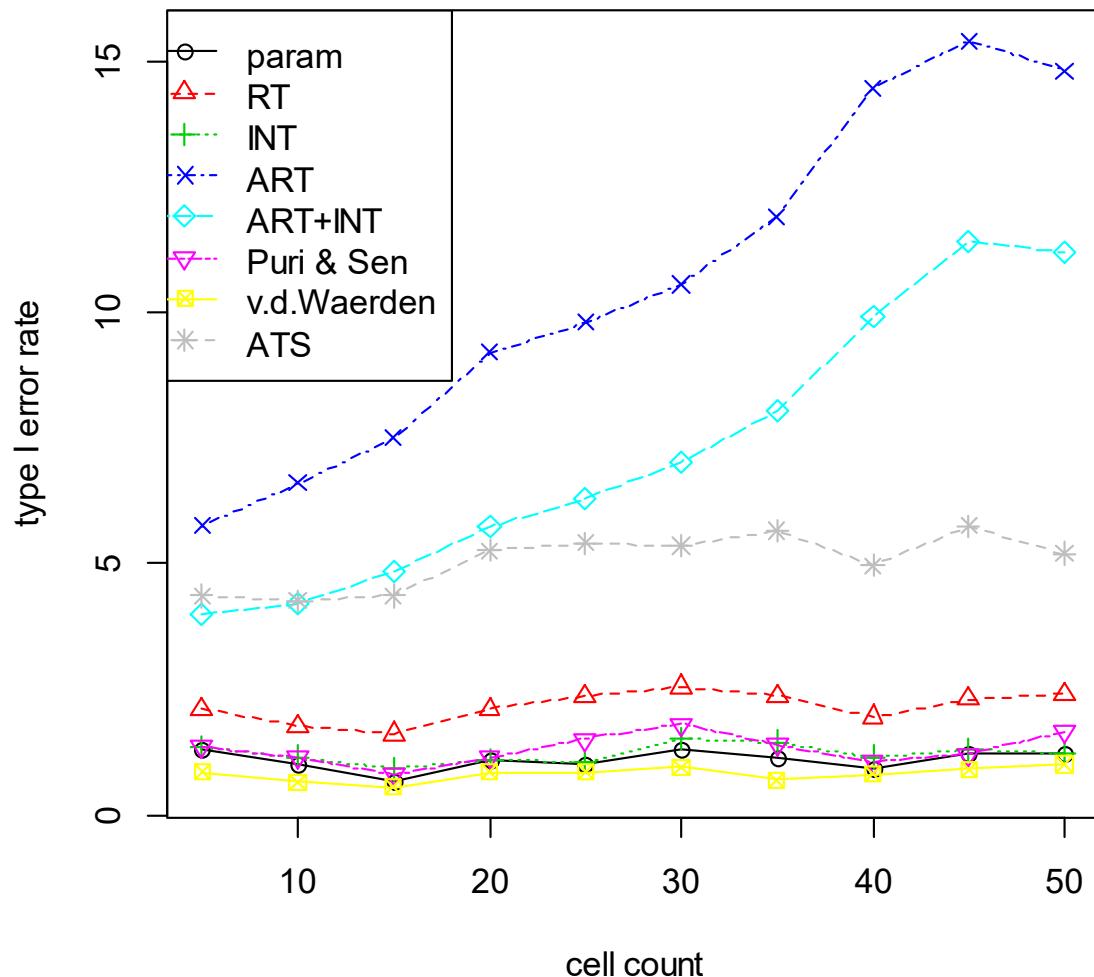
2. 4. 14   normal distribution - unequal variances (small $n_i \sim$ large s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	19.65	17.35	17.05	17.25	17.05	17.45	17.65	17.20	16.90	17.20
RT	11.20	9.70	9.70	11.20	10.45	10.70	11.30	10.85	11.25	10.80
INT	15.55	14.10	13.70	14.50	14.60	15.45	15.20	15.25	14.70	14.75
ART	5.30	4.70	5.05	6.35	7.05	8.15	8.00	9.10	11.60	11.40
ART+INT	5.35	4.35	5.35	6.15	7.00	8.45	8.75	9.40	11.70	11.50
Puri & Sen	7.60	6.85	6.90	7.85	8.05	8.60	8.75	7.85	8.40	8.50
v.d.Waerden	10.75	9.75	10.65	10.70	11.90	11.80	12.30	11.00	11.90	11.45
ATS	4.80	4.25	4.70	5.00	5.70	5.60	5.90	5.10	5.80	5.50
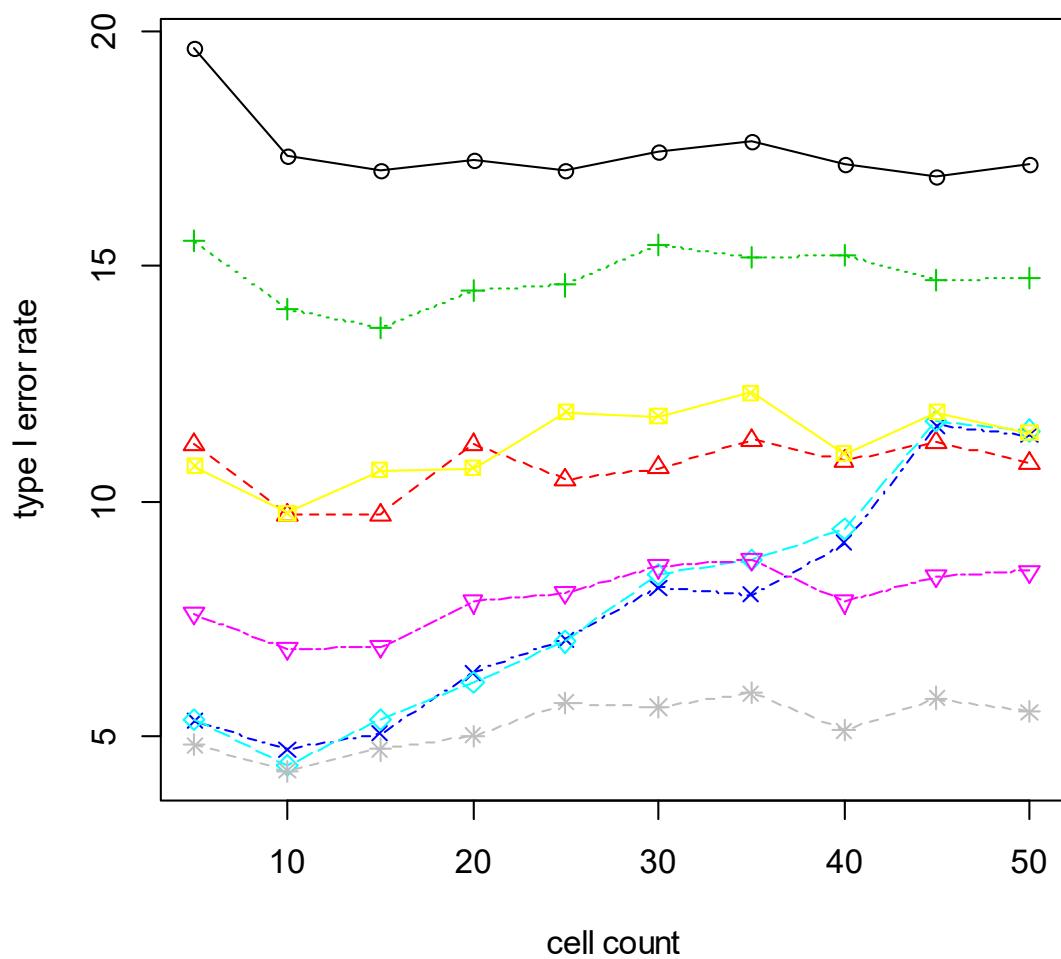
2. 4. 15   left skewed distribution - unequal variances (small $n_i \sim$ small s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	1.45	1.20	1.05	0.85	1.20	1.40	0.95	1.60	0.90	1.05
RT	2.15	1.45	1.75	1.20	1.80	1.65	1.35	2.15	1.90	1.80
INT	1.35	0.75	0.85	0.55	1.10	0.95	0.70	0.90	0.75	0.85
ART	4.20	4.70	5.05	5.95	7.75	8.40	9.35	9.35	9.55	10.85
ART+INT	2.45	2.45	2.75	3.10	4.50	5.25	5.55	5.45	6.30	7.35
Puri & Sen	1.20	1.15	0.90	0.80	1.15	1.15	0.85	1.65	1.15	1.45
v.d.Waerden	0.55	0.45	0.40	0.40	0.55	0.65	0.50	0.75	0.65	0.40
ATS	4.45	4.75	6.00	4.95	5.55	5.75	5.20	6.40	5.40	6.20
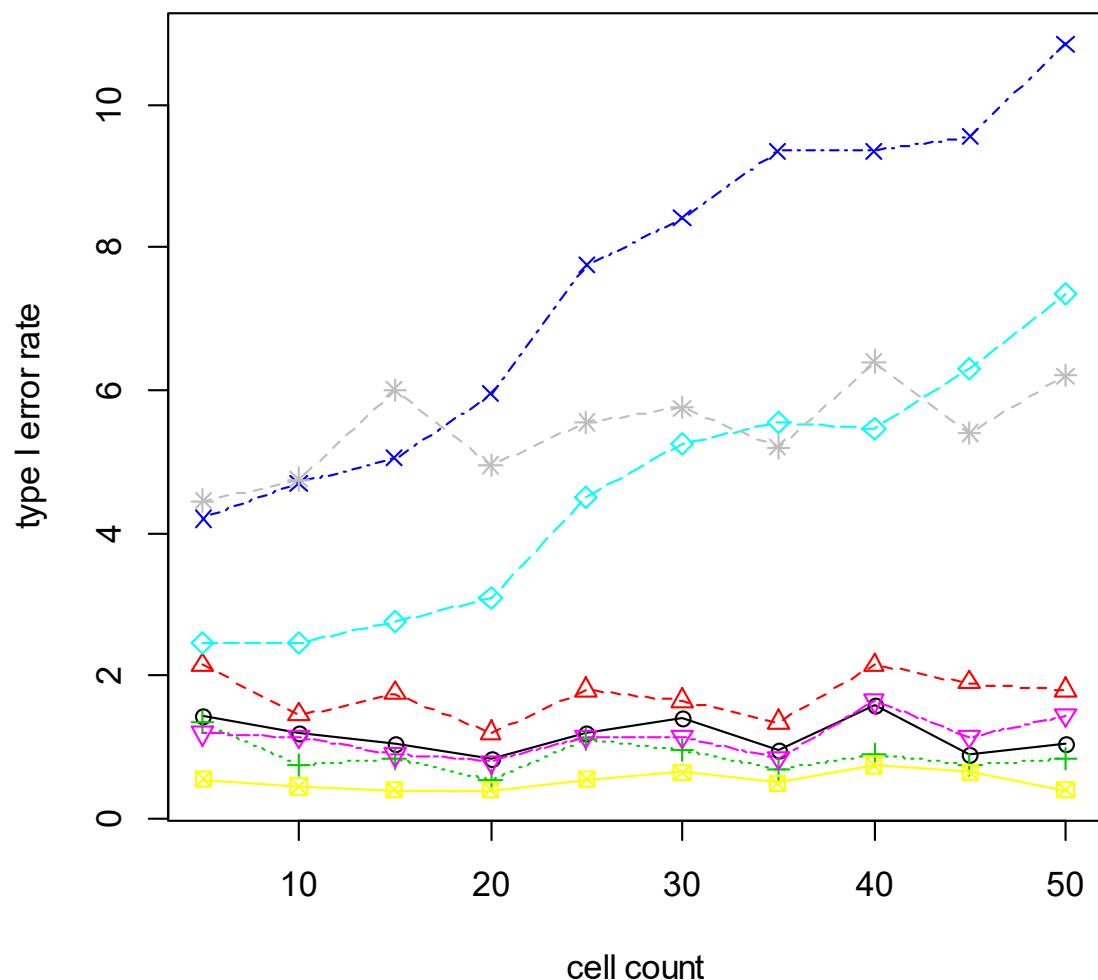
2. 4. 16   left skewed distribution - unequal variances (small $n_i \sim$ large s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	19.40	18.00	18.35	18.05	17.75	18.90	17.45	18.35	17.85	16.65
RT	13.05	13.25	12.70	13.85	14.65	15.65	15.75	16.30	15.45	16.00
INT	20.25	21.05	21.00	20.65	20.25	21.75	21.10	21.10	20.45	20.60
ART	4.65	6.90	7.35	8.10	10.05	11.35	12.80	14.60	14.95	17.55
ART+INT	5.10	5.70	7.50	8.65	11.50	12.50	14.95	16.60	17.80	21.80
Puri & Sen	9.95	9.75	10.85	10.75	11.00	12.50	12.65	13.10	12.70	13.05
v.d.Waerden	15.15	14.95	16.45	16.70	16.60	17.30	16.35	17.20	16.80	16.65
ATS	5.35	5.60	5.85	6.25	6.60	7.00	7.40	7.45	7.80	7.50
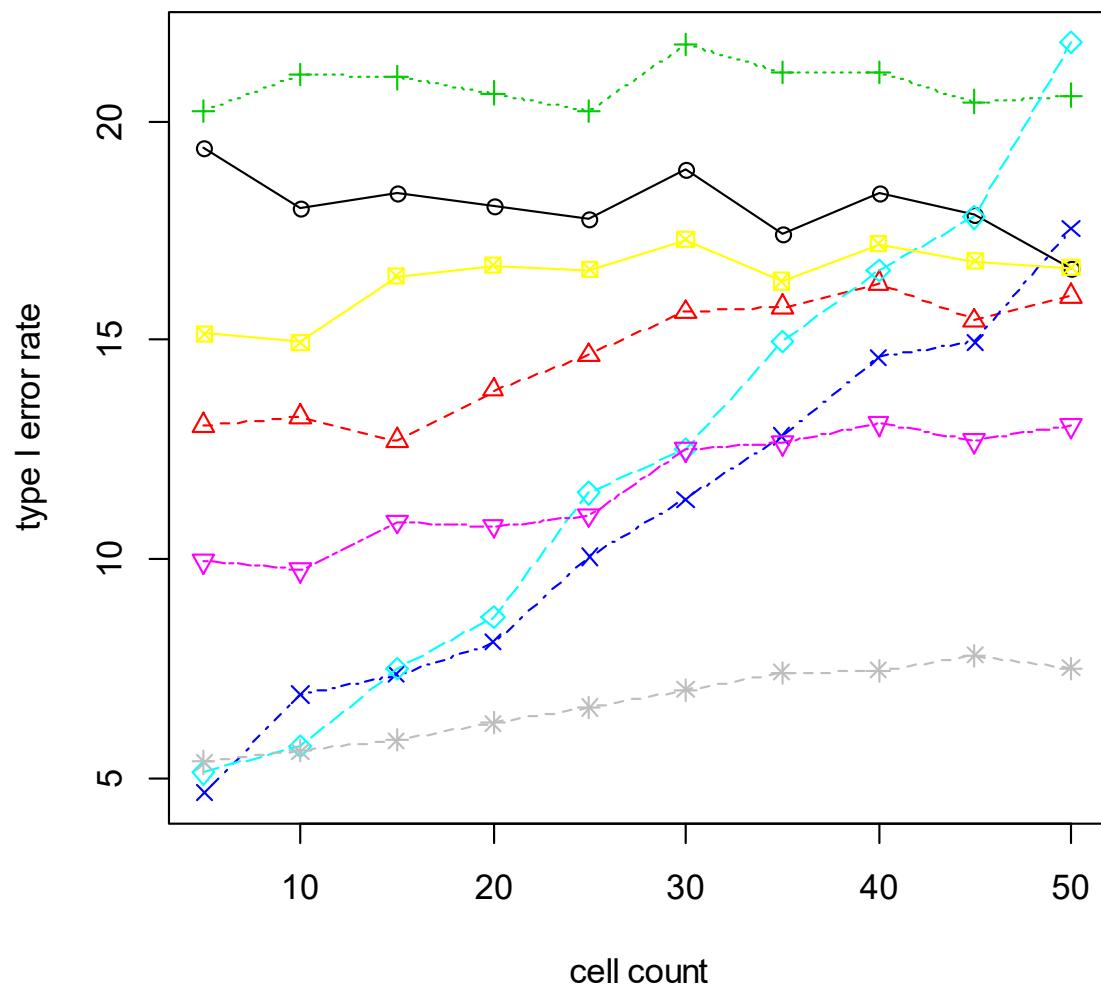
2. 5.   Main effect A - Interaction significant (effects ab$_{ij}$ = 0.6*s / equal n$_i$ / # levels = 2*4)

2. 5. 1   normal distribution - equal variances

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	3.95	5.80	5.20	4.55	5.25	5.30	5.75	5.30	4.60	5.05
RT	4.55	5.20	5.20	4.75	6.00	5.30	5.50	5.60	4.70	5.00
INT	4.25	5.65	5.35	4.60	5.40	5.10	5.45	5.45	4.85	4.95
ART	4.70	5.10	5.15	5.20	6.05	5.30	5.40	5.35	4.55	4.95
ART+INT	4.35	5.60	4.95	4.85	5.30	5.35	5.30	5.30	4.85	4.75
Puri & Sen	3.65	4.65	4.20	4.10	4.70	4.50	4.50	4.60	4.05	3.95
v.d.Waerden	3.80	4.35	4.15	3.95	4.70	4.25	4.60	4.50	4.00	4.05
ATS	4.00	5.20	5.15	4.75	6.00	5.30	5.50	5.60	4.70	5.00
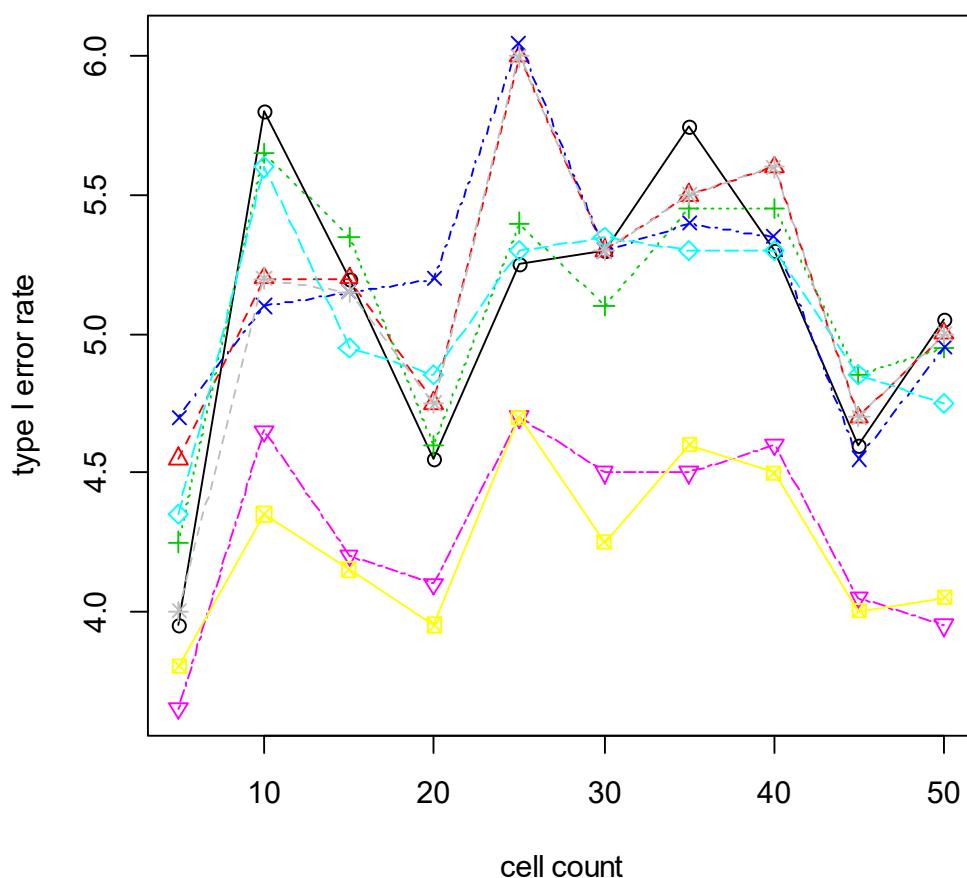
2. 5. 2   normal distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.60	5.70	4.60	4.60	5.20	5.35	5.60	4.95	5.15	4.95
RT	5.20	6.35	7.20	8.45	8.65	10.20	9.90	12.15	12.45	13.30
INT	4.50	5.60	5.30	4.60	5.30	6.05	5.45	5.85	5.55	5.20
ART	6.85	6.85	6.25	6.00	7.50	6.90	7.05	6.55	6.85	6.50
ART+INT	5.50	6.40	5.60	5.45	6.35	6.15	6.00	5.65	6.00	6.00
Puri & Sen	4.00	5.40	5.60	7.10	7.20	8.95	8.15	10.80	10.65	11.85
v.d.Waerden	3.50	4.45	4.25	3.85	4.25	4.95	4.35	4.75	4.85	4.05
ATS	4.65	6.20	7.10	8.40	8.50	10.20	9.85	12.15	12.45	13.30
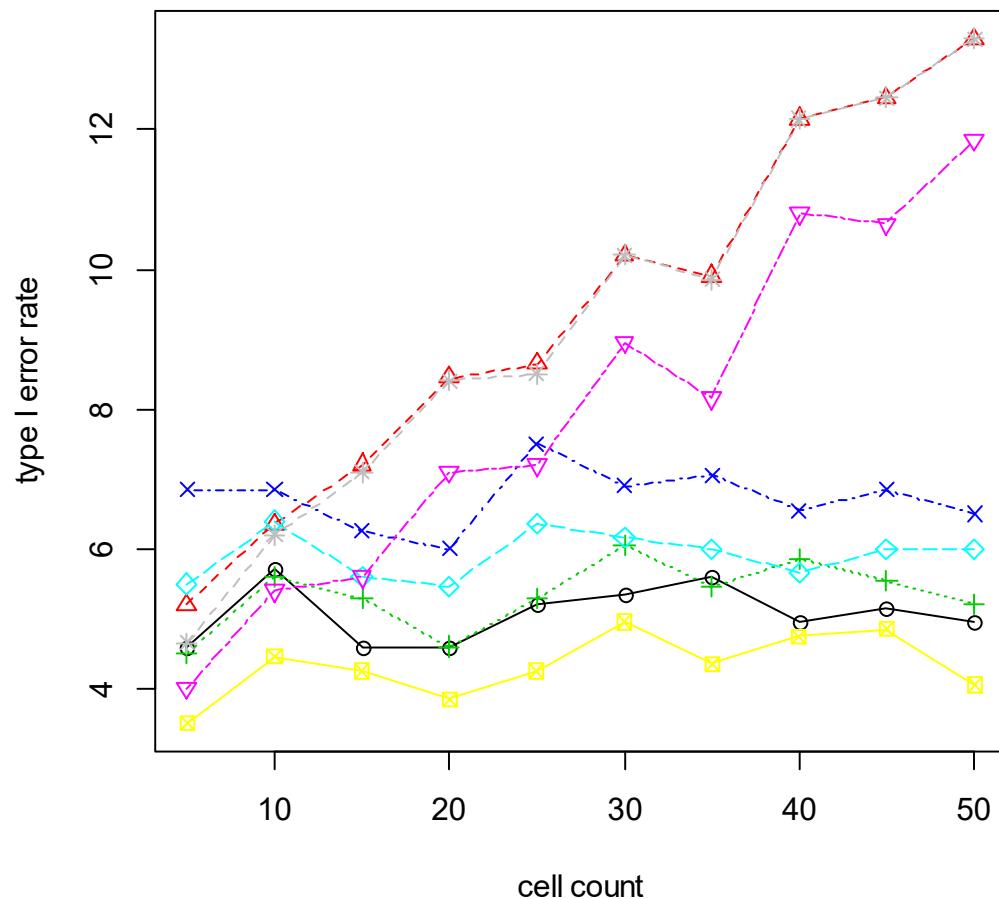
2. 5. 3   normal distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.00	5.75	4.75	4.45	5.65	5.05	5.10	5.05	5.40	4.85
RT	5.20	6.30	7.20	8.30	8.40	10.45	10.15	12.35	12.30	13.70
INT	4.65	5.80	5.35	4.95	5.20	5.75	5.10	5.65	5.80	5.05
ART	6.45	6.85	6.15	5.65	7.70	7.10	6.85	6.65	6.85	6.00
ART+INT	5.35	6.05	5.40	5.40	6.25	6.00	5.60	5.50	5.75	5.60
Puri & Sen	4.10	5.40	6.15	7.35	7.50	9.15	8.70	11.10	10.95	11.70
v.d.Waerden	3.50	4.70	4.35	3.90	4.40	4.90	4.20	4.60	4.55	4.40
ATS	4.95	6.20	7.15	8.25	8.40	10.40	10.10	12.35	12.25	13.70
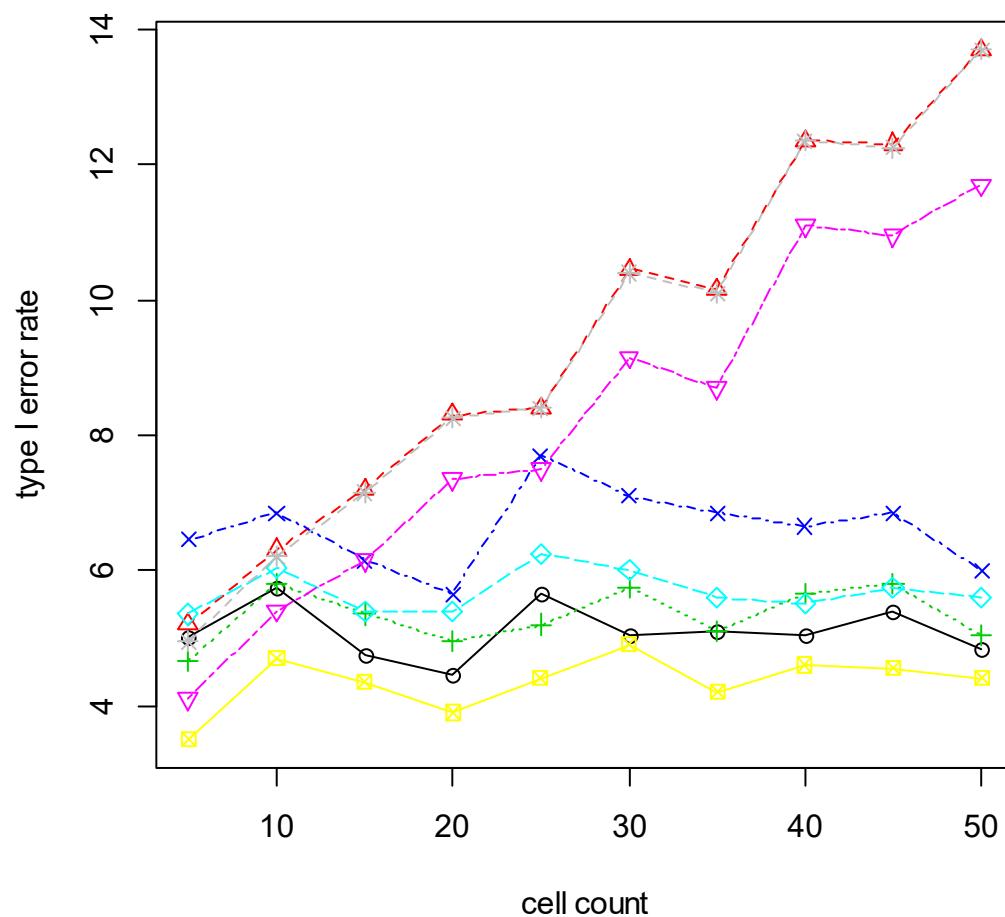
2. 5. 4　　right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.80	5.50	4.85	4.95	4.60	4.90	4.55	4.85	5.80	5.40
RT	4.85	5.75	5.55	4.65	4.40	4.75	4.50	4.80	6.00	5.05
INT	5.20	5.55	4.95	4.50	4.30	4.85	4.65	4.60	5.55	5.50
ART	5.25	5.45	5.60	4.85	4.90	5.00	4.80	4.35	6.05	5.45
ART+INT	4.90	5.20	4.95	4.40	4.05	4.75	4.40	4.20	5.40	5.05
Puri & Sen	4.20	4.55	4.35	3.60	3.35	3.85	3.35	3.65	4.55	4.25
v.d.Waerden	3.85	4.20	3.75	3.10	3.10	3.70	3.10	3.20	4.40	3.70
ATS	4.80	5.70	5.50	4.60	4.40	4.70	4.50	4.80	6.00	5.05
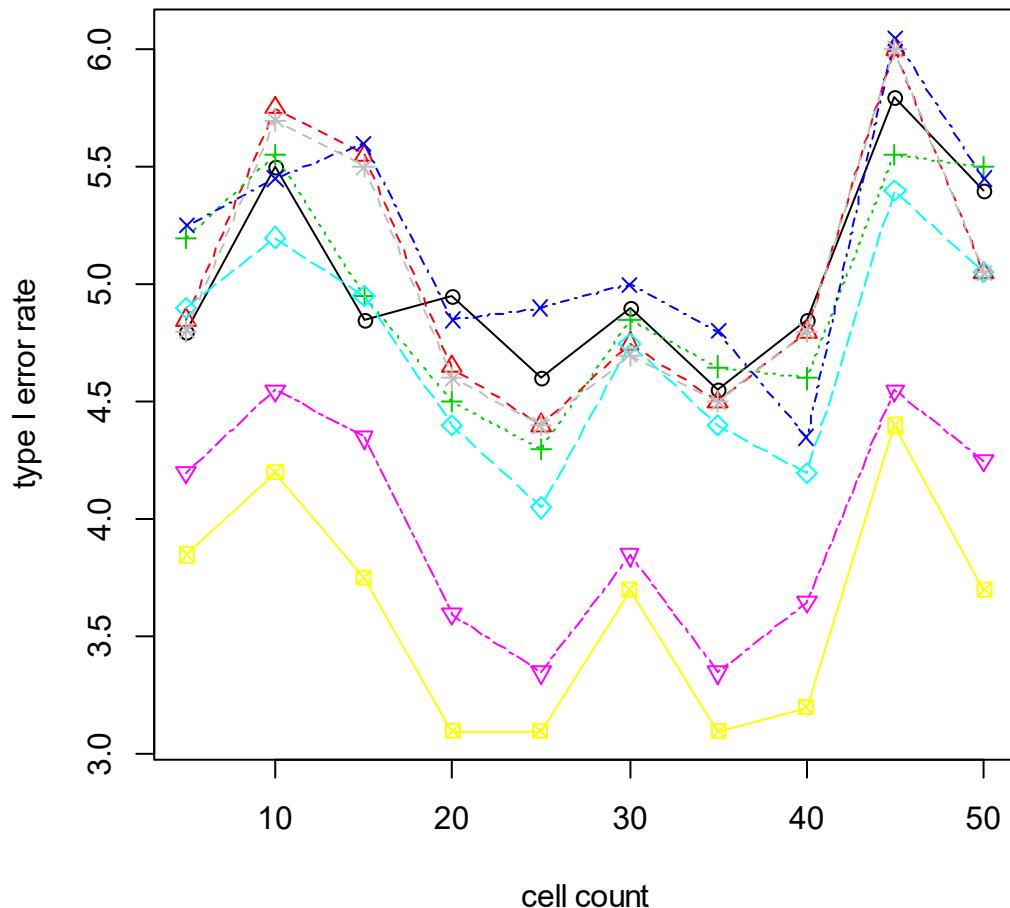
2. 5. 5   exponential distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.60	4.20	5.30	5.55	5.55	5.20	4.25	6.00	5.60	4.75
RT	4.45	4.85	5.85	5.45	5.35	5.50	4.75	5.15	5.25	4.80
INT	4.10	4.90	5.30	5.40	5.60	5.60	4.50	5.35	5.20	4.85
ART	7.75	7.45	8.95	8.70	9.00	8.65	8.10	8.85	8.60	8.30
ART+INT	5.30	4.70	5.85	5.40	4.95	4.45	4.20	5.45	4.10	4.45
Puri & Sen	3.15	4.15	4.70	4.40	4.75	4.80	4.05	4.40	4.30	4.30
v.d.Waerden	3.10	4.10	4.65	4.70	4.90	4.50	3.90	4.65	4.45	4.00
ATS	4.15	4.85	5.85	5.45	5.35	5.50	4.75	5.15	5.25	4.80
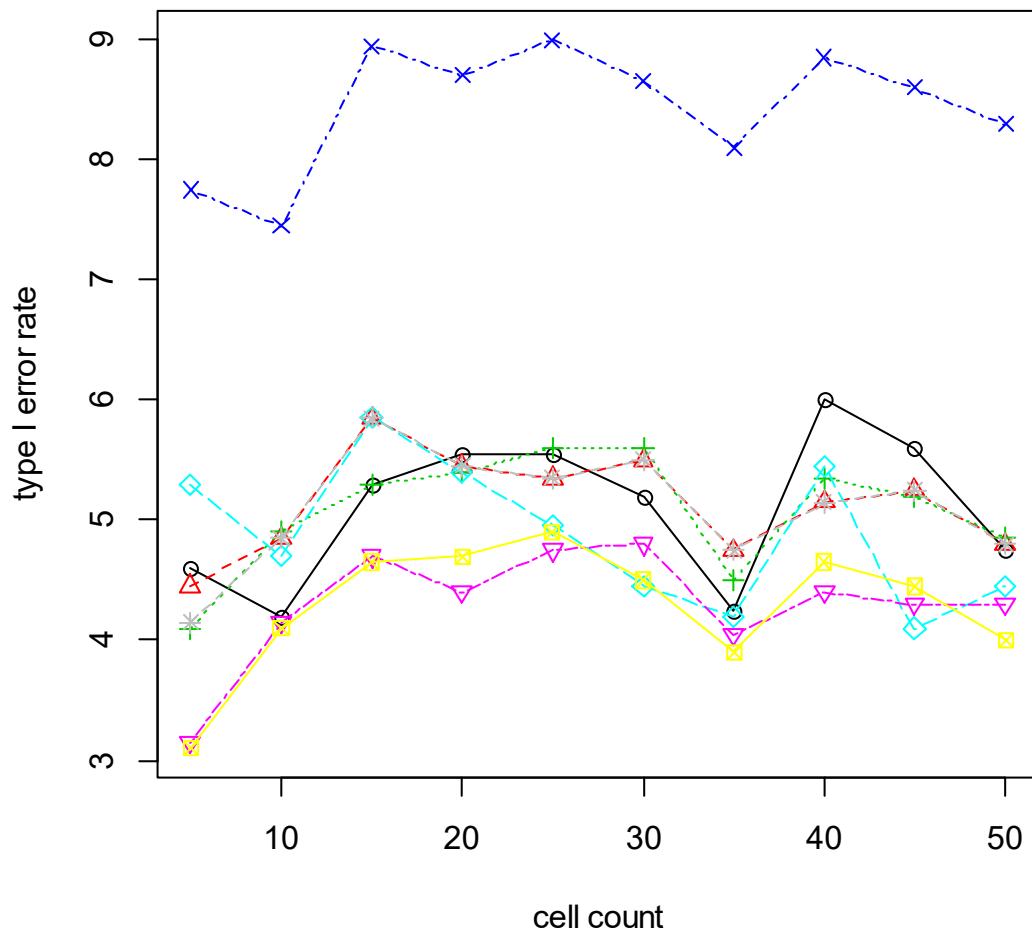
2. 5. 6   exponential distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.55	4.20	5.00	5.60	5.35	4.75	3.90	6.25	5.65	4.55
RT	4.00	5.15	5.50	5.05	5.75	5.25	4.40	5.00	5.25	4.90
INT	4.35	4.85	5.50	5.60	5.35	5.10	4.30	5.00	5.40	4.95
ART	7.70	8.05	9.95	10.90	11.05	11.00	11.30	13.15	13.65	15.20
ART+INT	5.10	5.15	6.40	6.75	5.90	6.30	6.55	7.75	7.20	8.45
Puri & Sen	3.30	4.15	4.65	4.65	4.85	4.40	3.60	4.25	4.50	4.20
v.d.Waerden	3.15	4.00	4.50	4.60	4.40	4.30	3.35	4.30	4.40	4.15
ATS	3.75	5.10	5.45	5.00	5.75	5.25	4.40	5.00	5.25	4.90
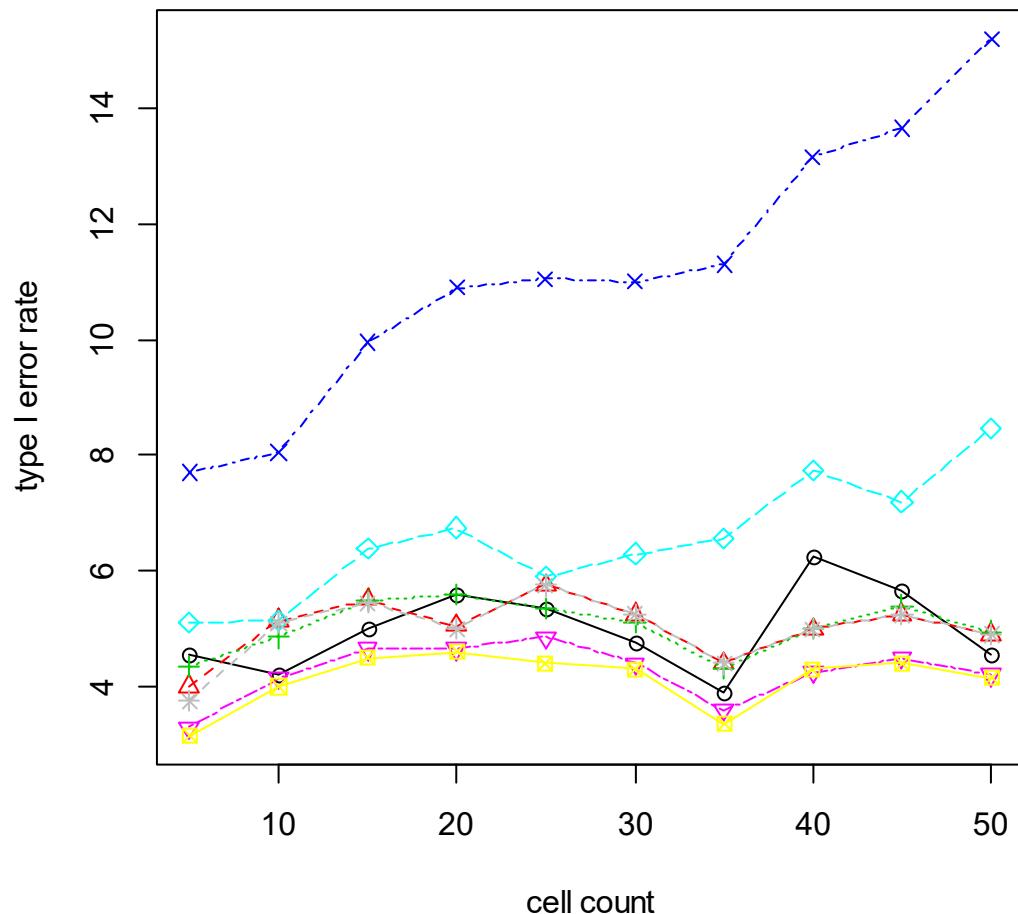
2. 5. 7   lognormal distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.75	5.55	5.30	4.25	4.90	4.35	4.60	4.60	5.05	4.75
RT	6.35	5.05	5.25	4.50	4.95	4.40	4.95	4.80	5.40	5.40
INT	5.90	5.20	5.40	4.15	5.00	4.40	4.95	4.95	5.10	5.30
ART	5.90	5.30	5.30	4.45	5.10	4.40	4.90	4.70	5.10	5.50
ART+INT	5.55	5.00	5.60	4.10	5.20	4.70	4.85	4.65	5.00	5.30
Puri & Sen	5.05	4.25	4.05	3.40	3.85	3.70	4.10	3.75	4.25	4.25
v.d.Waerden	4.85	4.25	4.35	3.25	3.70	3.70	3.80	3.60	4.20	4.15
ATS	6.05	5.05	5.25	4.50	4.95	4.40	4.95	4.80	5.40	5.40
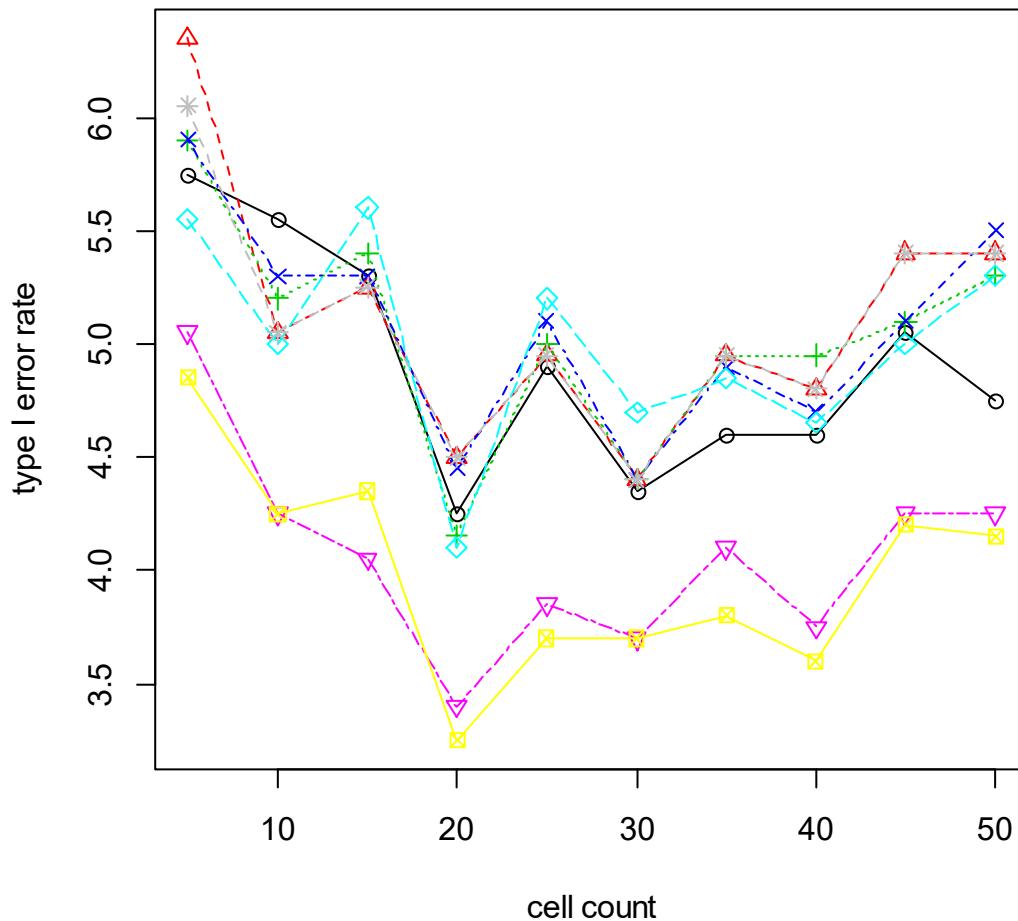
2. 5. 8   uniform distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.45	5.70	5.35	4.55	4.75	4.80	4.30	4.15	5.95	4.95
RT	5.05	5.85	5.20	4.45	4.80	5.25	4.40	4.15	5.50	5.25
INT	4.90	5.75	4.90	5.10	4.60	4.90	4.20	4.30	5.60	5.20
ART	5.05	5.40	5.40	4.75	4.65	5.05	4.40	4.20	5.75	5.15
ART+INT	5.20	5.50	4.95	4.70	4.45	4.75	4.45	4.55	5.70	5.05
Puri & Sen	3.95	4.45	4.45	4.10	3.85	4.35	3.75	3.70	4.40	4.30
v.d.Waerden	3.95	4.40	3.80	3.80	3.75	3.80	3.30	3.65	4.55	4.15
ATS	4.85	5.80	5.20	4.45	4.80	5.25	4.40	4.15	5.50	5.25
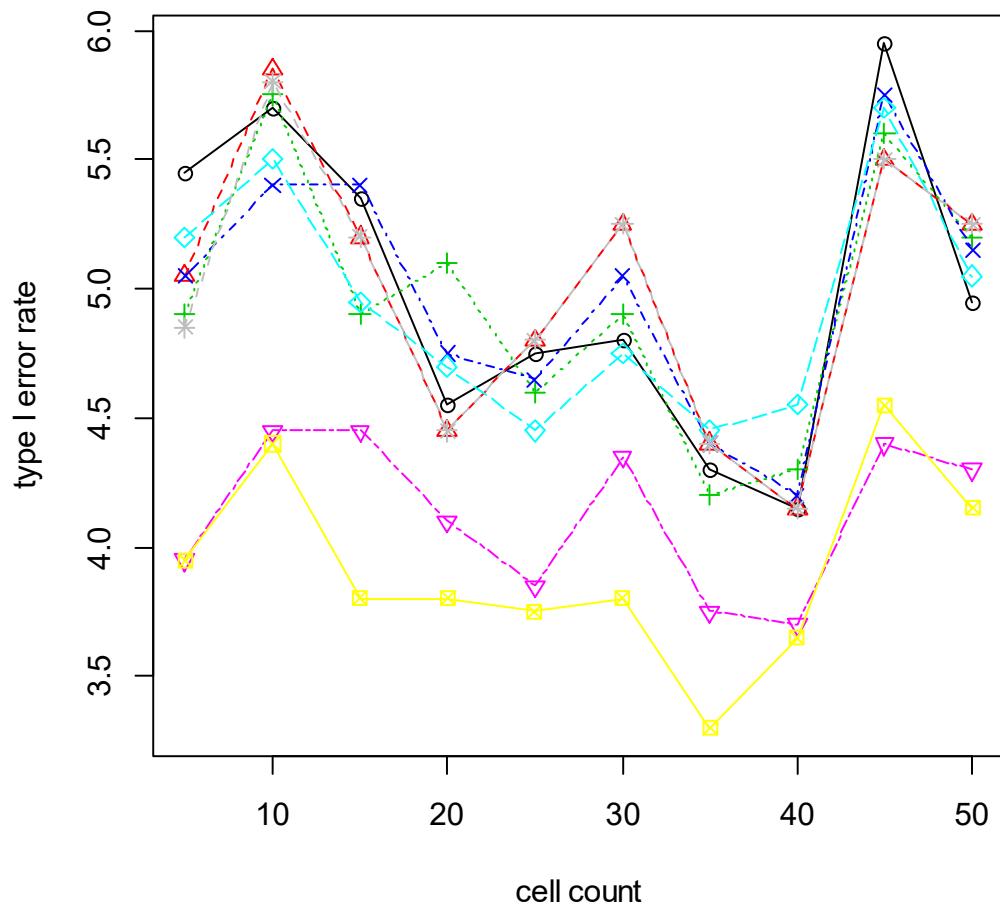
2. 5. 9   uniform distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.25	6.10	5.05	4.60	4.50	4.80	4.95	4.35	5.60	5.05
RT	4.95	6.60	4.95	4.40	4.55	4.90	4.55	4.35	5.65	5.10
INT	4.85	5.90	4.85	5.05	4.55	4.90	4.75	4.50	5.70	5.15
ART	5.50	6.80	5.95	5.55	5.70	6.10	7.10	6.85	7.00	7.25
ART+INT	5.30	6.70	5.85	6.20	5.70	6.85	7.30	7.05	8.05	8.05
Puri & Sen	4.30	5.00	4.40	4.10	4.20	4.20	3.65	3.90	4.60	4.50
v.d.Waerden	4.00	4.95	4.05	3.55	3.50	3.90	3.65	3.50	4.65	4.10
ATS	4.70	6.50	4.95	4.40	4.55	4.90	4.55	4.35	5.65	5.10
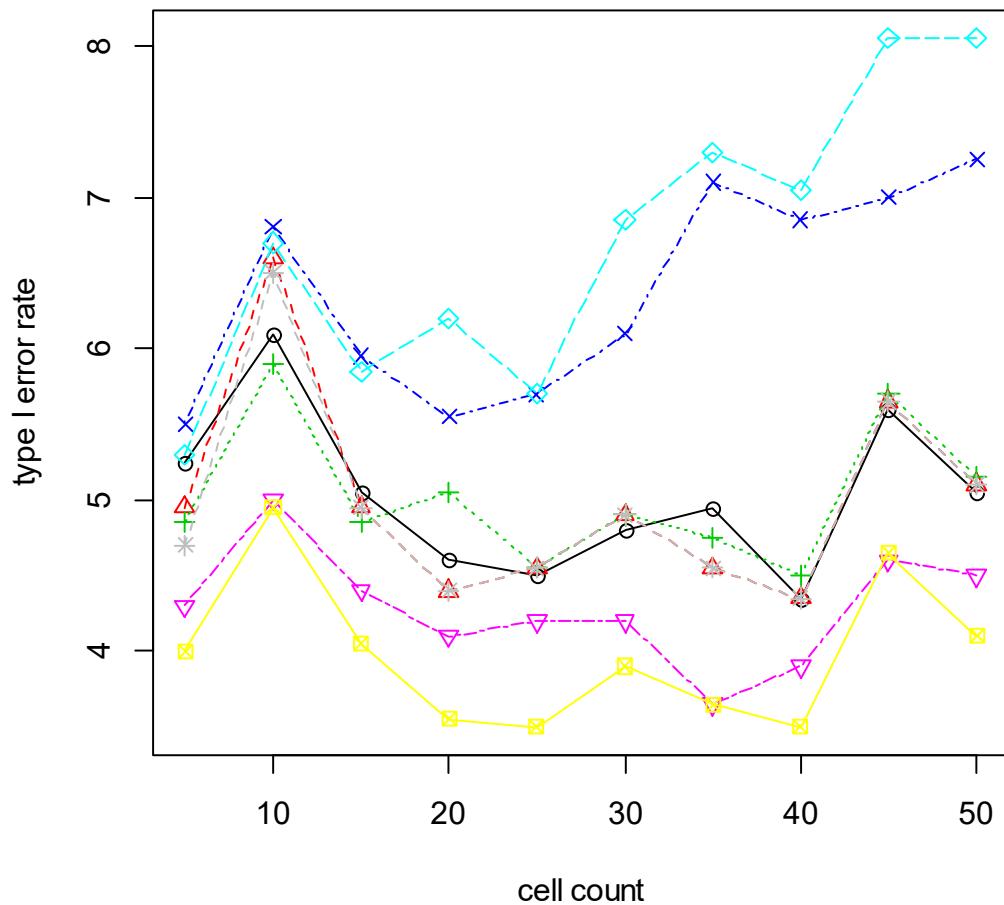
2. 5. 10 left/right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.65	4.35	4.90	4.75	4.65	4.60	4.70	4.05	5.10	4.35
RT	5.25	4.50	5.10	4.70	4.85	4.80	4.60	4.00	5.40	4.25
INT	5.15	4.50	4.75	4.85	4.55	4.25	4.25	4.05	4.85	3.95
ART	5.35	4.30	5.05	5.00	4.75	4.80	4.65	4.30	5.15	4.35
ART+INT	5.20	4.45	4.90	4.95	4.65	4.45	4.65	4.35	5.40	4.35
Puri & Sen	4.50	3.45	4.15	4.05	3.95	3.85	4.10	3.40	4.25	3.55
v.d.Waerden	4.35	3.45	3.70	3.85	3.15	3.10	3.40	3.15	3.75	3.00
ATS	5.05	4.45	5.05	4.70	4.85	4.80	4.60	4.00	5.40	4.25
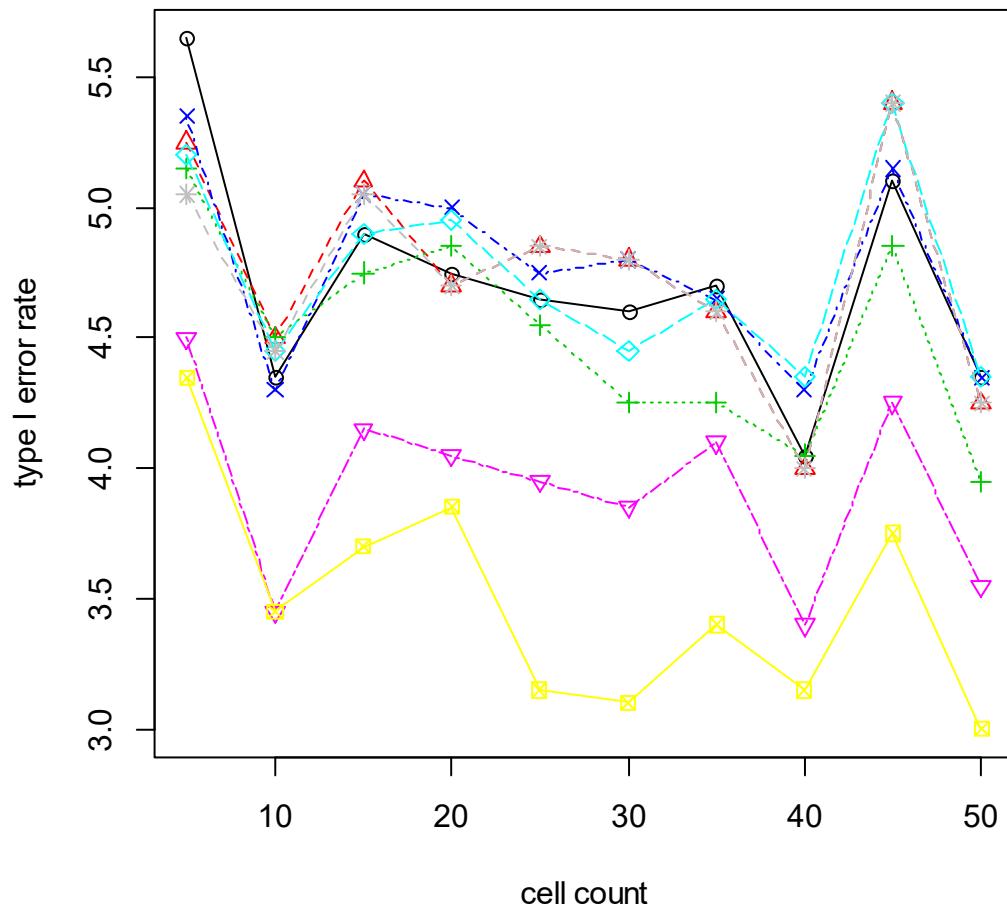
2. 5. 11   left skewed distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.65	5.65	5.75	4.95	4.95	4.75	4.65	4.70	5.65	4.90
RT	5.90	6.40	6.55	7.65	9.00	8.70	10.60	10.50	11.85	11.95
INT	5.20	5.70	5.75	4.55	4.95	4.70	4.50	4.55	5.35	5.25
ART	7.15	7.55	7.60	6.70	7.30	7.00	6.95	6.90	7.75	7.80
ART+INT	5.90	6.00	5.75	4.95	4.85	4.85	4.15	4.40	5.10	4.65
Puri & Sen	4.85	5.30	5.85	6.35	7.85	7.60	9.50	9.20	10.90	10.55
v.d.Waerden	4.20	4.55	4.50	3.70	3.55	3.60	2.95	3.60	4.25	4.00
ATS	5.60	6.40	6.45	7.55	8.95	8.55	10.60	10.45	11.85	11.95
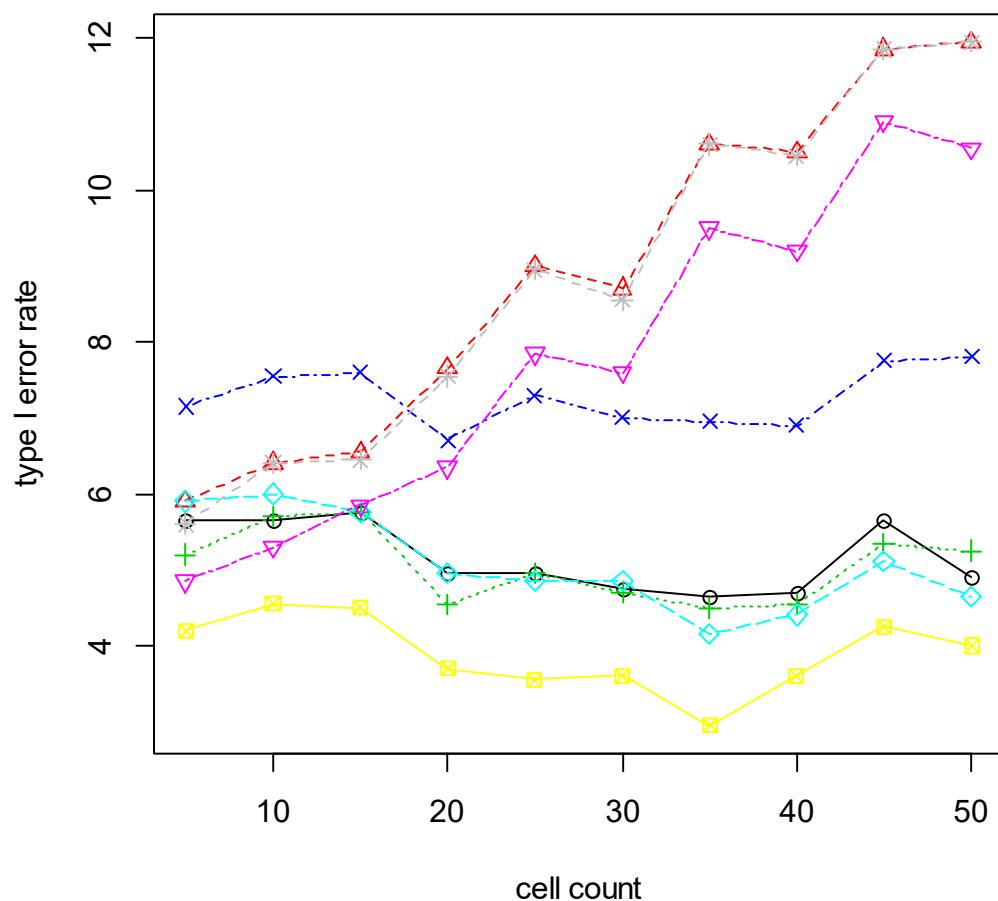
2. 5. 12   left skewed distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.70	5.45	5.25	5.35	4.90	4.75	4.50	4.75	5.30	5.15
RT	5.90	6.25	6.45	6.85	8.00	8.05	9.65	9.75	11.35	10.80
INT	5.05	5.15	4.70	4.70	4.25	4.40	4.10	4.45	4.40	4.45
ART	6.85	7.75	7.55	7.00	7.25	7.85	6.70	7.65	7.55	8.35
ART+INT	5.60	5.95	5.75	5.45	5.35	5.55	5.05	5.35	5.95	6.20
Puri & Sen	4.70	5.35	5.70	6.20	7.05	6.90	8.70	8.40	10.05	9.80
v.d.Waerden	3.90	3.95	3.55	3.55	3.40	3.40	3.10	3.40	3.85	3.25
ATS	5.55	6.10	6.35	6.85	7.90	8.00	9.65	9.70	11.35	10.65
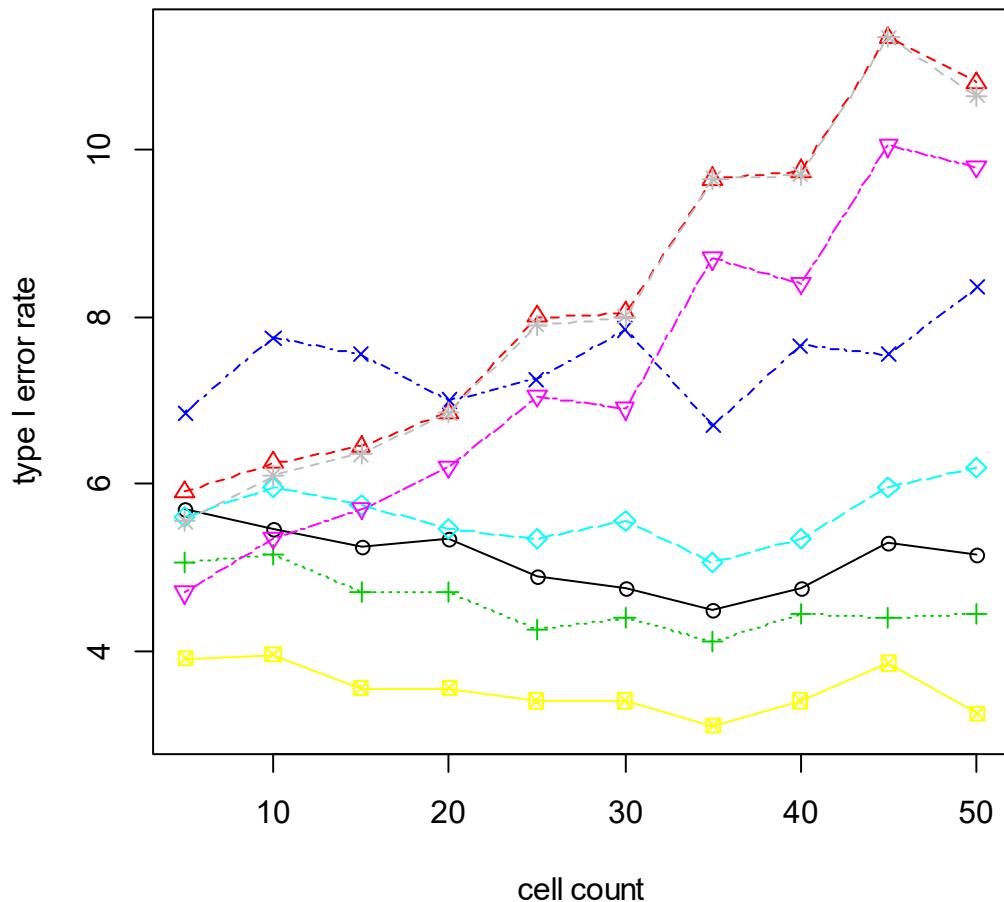
2. 6.   Main effect A - Interaction significant (effects ab$_{ij}$ = 0.6*s / unequal n$_i$ / # levels = 4*5)

2. 6. 1   normal distribution - equal variances

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.70	4.90	4.95	5.05	4.30	4.50	4.65	4.85	4.60	5.10
RT	4.50	5.40	5.10	5.40	4.70	4.65	5.45	4.80	4.85	5.05
INT	4.55	4.85	4.85	5.35	4.45	4.20	4.60	4.70	4.55	5.05
ART	3.35	4.05	4.10	4.85	4.80	4.90	5.85	6.70	8.05	8.45
ART+INT	3.15	3.40	3.90	4.55	4.65	4.35	6.10	7.00	7.60	8.55
Puri & Sen	3.55	4.15	4.00	3.75	3.95	3.60	4.05	3.40	3.30	3.90
v.d.Waerden	3.70	3.80	3.85	3.60	3.35	2.80	3.95	3.65	3.65	3.90
ATS	4.25	5.15	4.85	5.10	4.65	4.35	5.25	4.70	4.60	5.05
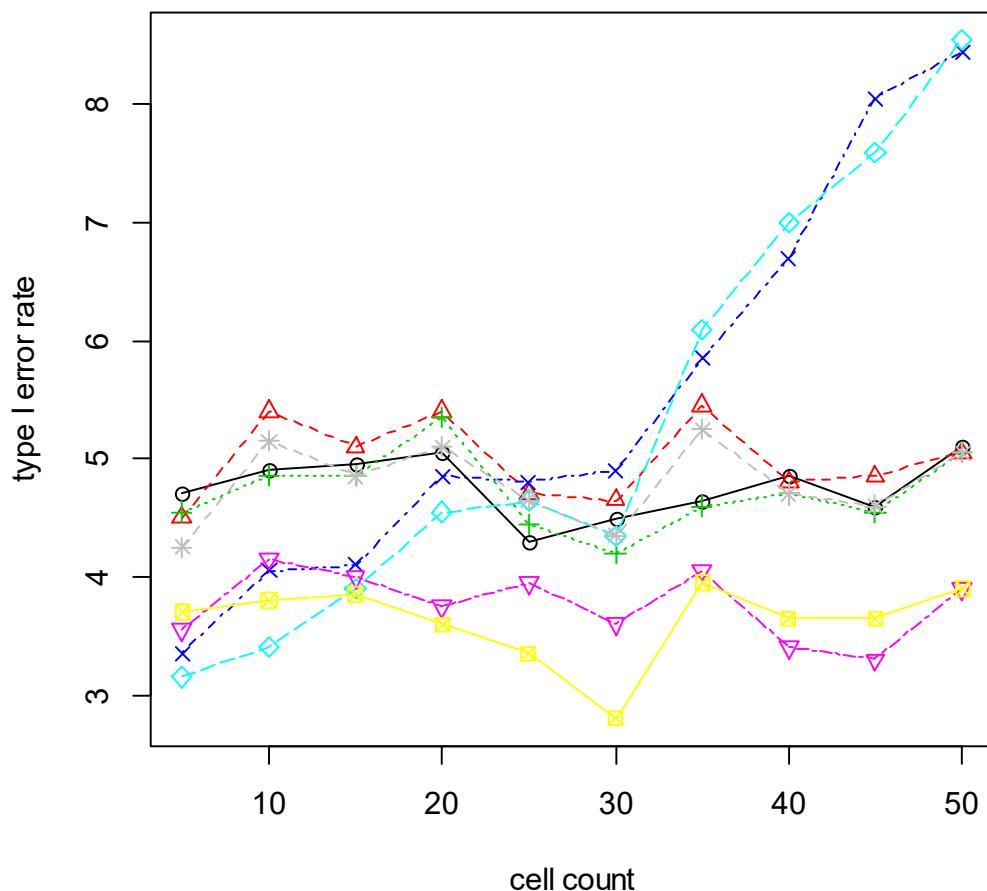
2. 6. 2   normal distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	3.25	3.55	3.50	3.45	2.90	2.80	3.05	3.50	3.60	3.50
RT	4.40	5.25	5.40	5.95	6.40	6.70	7.75	8.30	8.75	10.55
INT	3.60	3.50	3.70	4.00	3.30	3.40	3.65	3.40	4.15	3.90
ART	5.35	6.60	7.35	8.05	8.15	9.30	10.10	11.05	12.00	13.70
ART+INT	3.55	4.65	5.00	5.95	6.00	6.90	7.40	8.20	9.50	10.65
Puri & Sen	3.45	3.80	4.20	4.15	5.10	4.85	5.80	6.70	7.25	8.55
v.d.Waerden	3.15	2.75	2.80	2.30	2.25	2.50	3.00	2.75	3.20	2.90
ATS	4.30	5.50	5.90	6.15	7.25	6.95	8.30	8.95	9.70	10.90
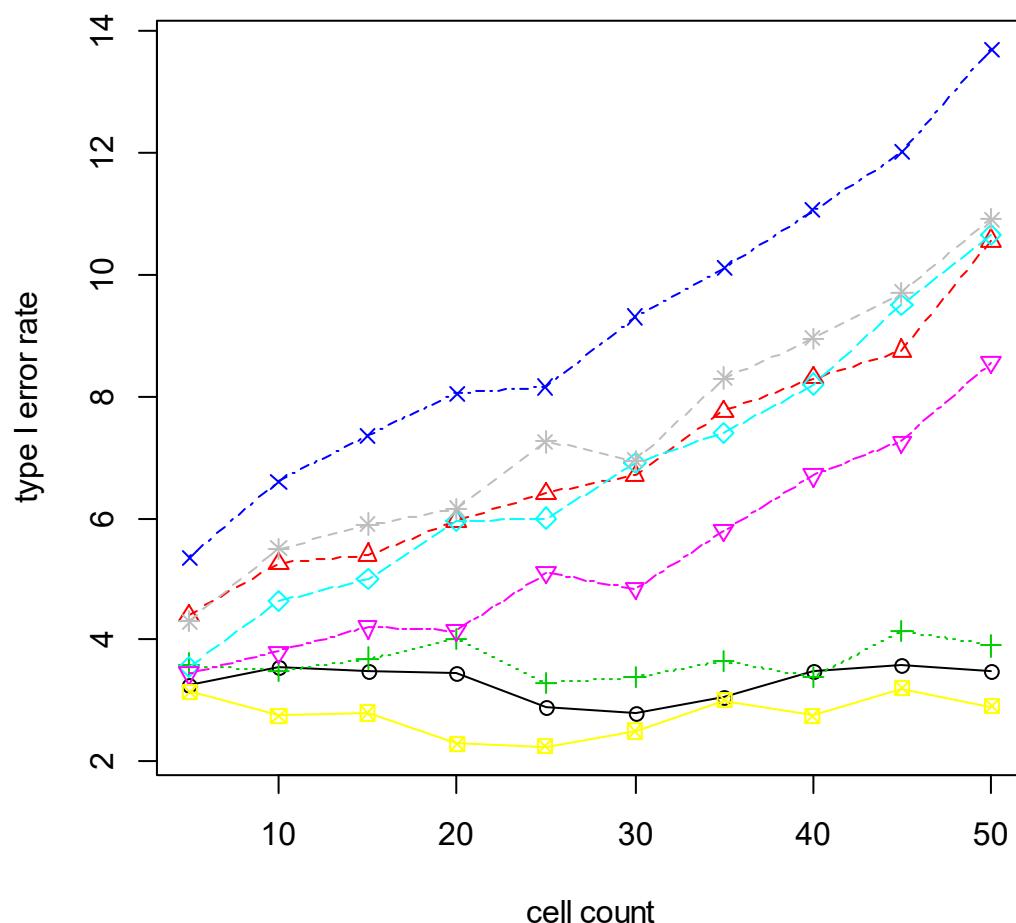
2. 6. 3   normal distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.35	6.20	6.40	6.30	5.45	6.25	6.35	6.40	7.15	6.80
RT	5.15	5.80	5.95	6.25	6.60	6.65	6.95	6.65	8.10	8.50
INT	5.20	5.30	5.75	5.35	5.15	5.55	5.15	5.60	6.55	6.60
ART	4.15	4.65	5.15	5.75	6.00	6.75	7.85	8.80	9.30	10.70
Puri & Sen	3.60	3.85	4.40	4.95	5.05	5.95	6.60	7.70	8.60	9.90
v.d.Waerden	4.00	4.60	3.90	4.75	4.85	4.75	5.95	5.65	5.70	6.65
ATS	3.85	4.05	4.45	4.25	3.65	4.60	4.45	4.10	4.90	5.30
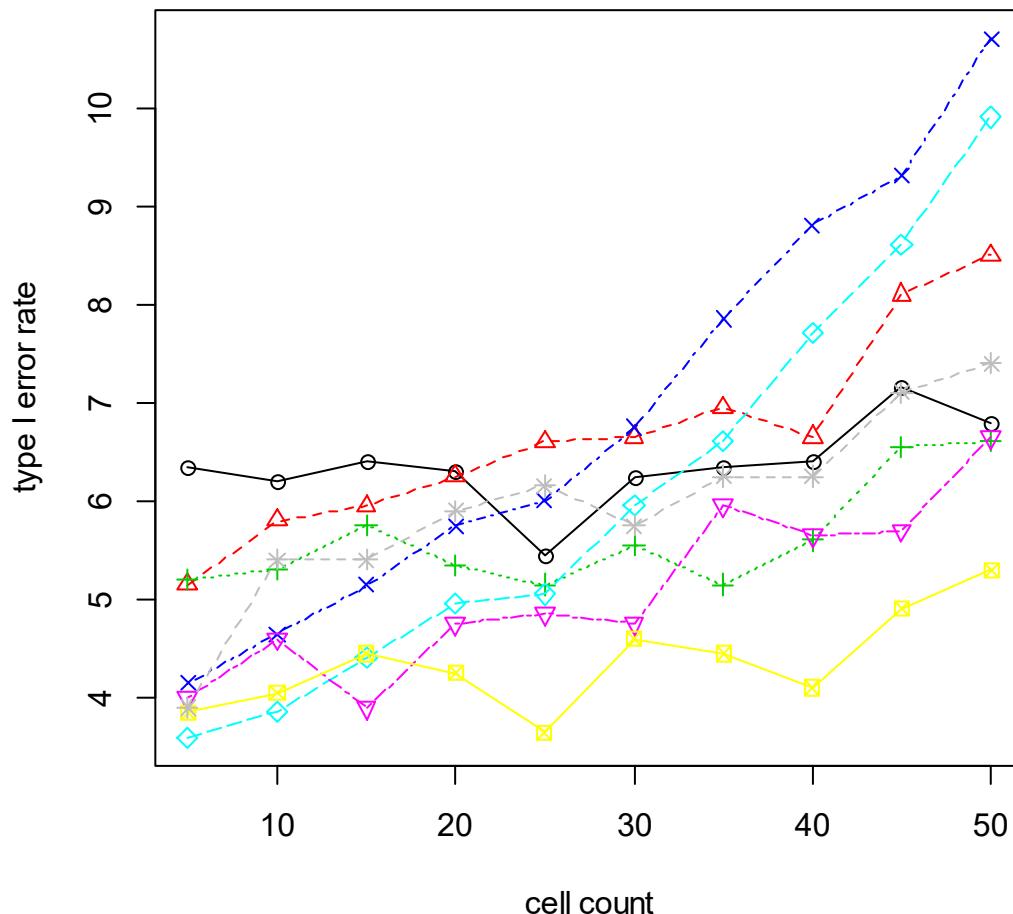
2. 6. 4   right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.35	5.15	5.15	4.85	4.95	4.60	4.95	5.55	4.65	4.85
RT	4.10	4.20	4.50	4.20	4.30	4.70	4.20	4.90	3.75	4.35
INT	3.85	3.85	4.05	3.40	3.85	3.80	3.70	3.95	3.50	3.95
ART	3.25	4.10	4.60	5.65	7.10	7.70	8.35	11.35	11.35	11.70
ART+INT	2.65	3.90	4.90	6.45	8.40	10.55	12.60	15.20	17.20	19.25
Puri & Sen	2.60	2.70	2.85	2.85	2.95	3.35	2.65	3.10	2.70	2.80
v.d.Waerden	2.40	2.55	2.75	2.45	2.55	2.60	2.35	2.20	2.50	2.15
ATS	4.15	4.60	5.10	4.45	4.85	5.65	4.85	5.85	4.55	4.80
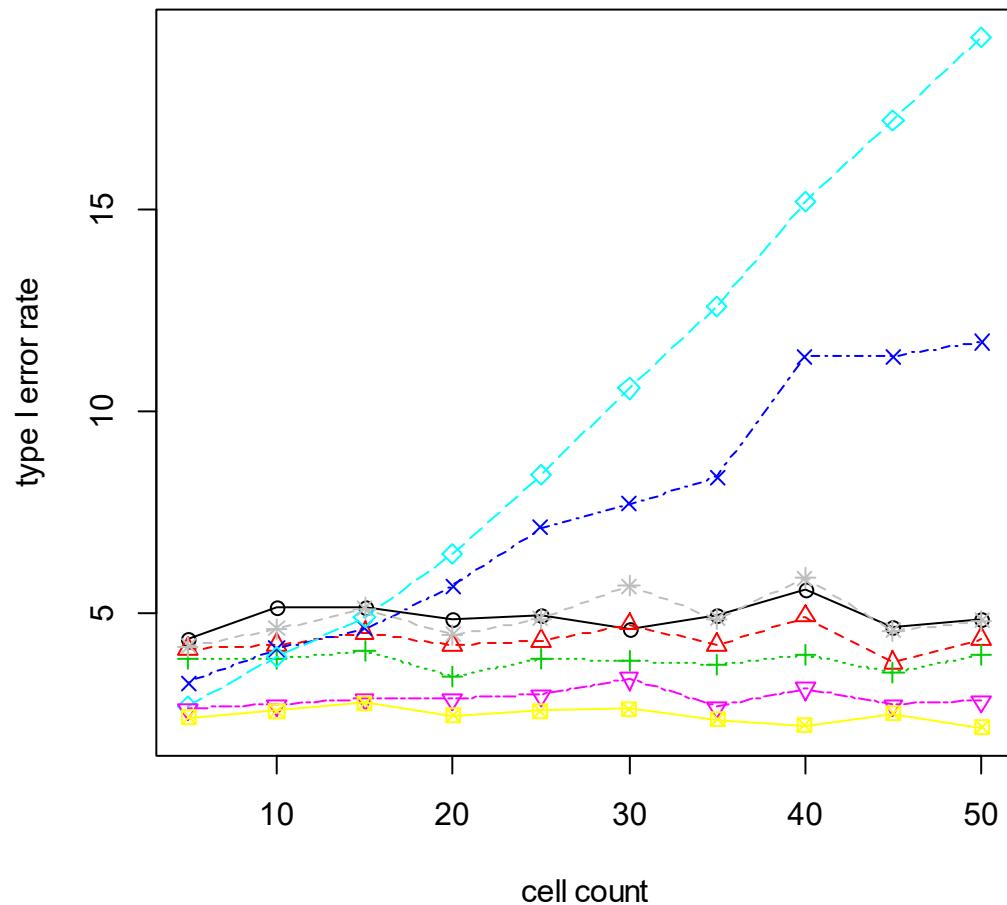
2. 6. 5 exponential distribution- continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	8.30	7.35	7.3	7.30	6.60	7.25	7.10	6.95	7.15	7.30
RT	5.50	5.95	5.5	5.40	5.05	5.60	4.70	6.30	5.35	5.45
INT	6.25	6.20	5.8	5.60	5.35	6.00	4.85	6.25	5.25	5.45
ART	8.45	8.70	10.7	11.60	13.00	16.05	16.65	19.15	20.95	23.10
ART+INT	4.55	4.15	6.5	6.95	7.60	10.35	11.65	14.05	15.60	19.30
Puri & Sen	3.70	4.60	4.4	4.30	3.95	4.60	3.85	5.50	4.40	4.75
v.d.Waerden	4.75	4.65	4.6	4.60	4.35	4.45	4.05	5.05	4.10	4.35
ATS	4.30	5.00	5.5	5.15	4.90	4.75	4.45	5.85	4.80	4.35
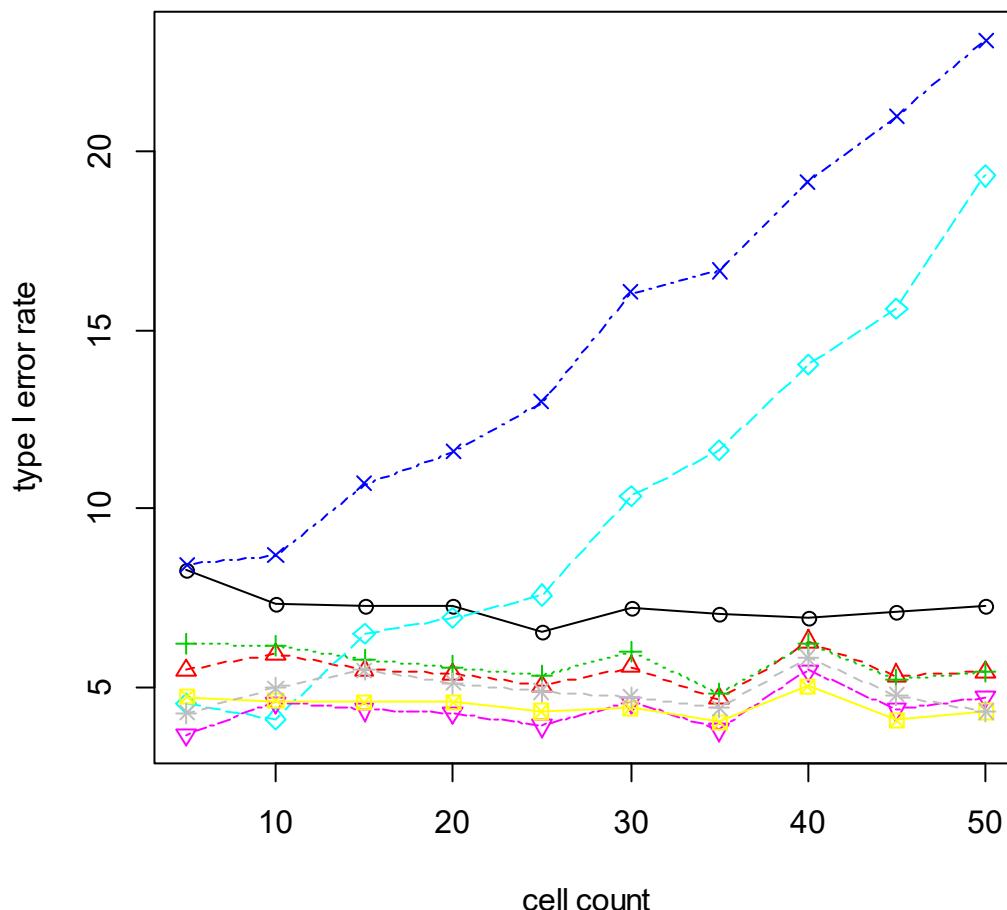
2. 6. 6   exponential distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	8.20	7.35	7.05	7.15	6.70	6.85	7.25	6.95	7.25	7.00
RT	6.05	5.70	5.70	5.15	5.05	5.80	5.20	6.15	5.05	5.35
INT	6.50	6.45	5.90	6.10	5.10	6.25	5.85	6.30	5.40	5.75
ART	9.10	9.10	12.55	14.00	15.05	20.00	22.00	25.30	27.70	31.75
ART+INT	4.60	5.00	7.15	8.15	8.95	12.75	15.70	18.15	20.70	25.25
Puri & Sen	4.40	4.75	4.25	4.10	3.80	4.40	3.85	4.60	4.10	4.20
v.d.Waerden	4.90	4.70	4.55	4.65	4.10	4.55	4.55	5.05	4.05	4.70
ATS	4.45	4.90	4.60	4.60	4.45	4.70	4.55	5.90	4.50	4.60
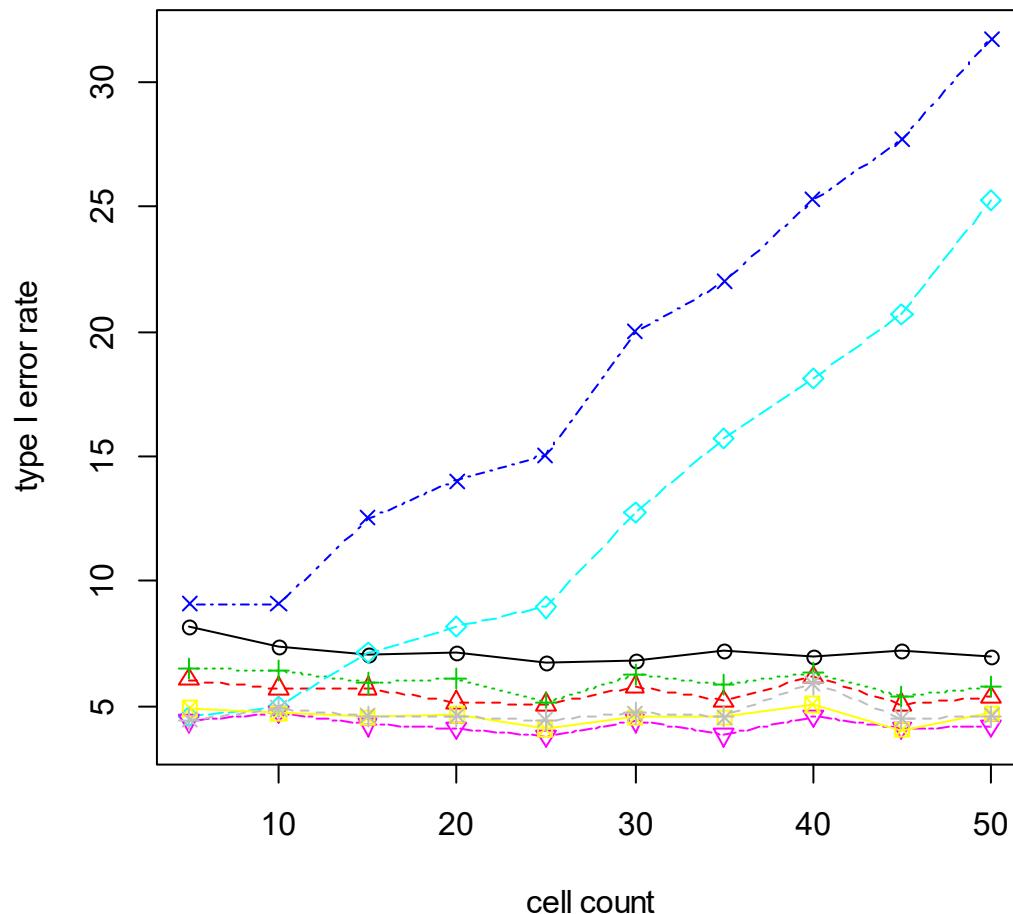
2. 6. 7   lognormal distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.50	5.05	4.00	3.90	4.50	4.60	5.20	4.95	5.55	5.15
RT	4.45	4.80	4.30	4.35	4.40	4.55	4.25	4.90	4.70	4.95
INT	4.30	4.25	3.70	3.55	3.85	4.30	4.60	4.75	4.60	4.75
ART	3.90	4.15	5.00	4.60	5.75	6.15	7.25	8.95	8.75	11.20
ART+INT	3.45	4.00	4.00	4.70	5.40	6.05	7.30	9.00	8.80	10.95
Puri & Sen	3.50	3.60	3.25	3.00	3.10	3.15	3.00	4.00	3.80	3.70
v.d.Waerden	3.10	3.25	2.65	2.70	3.10	2.70	3.20	3.55	3.60	3.40
ATS	4.00	4.70	4.35	4.25	4.10	4.50	4.30	4.90	5.00	5.05
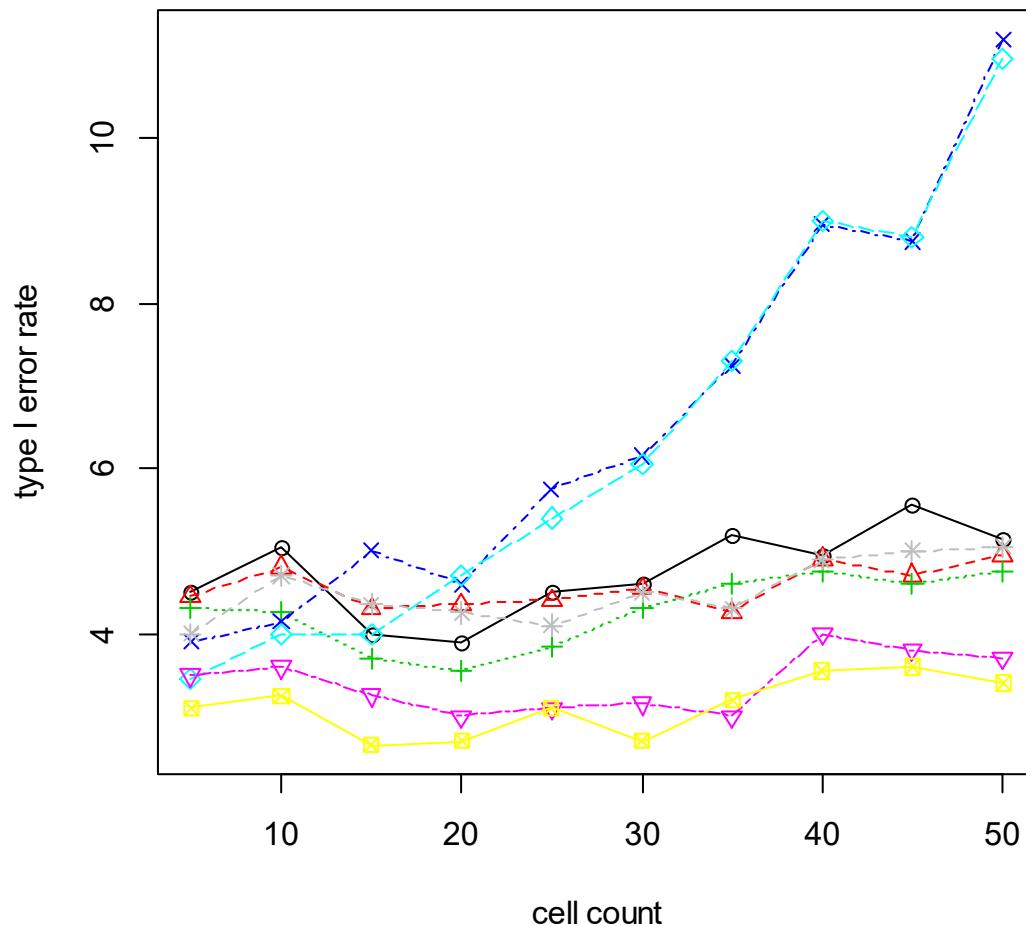
2. 6. 8   uniform distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.65	4.50	5.45	4.55	5.00	5.40	4.75	5.55	4.70	5.15
RT	4.80	4.70	5.50	4.60	5.15	5.60	4.90	5.60	4.75	4.90
INT	4.60	4.35	4.80	4.95	4.55	4.80	5.00	5.50	4.70	4.75
ART	3.45	3.20	3.95	4.45	4.80	5.70	5.60	8.05	8.10	8.65
ART+INT	3.30	3.90	4.80	5.55	6.95	8.25	9.75	12.55	14.50	15.85
Puri & Sen	3.55	3.50	4.10	3.70	3.95	4.85	3.35	4.15	3.70	3.65
v.d.Waerden	2.90	3.10	3.35	3.75	3.00	3.75	3.10	4.05	3.00	3.10
ATS	4.45	4.60	5.05	4.50	4.95	5.75	4.65	5.65	4.85	4.50
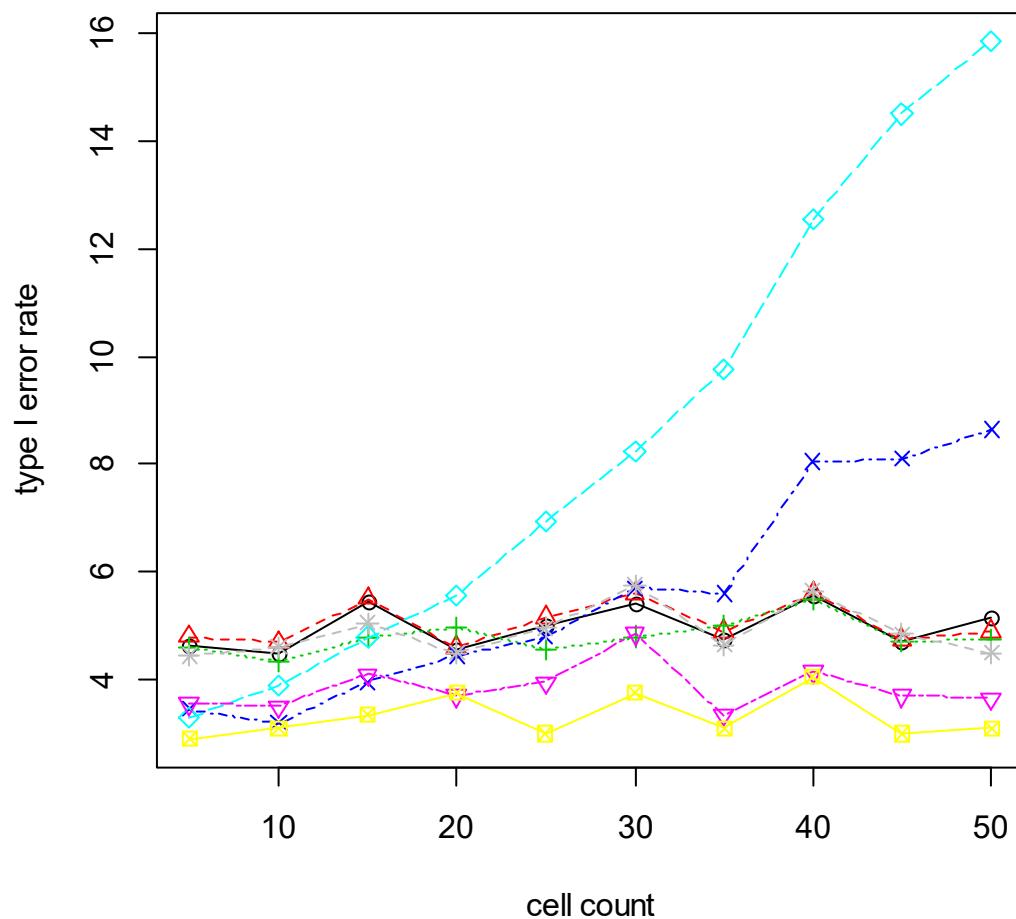
2. 6. 9   uniform distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.35	4.85	5.10	4.30	5.10	5.25	4.25	5.55	4.65	5.45
RT	4.75	4.90	5.50	4.75	5.45	5.55	4.35	5.30	4.65	5.60
INT	3.95	4.65	4.75	4.40	4.70	4.95	4.55	5.55	5.05	5.05
ART	3.35	3.80	4.00	4.90	5.95	7.65	8.35	12.25	12.90	14.35
ART+INT	3.35	3.75	5.15	6.00	7.55	10.25	12.05	16.95	18.55	22.10
Puri & Sen	2.85	3.85	3.90	3.90	4.55	4.55	3.75	4.30	3.95	4.50
v.d.Waerden	2.60	3.45	3.50	3.45	3.45	3.55	3.35	4.10	3.70	3.95
ATS	4.25	4.80	5.50	4.80	5.40	5.20	4.45	5.60	4.75	5.40
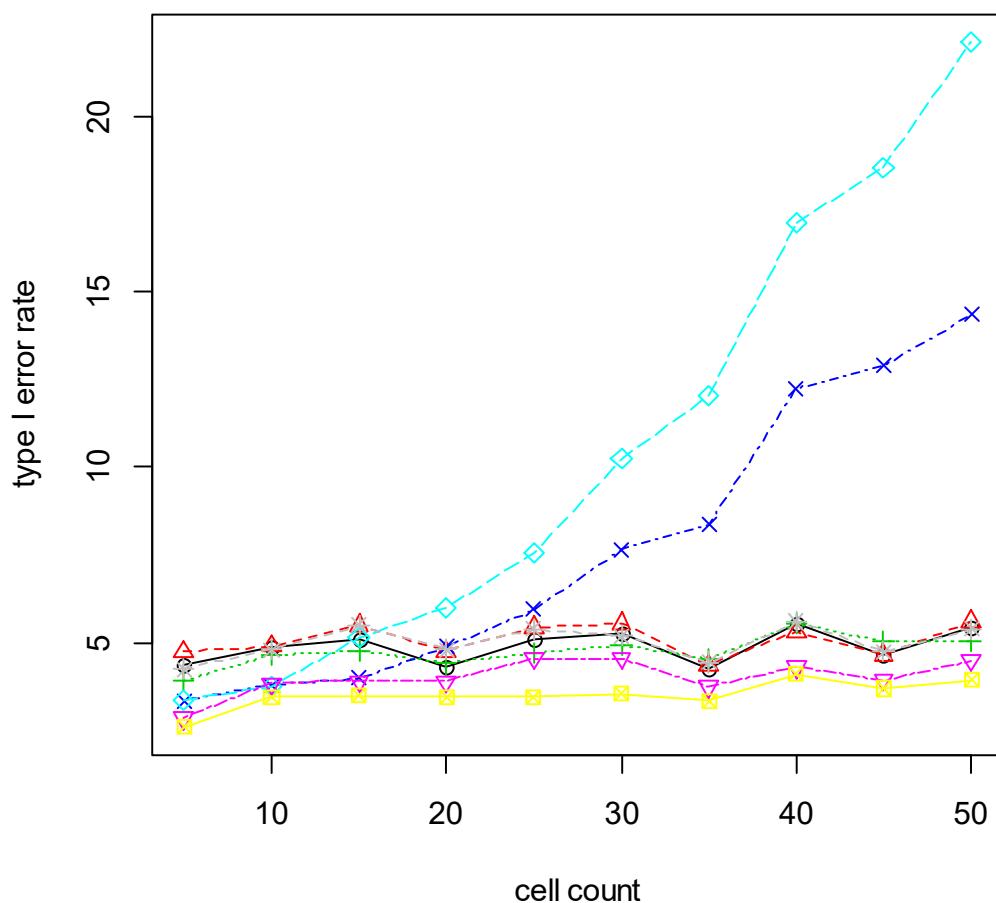
2. 6. 10   left/right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.95	4.95	5.60	5.10	4.45	4.70	4.40	4.90	3.85	4.00
RT	5.45	5.45	5.80	5.55	4.50	4.75	4.35	5.30	4.25	4.45
INT	4.80	4.95	5.05	4.65	4.35	4.55	3.65	4.75	3.50	4.00
ART	3.30	3.60	4.00	4.20	4.10	5.20	5.65	6.40	6.30	7.30
ART+INT	3.35	3.45	4.15	5.25	5.65	7.15	8.15	8.60	9.65	10.75
Puri & Sen	3.40	4.30	4.85	4.15	3.65	3.90	3.65	4.20	3.15	3.60
v.d.Waerden	3.05	3.80	4.30	3.25	3.15	3.20	2.55	3.35	2.50	3.20
ATS	4.35	5.25	5.70	5.50	4.55	4.85	4.15	4.70	4.20	4.25
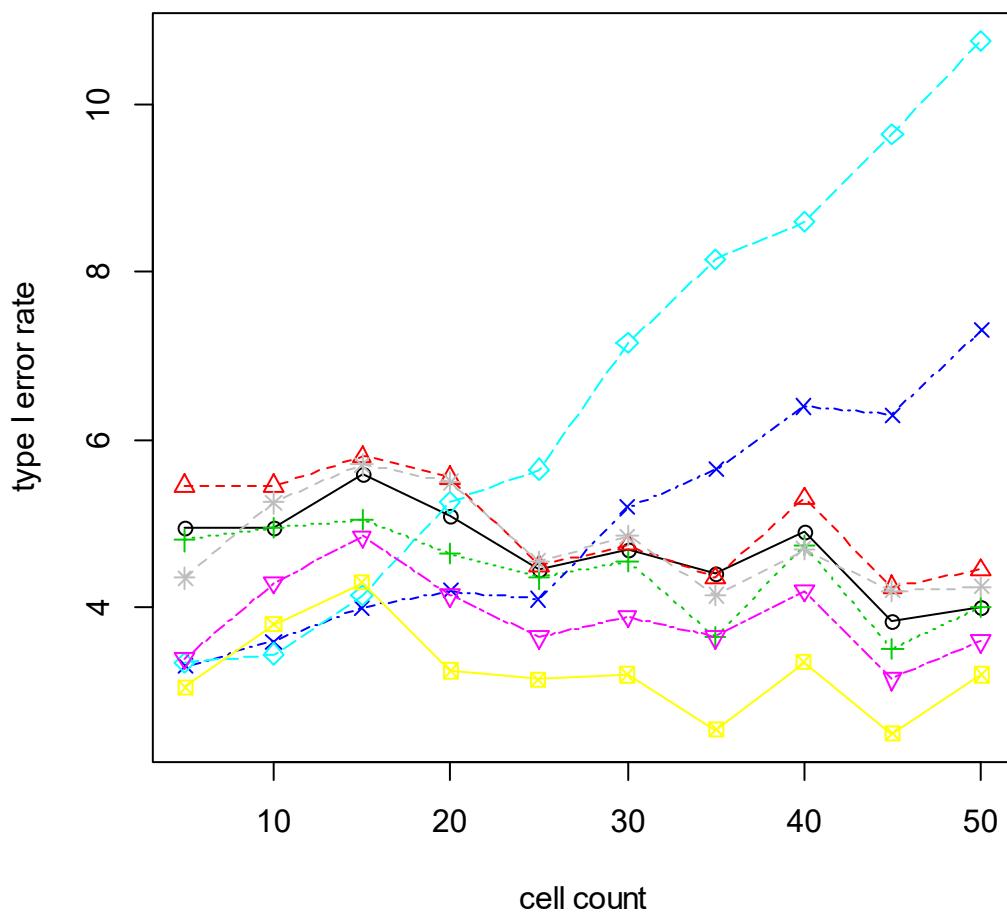
2. 6. 11   left skewed distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	3.60	3.85	4.05	3.40	3.30	4.00	3.35	3.80	3.90	3.05
RT	4.60	5.30	6.15	5.85	6.70	8.70	8.75	9.50	10.15	10.15
INT	3.55	3.95	4.00	3.40	3.30	3.85	3.50	3.35	3.60	2.85
ART	5.70	7.10	7.55	7.70	8.70	9.55	9.70	12.05	13.15	13.70
ART+INT	3.40	3.95	4.05	4.70	5.20	6.25	6.60	8.65	9.40	9.75
Puri & Sen	3.35	3.90	4.75	4.75	5.05	7.00	7.00	7.55	8.15	8.70
v.d.Waerden	2.90	2.65	2.65	2.00	2.20	2.95	2.25	2.50	2.75	1.90
ATS	3.60	5.65	6.00	6.05	6.70	9.10	9.40	10.00	10.85	10.35
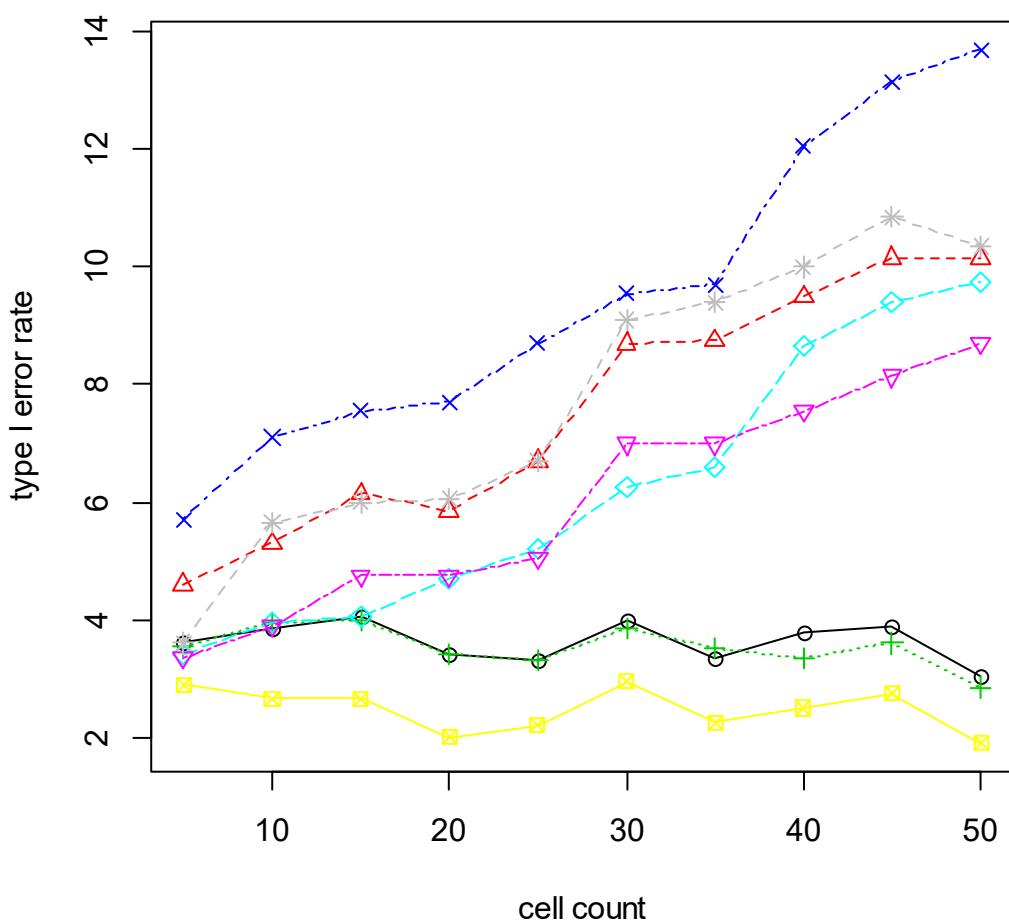
2. 6. 12   left skewed distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.90	6.55	6.45	6.25	6.30	6.60	6.50	6.20	6.35	6.15
RT	5.25	5.35	5.75	5.50	6.30	6.40	5.55	6.90	6.45	6.45
INT	5.85	5.90	5.85	5.55	5.80	6.20	5.70	5.25	5.40	5.45
ART	3.65	4.85	5.70	6.30	6.90	7.90	8.50	10.15	11.05	12.05
ART+INT	3.15	4.25	4.50	5.55	5.45	6.75	7.85	9.05	11.10	11.65
Puri & Sen	3.85	4.40	4.45	4.05	4.50	4.85	4.65	5.40	5.25	5.30
v.d.Waerden	4.10	4.30	4.75	4.10	4.30	4.60	4.25	3.75	4.75	3.95
ATS	3.50	4.60	5.20	4.70	4.75	5.85	4.95	6.15	5.65	5.65
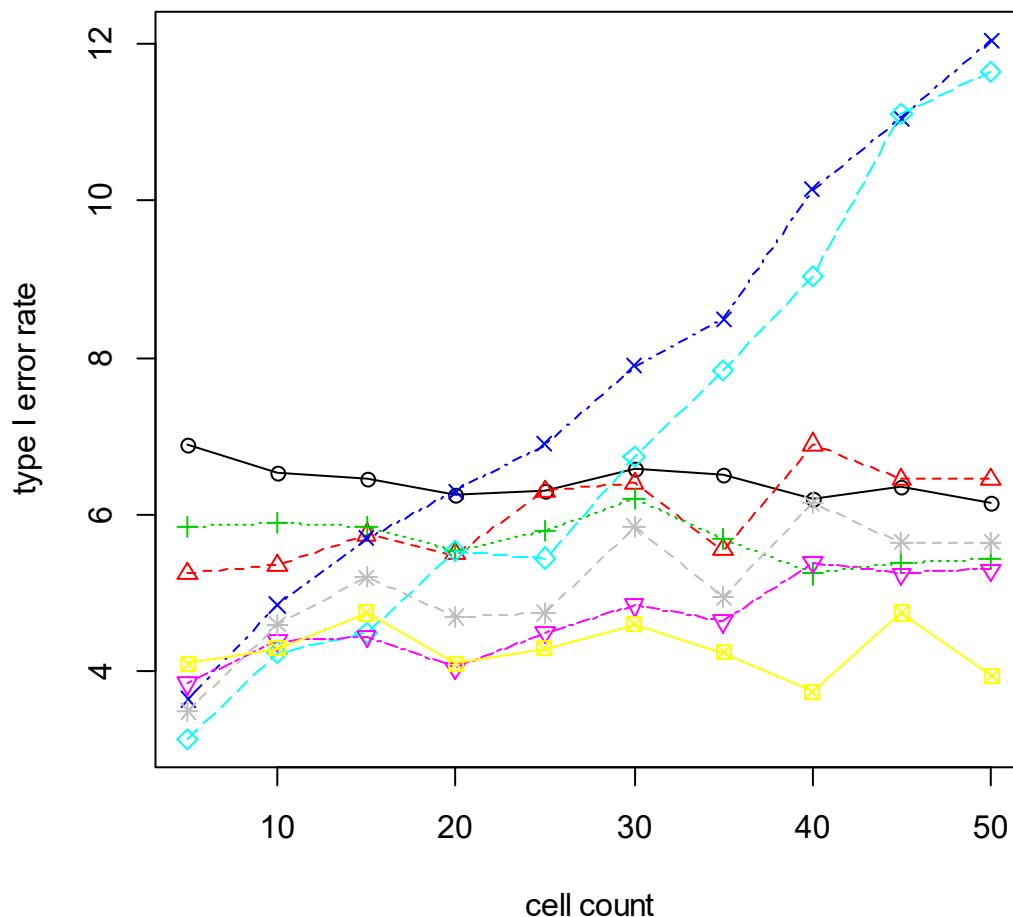
2. 6. 13   normal distribution - unequal variances (small n_i ~ small s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	1.00	1.15	0.80	0.85	0.95	0.90	1.00	0.75	0.85	0.85
RT	2.05	2.15	1.85	2.30	1.80	1.80	2.75	2.05	2.50	2.75
INT	1.50	1.30	0.90	1.05	0.95	0.95	1.35	0.95	0.95	1.00
ART	4.10	5.05	5.70	6.40	6.80	7.50	7.55	9.10	10.45	11.60
ART+INT	3.05	3.55	4.10	4.40	5.40	5.45	5.85	7.50	8.70	9.55
Puri & Sen	1.60	1.45	1.40	1.55	1.40	1.15	2.00	1.25	1.80	2.00
v.d.Waerden	1.00	0.80	0.60	0.80	0.75	0.40	0.75	0.60	0.45	0.70
ATS	4.00	5.40	5.45	5.25	4.75	5.50	5.50	5.30	5.40	5.75
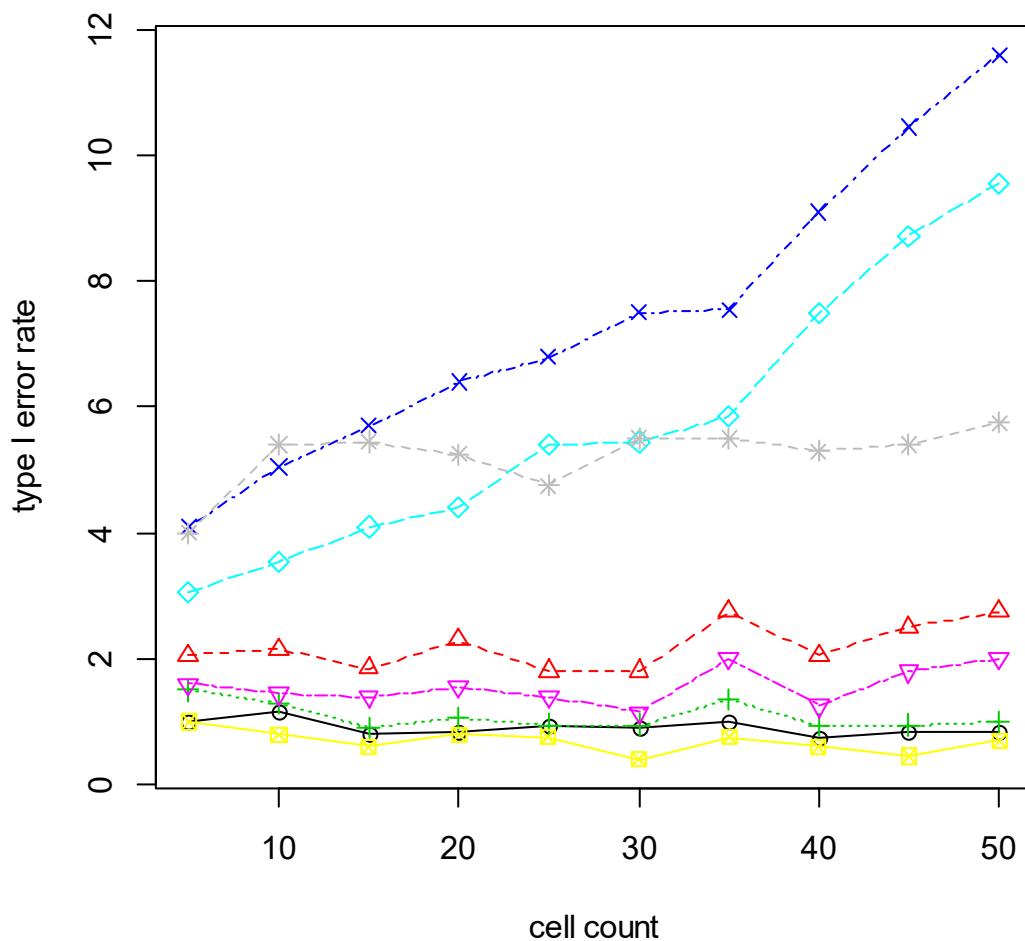
2. 6. 14   normal distribution - unequal variances (small n_i ~ large s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	18.25	16.30	17.00	16.45	16.30	15.75	16.55	16.65	17.00	17.85
RT	9.95	10.10	10.75	10.70	9.95	9.75	10.10	10.80	11.50	11.40
INT	14.25	14.10	14.50	14.05	14.45	12.60	14.40	14.05	14.80	15.70
ART	3.45	4.80	5.05	5.35	5.80	6.00	7.35	7.75	8.95	9.30
ART+INT	3.95	4.15	4.65	4.70	5.15	5.15	6.10	7.05	7.60	9.30
Puri & Sen	8.15	8.00	7.80	8.80	7.85	7.95	8.40	8.65	9.05	9.10
v.d.Waerden	11.20	10.70	11.40	11.60	11.55	10.30	11.30	11.75	12.70	13.05
ATS	4.35	4.55	5.00	5.00	5.35	5.05	4.95	5.15	5.40	5.30
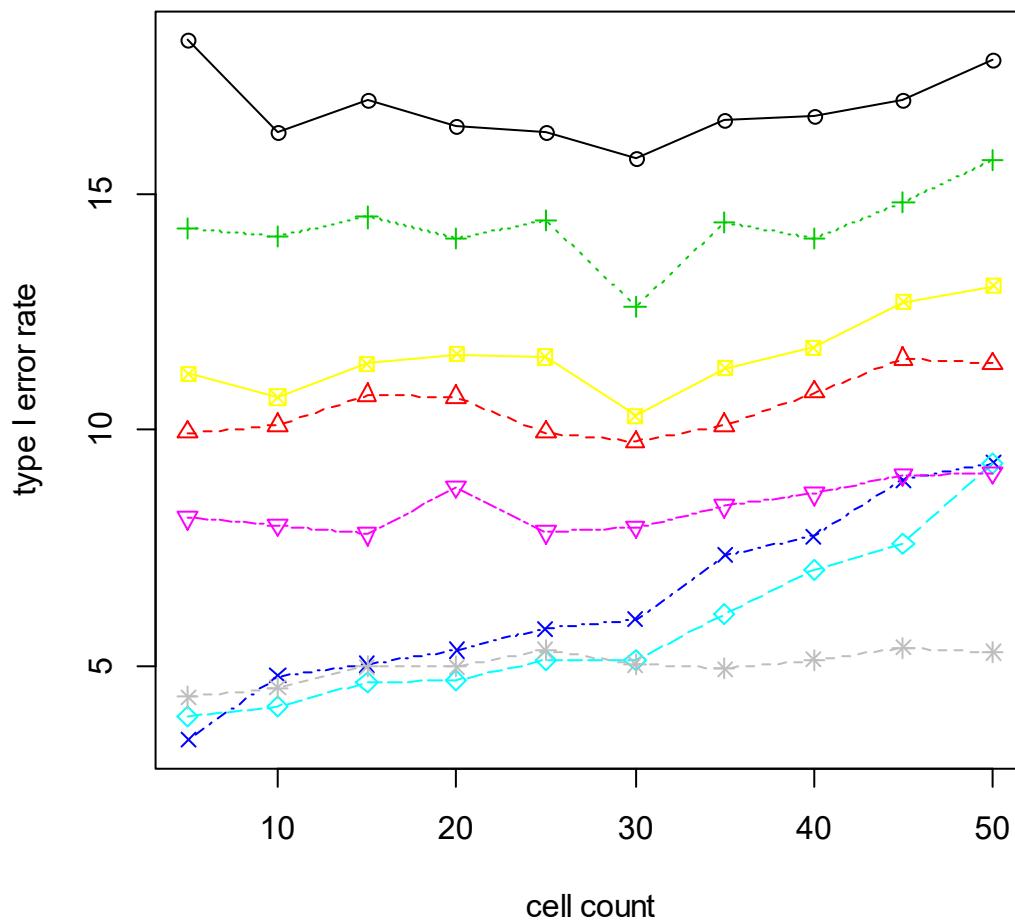
2. 6. 15   left skewed distribution - unequal variances (small n$_i$ ~ small s$_i$)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	1.00	1.10	0.95	0.65	1.00	1.55	1.00	0.95	0.85	1.05
RT	1.35	1.40	1.65	1.45	2.15	1.95	1.95	2.20	1.85	1.90
INT	0.90	0.90	0.90	0.65	1.00	1.30	1.05	1.40	1.30	1.50
ART	3.90	4.55	5.30	5.60	6.90	7.75	8.90	10.45	12.10	12.75
ART+INT	2.45	2.75	3.75	3.80	4.90	6.05	7.35	9.40	11.20	11.30
Puri & Sen	0.75	0.95	1.05	0.95	1.40	1.50	1.10	1.25	1.40	1.25
v.d.Waerden	0.35	0.60	0.65	0.35	0.45	0.70	0.75	0.90	1.00	1.05
ATS	4.45	4.75	5.60	5.05	5.80	5.90	5.60	6.75	5.70	5.15
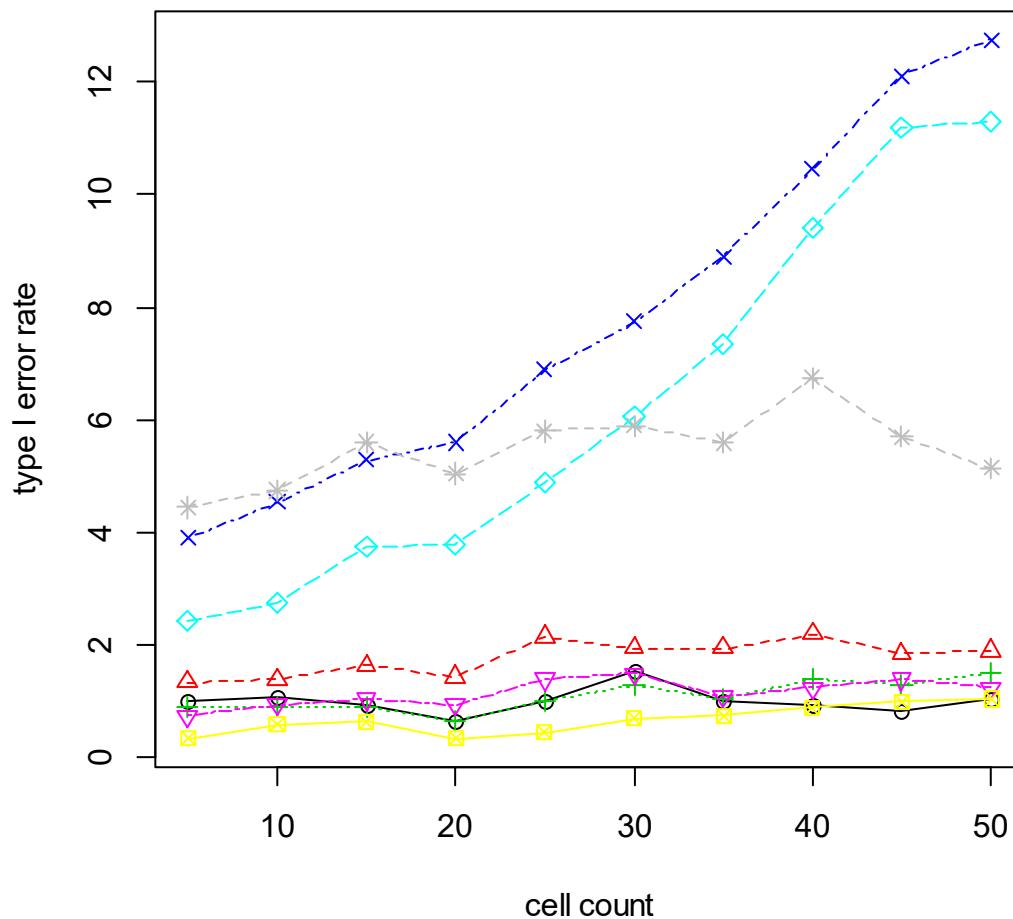
2. 6. 16   left skewed distribution - unequal variances (small n_i ~ large s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	17.20	18.00	16.75	16.45	16.65	15.90	17.90	16.35	17.15	16.25
RT	11.30	12.35	12.35	11.95	12.75	13.05	13.00	12.15	13.05	12.50
INT	18.45	19.75	18.75	19.00	19.70	19.45	20.75	19.65	20.25	20.00
ART	3.70	4.85	5.30	5.90	6.90	8.15	7.70	9.30	9.25	9.25
ART+INT	4.15	4.25	5.00	5.05	5.45	6.90	6.75	8.80	8.45	9.30
Puri & Sen	8.55	9.70	9.50	9.20	10.15	10.60	10.85	10.45	10.50	9.95
v.d.Waerden	13.40	15.55	15.25	15.70	16.10	16.00	17.20	16.40	17.05	16.40
ATS	4.40	5.00	5.60	5.30	5.55	5.50	5.25	5.80	4.50	5.00
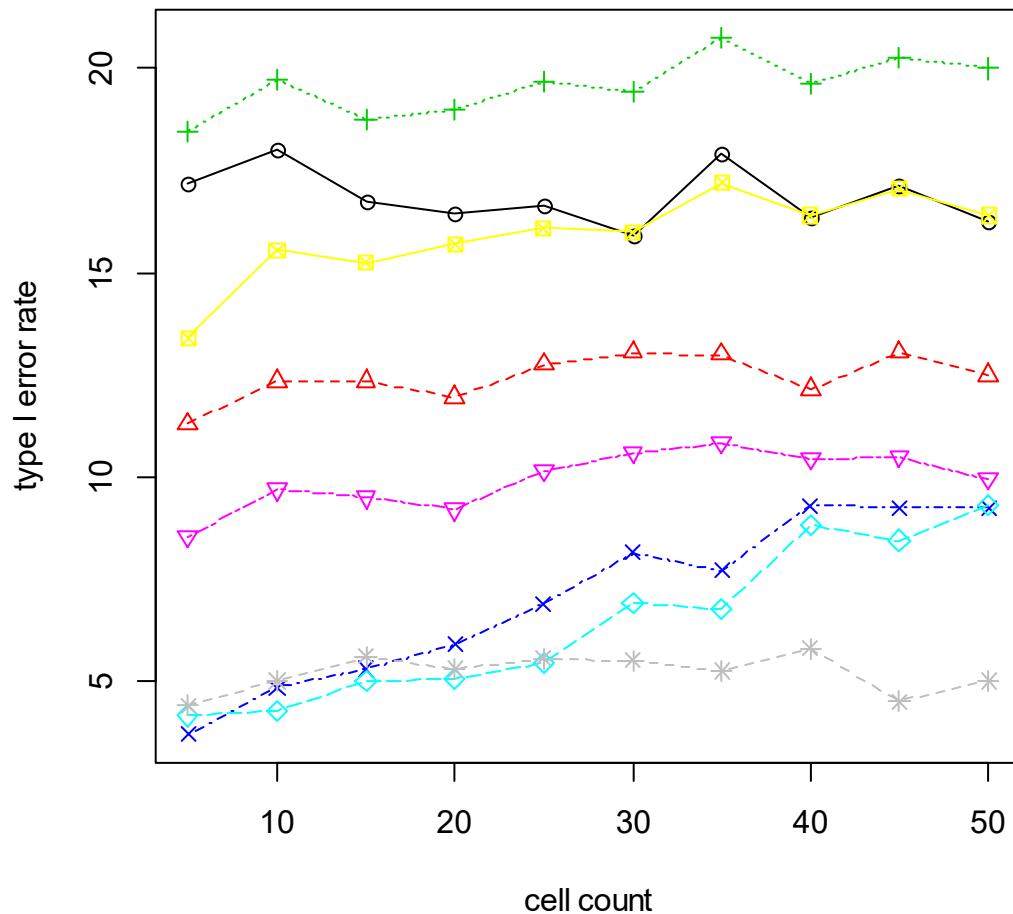
2. 7. Main effect B - A and interaction significant (effects a$_i$ = 0.6*s ab$_{ij}$ = 0.6*s / equal n$_i$ / # levels = 2*4)

2. 7. 1   normal distribution - equal variances

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.55	4.50	4.20	5.10	4.35	4.55	4.40	4.20	4.40	4.55
RT	5.00	4.50	4.35	4.85	4.50	4.45	4.70	4.30	4.20	4.80
INT	5.65	4.20	4.25	5.10	4.30	4.05	4.65	4.05	4.25	4.45
ART	5.40	4.80	4.15	5.50	4.70	4.80	4.80	4.50	4.70	4.60
ART+INT	5.55	4.55	4.15	5.40	4.50	4.40	4.55	4.45	4.55	4.80
Puri & Sen	2.30	2.10	2.20	2.40	2.05	2.15	2.65	2.10	2.20	2.60
v.d.Waerden	2.45	2.40	2.25	2.05	1.95	1.90	2.20	2.20	2.10	2.65
ATS	4.35	4.20	4.20	4.75	4.25	4.40	4.60	4.20	4.20	4.80
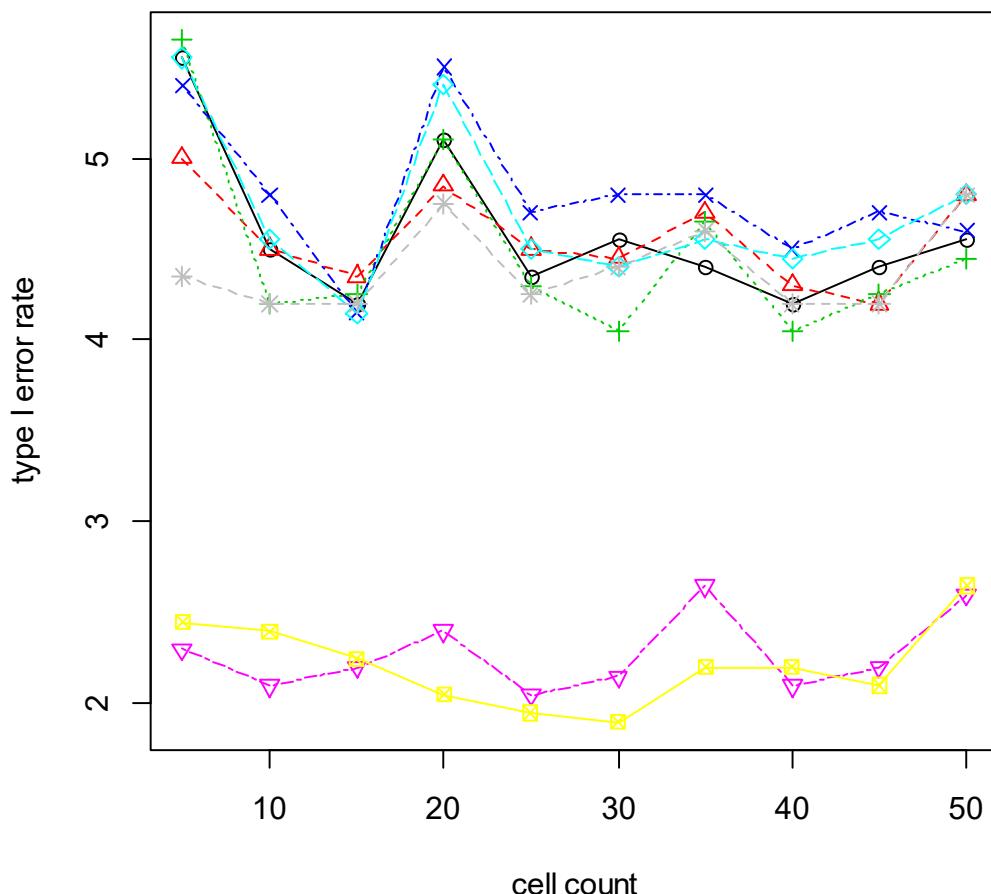
2. 7. 2   normal distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	7.00	6.10	5.85	6.20	6.20	6.10	5.80	5.85	5.85	6.05
RT	4.90	5.30	5.60	5.90	5.10	5.50	5.15	5.45	4.70	5.35
INT	5.25	4.60	5.15	4.95	4.75	5.30	4.85	4.75	4.40	4.50
ART	5.70	5.60	5.60	6.55	5.50	5.60	5.50	5.55	5.30	5.85
ART+INT	5.45	5.05	5.20	5.80	5.30	5.05	4.90	5.15	4.35	4.60
Puri & Sen	2.80	3.25	3.55	3.65	3.00	3.40	3.40	3.20	2.80	3.35
v.d.Waerden	3.05	2.85	3.00	3.10	2.55	2.90	2.50	2.60	2.45	2.50
ATS	4.50	4.85	5.30	5.35	4.65	5.15	4.90	5.10	4.30	5.15
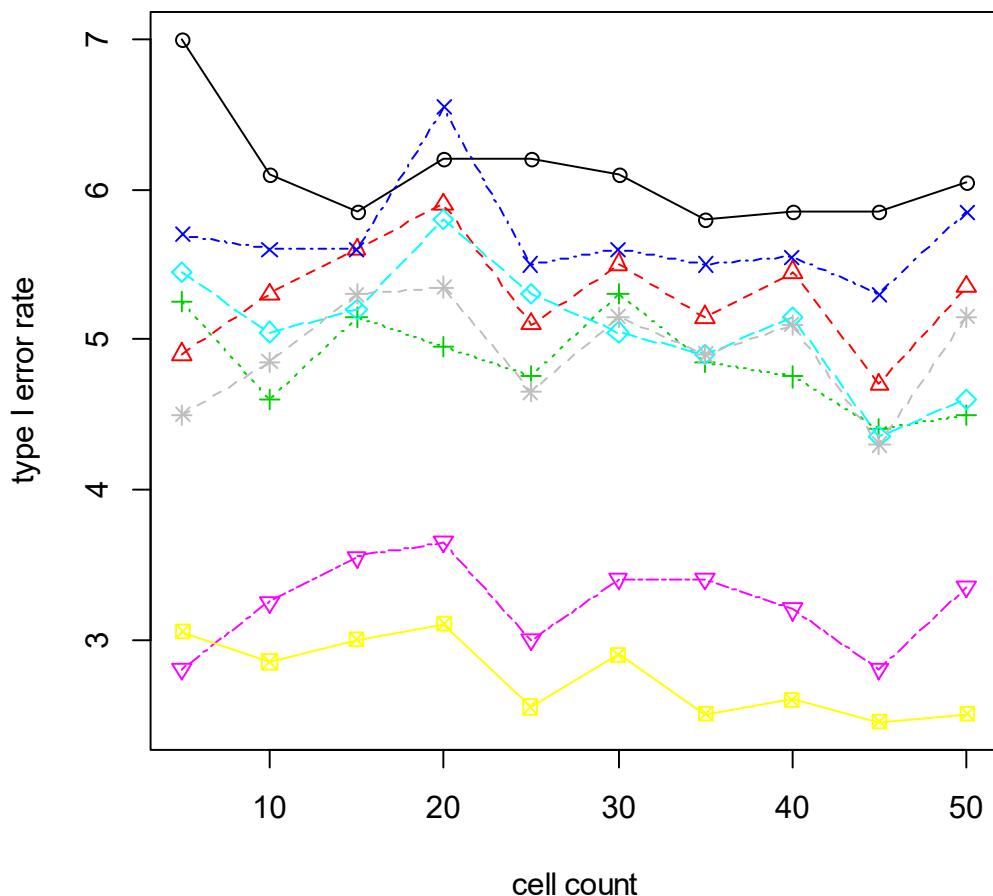
2. 7. 3   normal distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.50	5.80	6.05	6.30	5.55	5.65	5.55	5.70	5.50	6.05
RT	5.00	5.30	6.05	7.00	6.15	6.70	7.00	7.15	7.00	7.00
INT	5.20	5.30	5.55	5.55	5.55	5.55	5.95	5.55	5.25	5.50
ART	6.15	5.80	6.35	6.95	5.85	6.10	6.00	5.75	5.75	5.75
ART+INT	5.65	5.30	5.75	6.30	5.05	5.30	5.25	5.65	4.85	5.65
Puri & Sen	2.90	3.65	3.75	4.40	3.90	4.20	4.80	4.35	4.40	4.45
v.d.Waerden	2.85	3.00	3.35	3.50	2.85	3.25	3.25	3.15	3.35	3.50
ATS	4.25	5.00	5.55	6.25	5.85	6.35	6.75	6.70	6.60	6.55
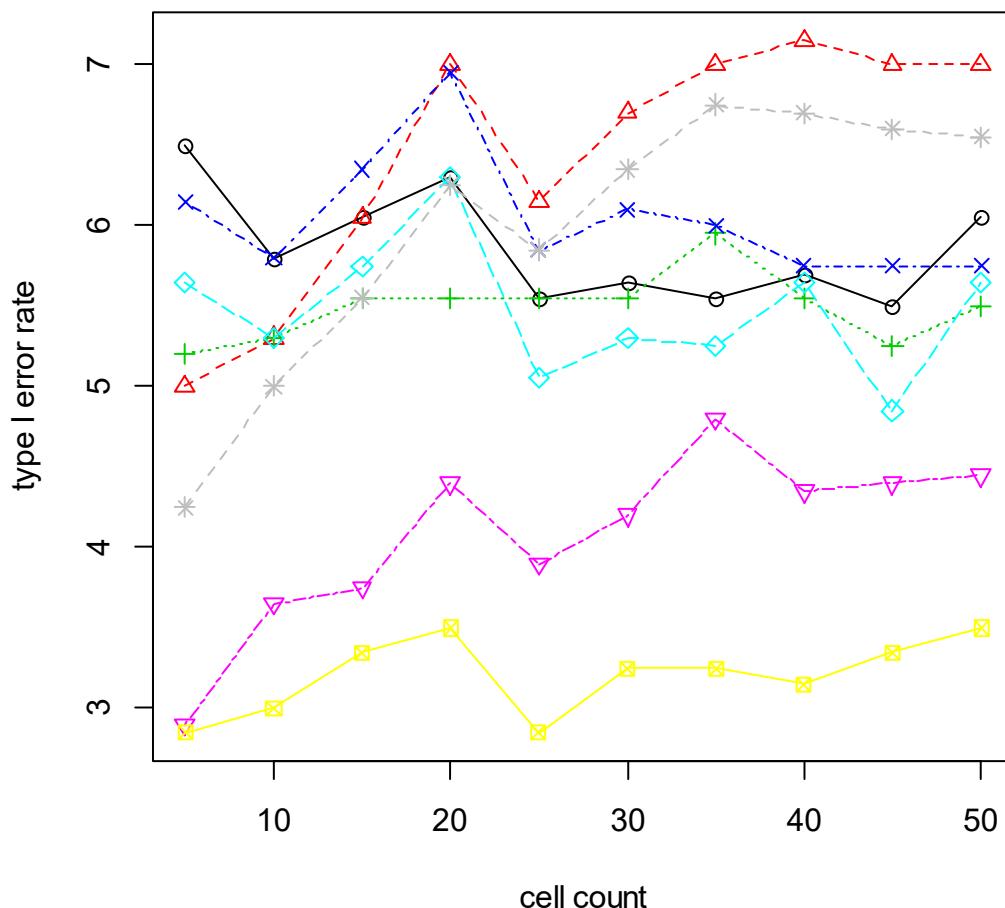
2. 7. 4   right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.20	4.55	4.45	4.75	4.85	5.20	5.15	4.40	3.95	5.25
RT	3.95	4.80	4.20	4.70	5.15	5.45	4.95	4.65	4.25	5.00
INT	4.25	5.10	5.05	5.30	6.45	7.15	7.00	7.00	7.25	7.15
ART	4.55	5.00	4.30	4.60	5.40	5.90	5.25	5.25	4.40	5.40
ART+INT	3.65	4.10	3.90	4.30	4.15	5.00	4.45	4.40	3.90	4.50
Puri & Sen	1.85	2.25	2.25	2.45	2.55	2.45	2.40	2.25	1.75	2.65
v.d.Waerden	1.30	2.05	1.65	2.45	2.65	2.80	2.80	3.30	2.75	3.95
ATS	3.40	4.45	4.05	4.45	5.05	5.35	4.95	4.65	4.05	4.95
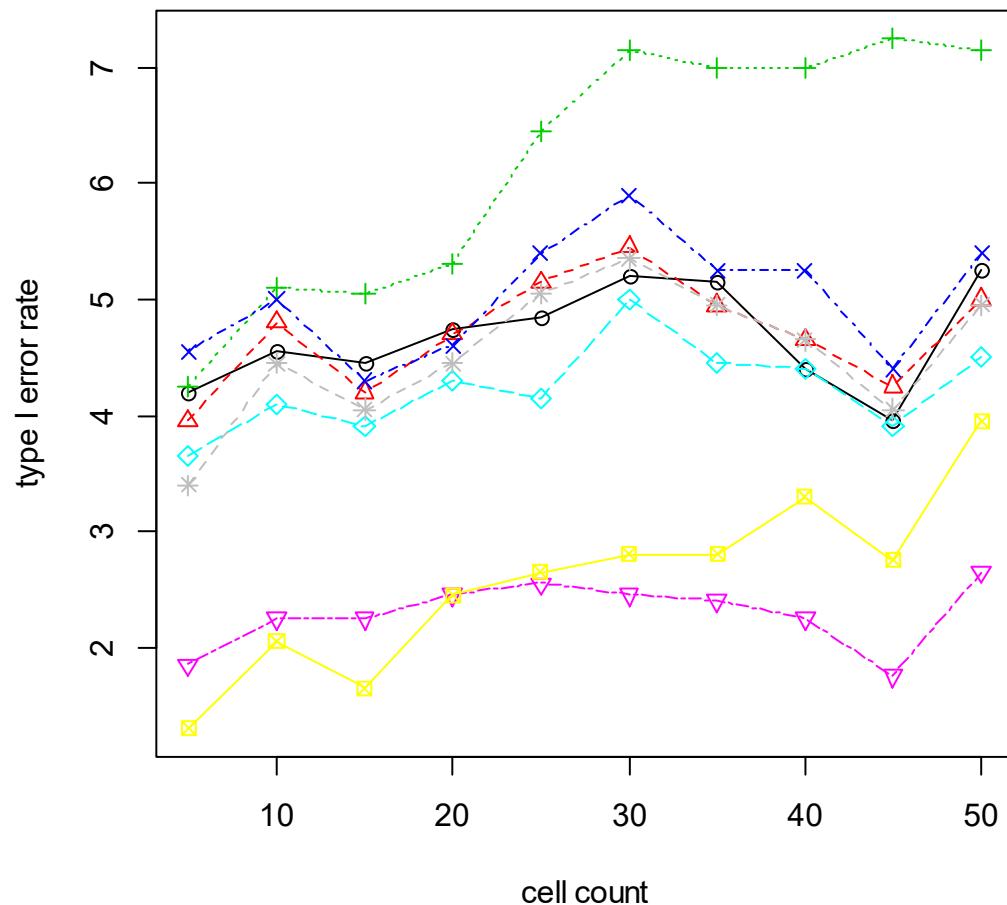
2. 7. 5   exponential distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.50	4.55	4.70	4.70	5.50	4.35	4.95	4.65	5.60	4.70
RT	5.30	5.85	6.35	6.90	9.40	9.05	8.85	9.65	11.50	11.25
INT	4.95	5.60	5.70	5.45	8.20	7.65	7.00	7.35	8.70	8.45
ART	8.15	8.10	9.05	8.40	9.85	9.90	9.90	10.00	10.35	9.65
ART+INT	4.90	4.55	4.00	4.10	5.00	4.80	5.25	3.95	4.60	4.50
Puri & Sen	3.70	4.30	5.00	4.45	6.85	7.10	7.40	7.25	8.85	8.90
v.d.Waerden	3.35	3.70	4.00	3.65	6.00	5.85	5.65	5.10	6.65	7.25
ATS	4.50	5.35	6.25	6.85	9.25	8.95	8.80	9.65	11.40	11.20
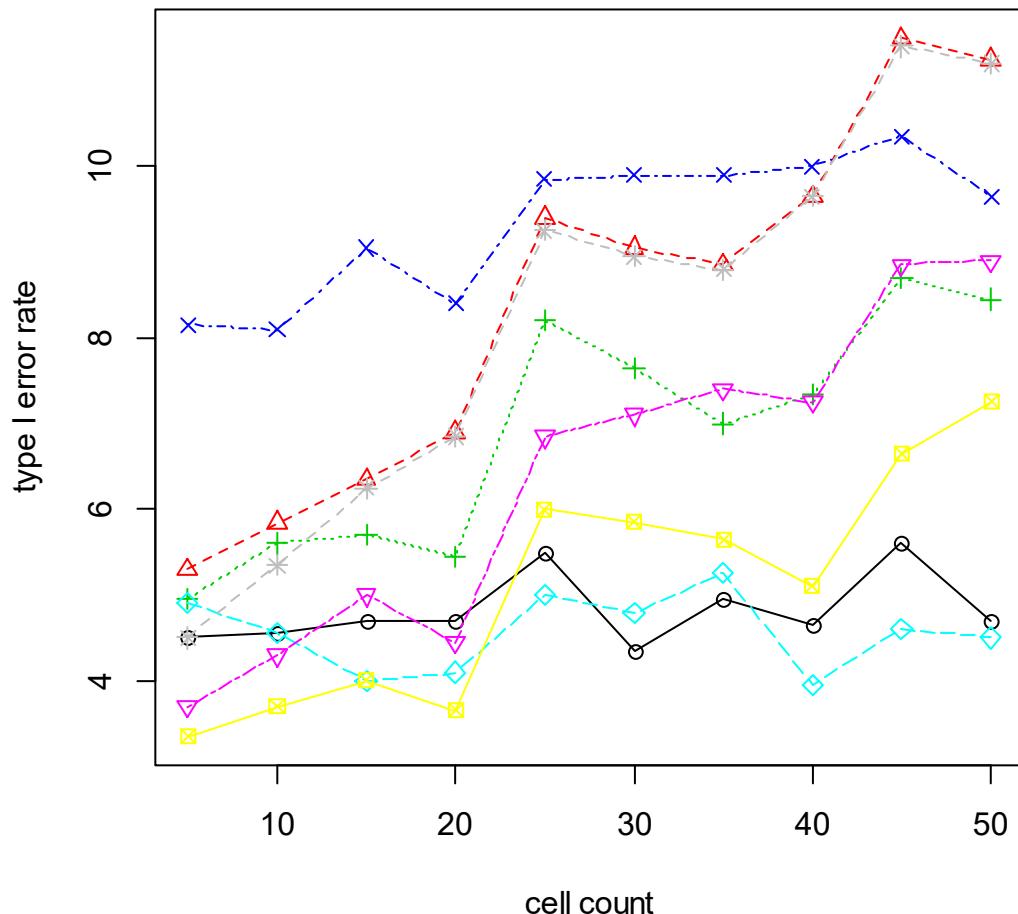
2. 7. 6　　exponential distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.70	4.90	4.60	4.90	5.30	4.40	5.15	4.90	5.85	4.65
RT	5.65	5.95	7.50	6.55	8.55	8.65	8.95	9.30	10.85	10.50
INT	5.30	5.40	6.00	5.55	8.10	7.20	7.30	6.95	8.20	7.80
ART	8.05	8.50	9.70	8.80	10.60	10.35	10.20	10.90	11.20	10.35
ART+INT	4.80	4.30	4.30	4.20	5.15	4.65	4.55	3.80	4.40	3.95
Puri & Sen	2.85	4.45	5.20	4.75	6.50	6.70	7.00	7.00	8.40	8.40
v.d.Waerden	2.95	3.90	4.10	3.90	6.15	5.30	5.30	5.30	5.85	6.00
ATS	4.20	5.75	7.45	6.25	8.35	8.60	8.90	9.30	10.70	10.40
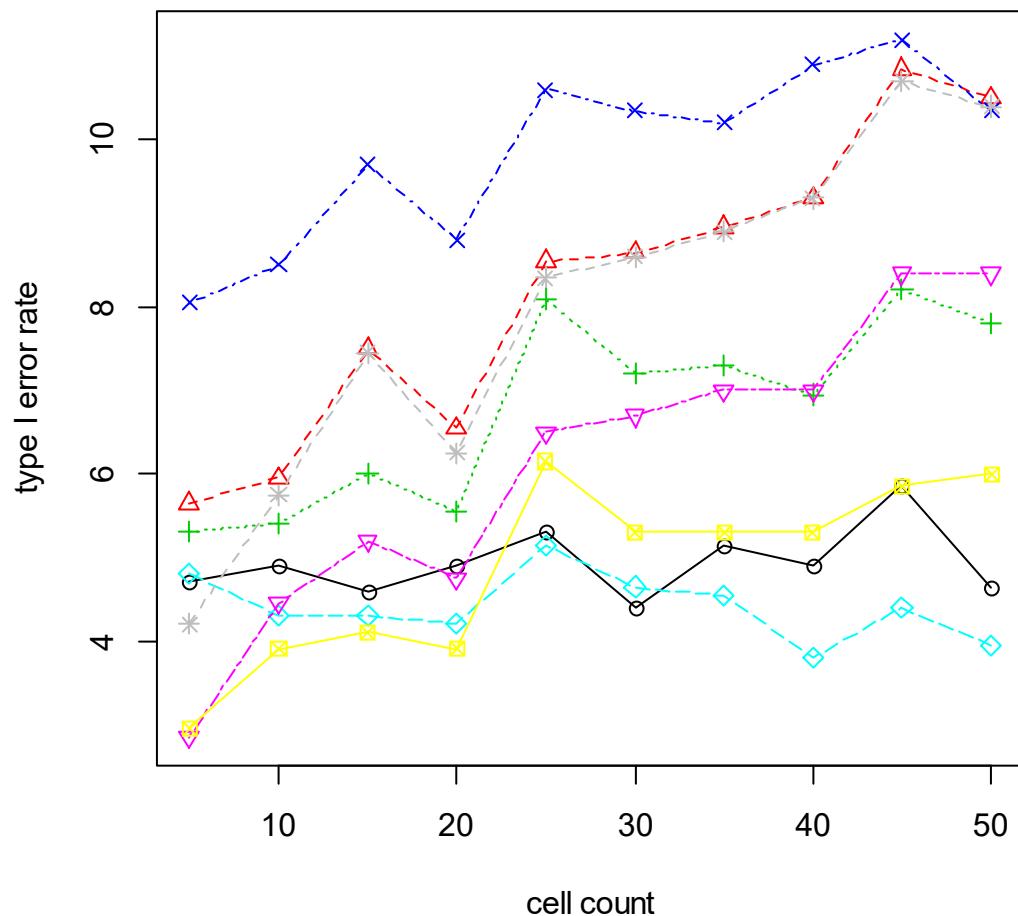
2. 7. 7   lognormal distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.55	4.70	5.00	4.70	5.35	4.50	5.05	4.20	4.30	4.55
RT	5.70	5.30	5.15	4.70	5.10	4.40	4.55	3.95	4.10	4.25
INT	5.50	5.10	4.90	5.00	5.80	5.35	5.70	4.30	4.60	5.10
ART	5.75	5.00	5.60	5.10	5.00	4.65	4.85	4.50	4.10	4.75
ART+INT	5.70	4.85	5.00	5.25	5.50	4.65	5.30	4.25	4.15	4.65
Puri & Sen	3.05	2.60	2.45	2.25	2.95	2.20	2.20	2.15	2.05	2.65
v.d.Waerden	3.10	2.30	2.40	2.35	2.70	2.45	2.70	2.40	2.05	2.60
ATS	4.60	5.10	5.00	4.55	5.05	4.35	4.50	3.95	4.05	4.20
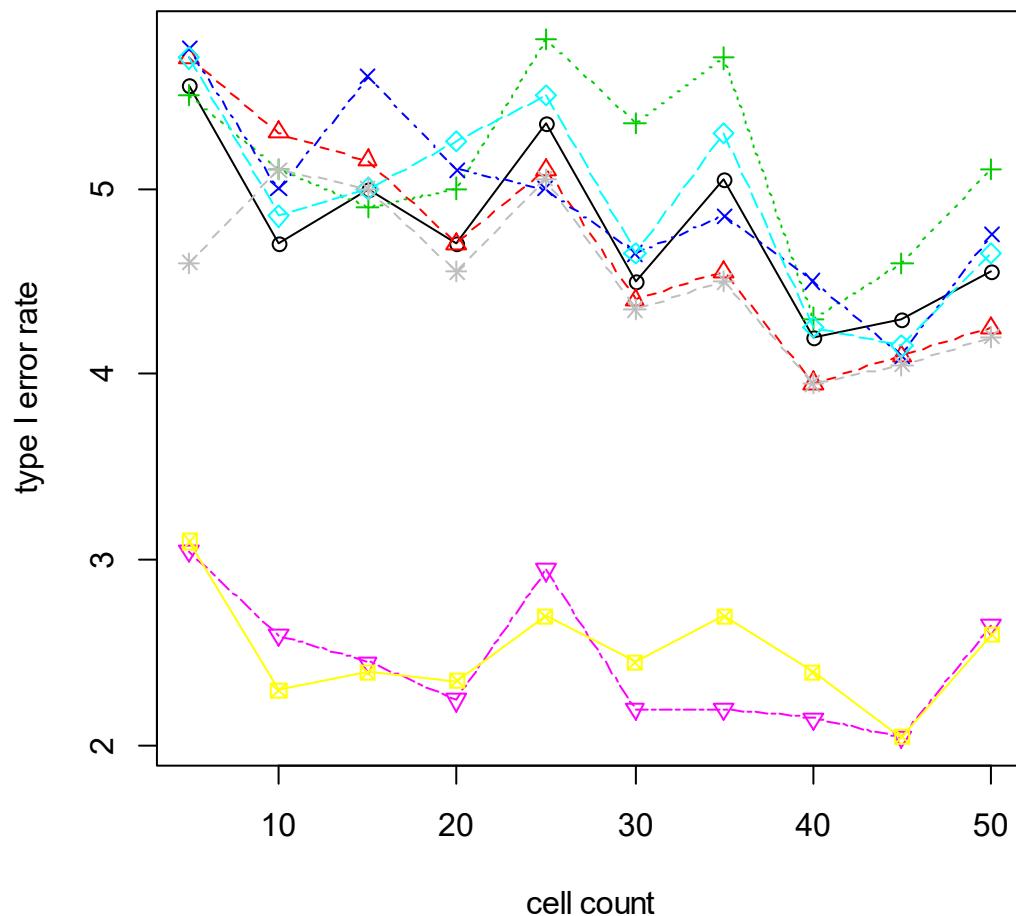
2. 7. 8   uniform distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.40	4.40	4.15	4.75	4.55	5.45	5.25	4.70	4.15	5.10
RT	4.85	4.55	4.00	4.75	4.80	5.65	5.25	4.70	4.25	5.10
INT	4.15	3.90	3.85	4.25	4.20	4.85	4.30	4.35	3.50	4.80
ART	4.60	4.55	4.00	4.65	4.60	5.55	5.40	4.65	4.00	5.05
ART+INT	4.15	4.60	4.30	4.30	4.75	5.00	4.75	5.15	4.00	4.65
Puri & Sen	2.30	2.45	1.90	2.50	3.15	3.15	2.70	2.75	2.20	2.90
v.d.Waerden	1.90	1.85	2.00	2.00	2.10	2.45	2.55	1.85	1.75	2.50
ATS	3.70	4.45	3.90	4.60	4.75	5.65	5.20	4.70	4.20	5.10
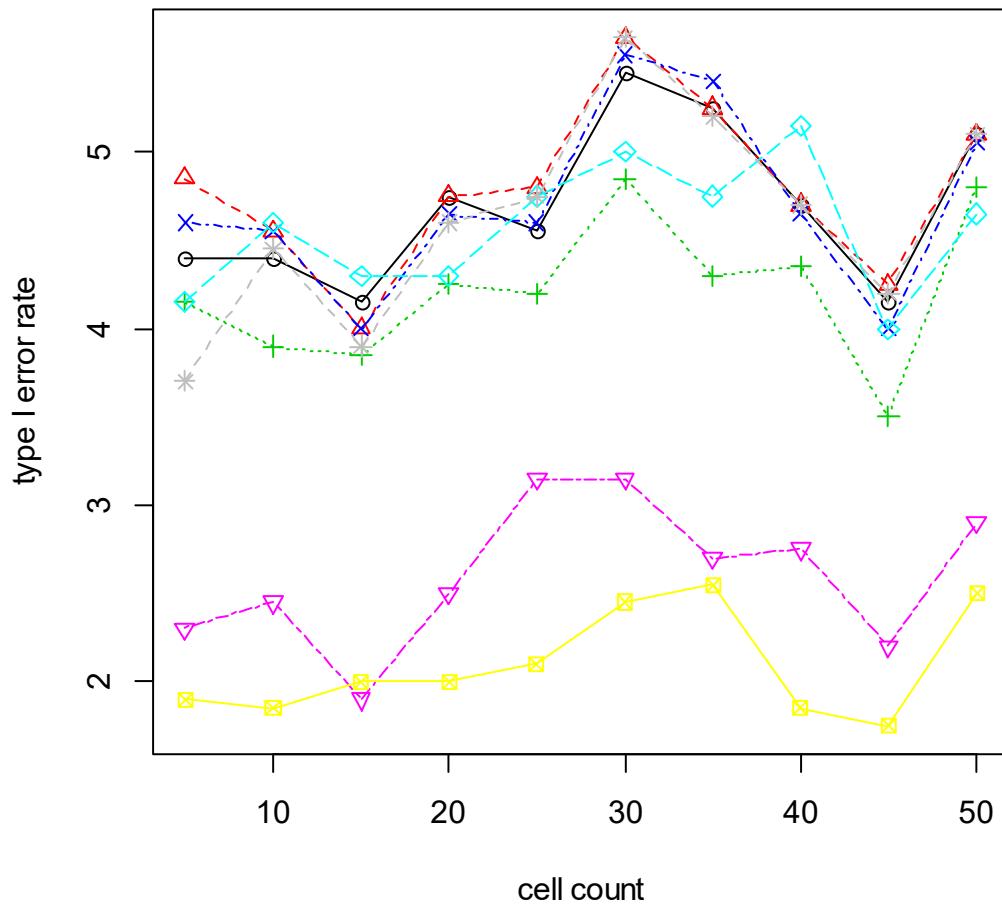
2. 7. 9   uniform distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.25	4.25	4.40	5.20	5.10	5.25	5.35	4.85	4.25	5.00
RT	4.95	4.45	4.25	5.05	5.65	5.25	5.30	4.95	4.40	4.70
INT	4.10	4.15	4.40	4.65	4.80	5.05	5.05	4.65	3.60	4.80
ART	4.60	4.40	4.60	5.10	5.70	5.70	5.20	4.85	4.45	5.20
ART+INT	3.95	4.05	4.60	5.05	4.70	5.00	5.00	4.60	4.20	4.40
Puri & Sen	2.15	2.15	2.40	2.95	3.00	3.70	2.95	3.00	2.45	2.90
v.d.Waerden	1.85	1.70	2.55	2.50	2.55	2.65	2.90	2.55	2.20	2.45
ATS	4.15	4.35	4.15	4.90	5.60	5.20	5.25	4.90	4.35	4.70
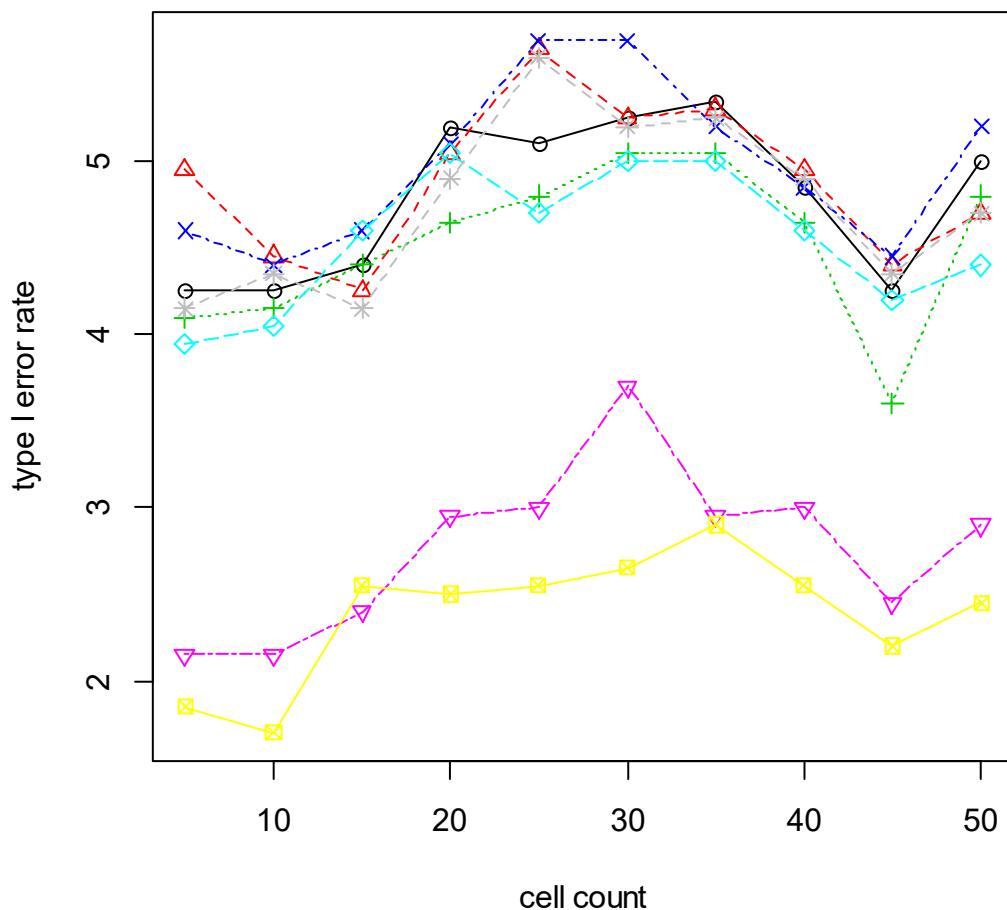
2. 7. 10   left/right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.55	4.45	4.10	5.05	4.65	5.35	5.05	4.65	4.10	4.90
RT	4.05	4.25	3.75	3.70	4.40	4.85	4.90	4.40	3.65	4.85
INT	3.80	4.10	3.95	4.40	4.50	5.00	4.75	4.70	4.15	5.00
ART	3.75	4.50	3.75	3.80	4.60	4.90	4.95	4.40	3.60	4.50
ART+INT	3.95	4.75	5.05	5.90	6.50	7.45	6.95	7.70	8.00	8.05
Puri & Sen	1.95	2.25	2.30	2.45	2.65	2.75	2.80	2.65	2.05	2.90
v.d.Waerden	1.70	1.90	1.85	2.35	2.25	2.65	2.85	2.55	2.00	2.60
ATS	3.30	3.85	3.70	3.60	4.40	4.70	4.80	4.35	3.60	4.85
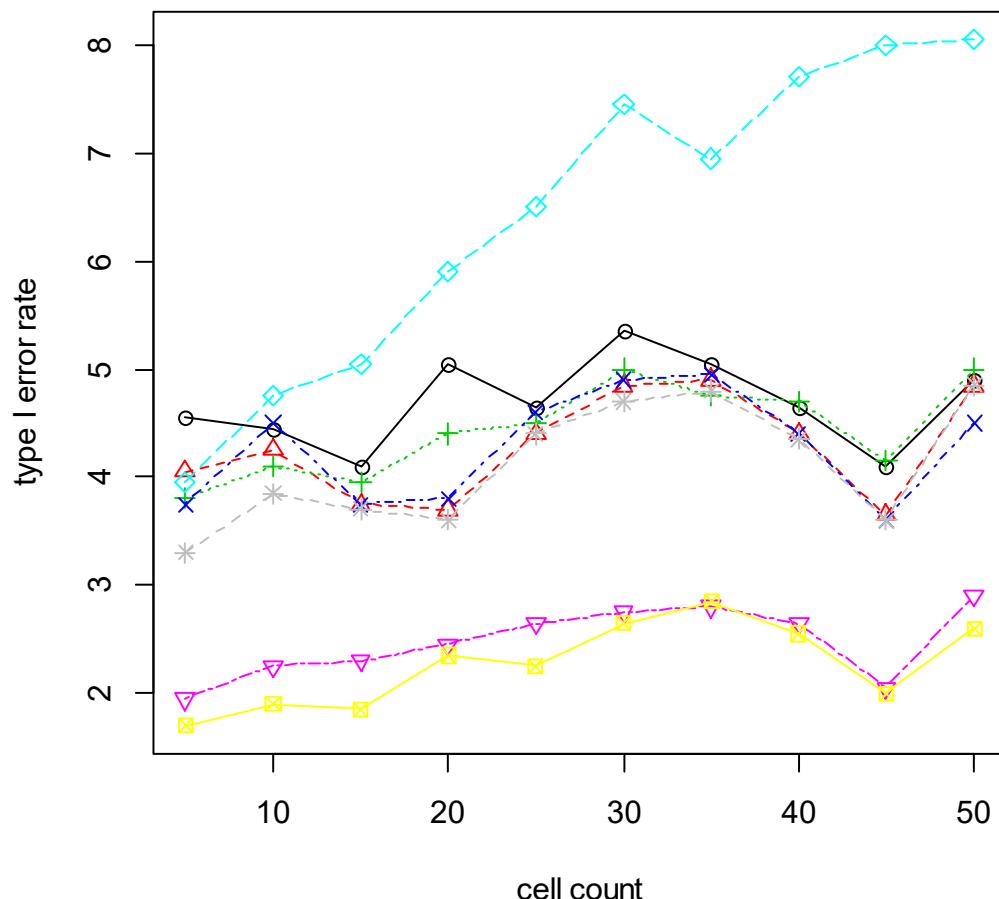
2. 7. 11   left skewed distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.05	5.20	5.00	4.75	5.25	5.85	5.65	5.20	4.75	6.25
RT	4.60	5.60	4.75	5.15	5.75	6.10	5.90	6.05	5.65	6.65
INT	4.60	4.95	4.60	4.85	4.70	4.90	5.20	5.30	4.65	5.50
ART	4.50	4.95	5.30	5.80	6.10	6.95	6.65	6.55	6.50	7.80
ART+INT	4.35	4.40	4.70	4.60	5.10	5.55	6.10	5.50	5.00	6.10
Puri & Sen	2.70	3.35	3.10	3.45	3.90	4.25	4.25	3.50	3.20	4.50
v.d.Waerden	2.30	2.65	2.60	2.75	2.75	3.20	3.45	2.70	2.65	3.45
ATS	3.55	5.15	4.50	4.80	5.25	5.75	5.50	5.45	5.00	6.00
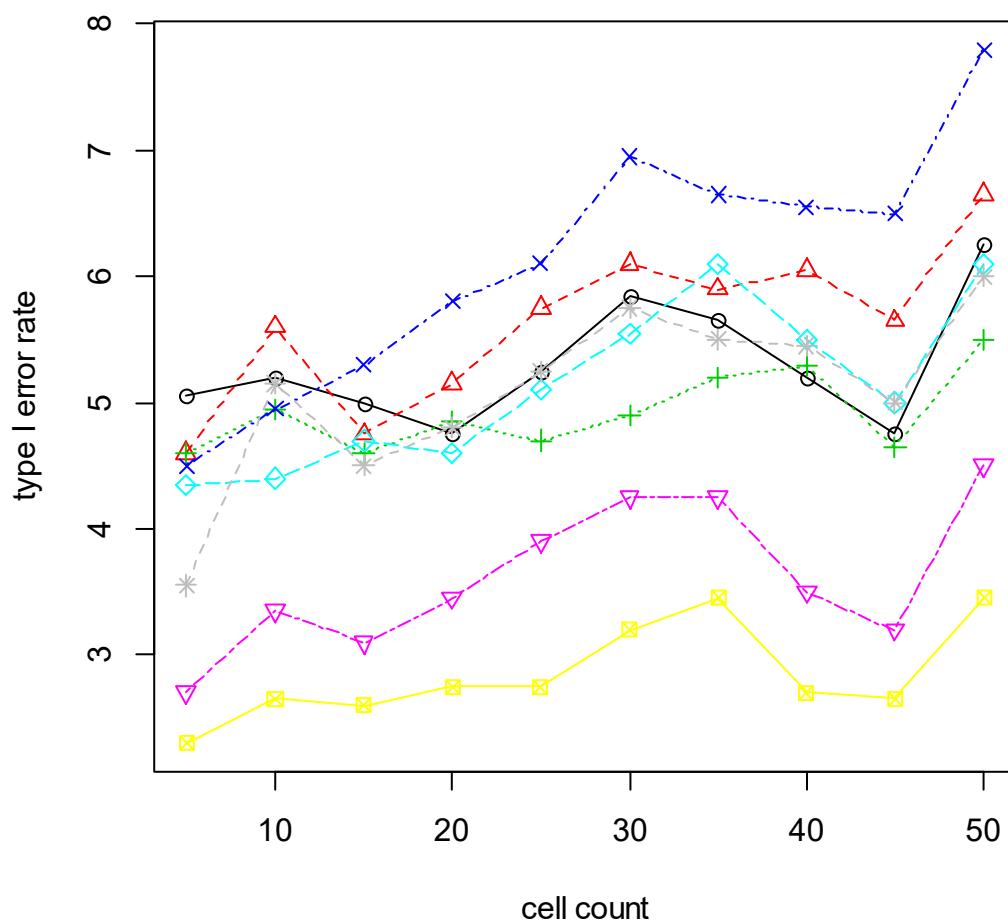
2. 7. 12   left skewed distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.55	5.05	4.60	4.80	5.00	5.75	5.60	5.20	5.00	5.65
RT	5.00	4.95	4.55	5.15	5.40	5.20	5.55	5.55	5.05	6.00
INT	4.50	4.45	4.25	4.70	4.50	4.65	4.75	4.85	4.40	5.40
ART	4.90	5.55	6.00	6.25	7.45	7.15	7.30	7.40	7.25	8.25
ART+INT	4.55	5.25	5.00	5.25	5.65	5.80	6.10	5.55	5.65	6.05
Puri & Sen	3.00	2.70	2.60	3.25	4.00	3.85	3.85	3.45	3.40	4.20
v.d.Waerden	2.50	2.35	2.35	3.15	2.50	2.55	2.80	2.50	2.05	3.65
ATS	3.90	4.50	4.30	4.60	5.20	5.00	5.25	5.05	4.95	5.70
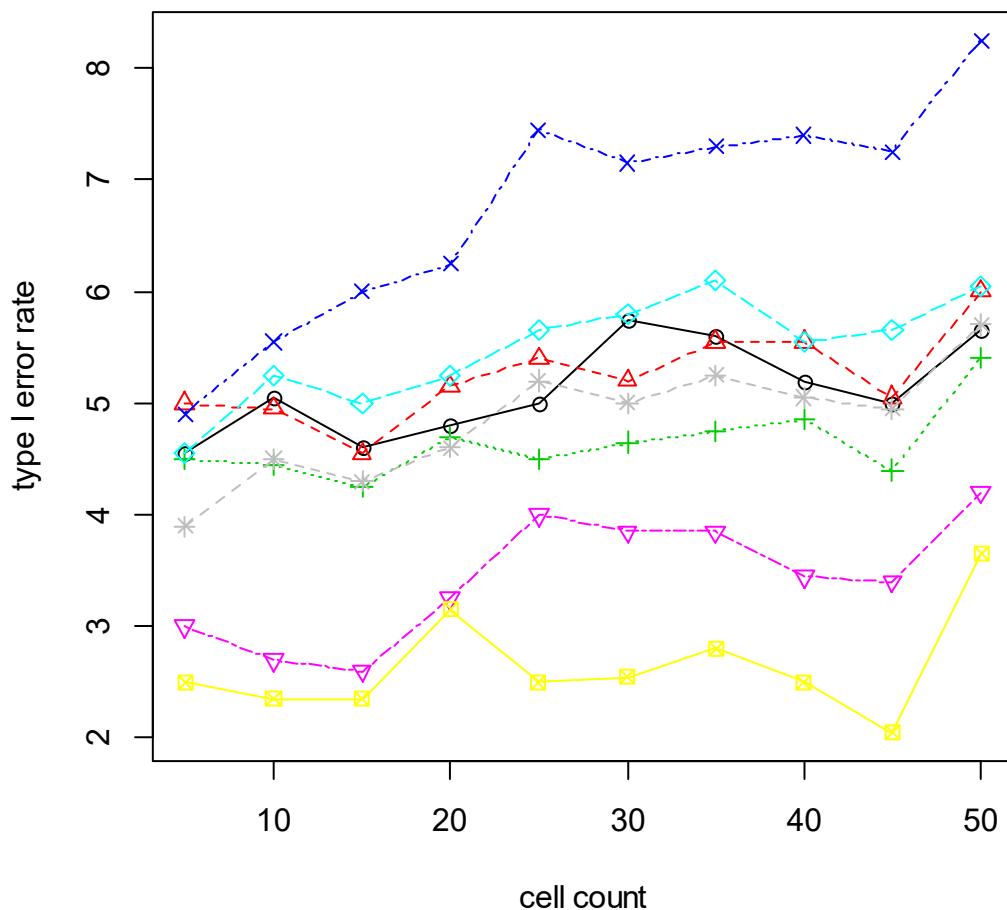
5. 8.   Main effect B - A and interaction significant (effects a$_i$ = 0.6*s ab$_{ij}$ = 0.6*s / unequal n$_i$ / # levels = 4*5)

2. 8. 1   normal distribution - equal variances

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.85	4.40	4.15	4.95	5.45	5.10	5.60	4.00	5.55	5.10
RT	5.95	4.30	4.55	5.60	5.15	5.05	5.45	4.50	5.20	4.75
INT	5.80	4.30	4.10	5.00	5.35	4.90	5.35	3.75	5.15	4.90
ART	4.75	4.65	5.30	6.10	6.35	7.40	8.50	9.05	12.05	12.45
ART+INT	4.55	4.35	5.20	6.05	6.40	7.20	8.20	9.50	11.35	12.75
Puri & Sen	2.80	2.35	2.35	2.70	3.15	3.00	2.80	2.05	2.45	2.70
v.d.Waerden	2.90	2.30	1.95	2.45	2.90	2.80	2.75	2.00	2.45	2.65
ATS	4.60	3.85	4.50	4.75	5.25	5.15	5.70	4.10	5.00	4.95
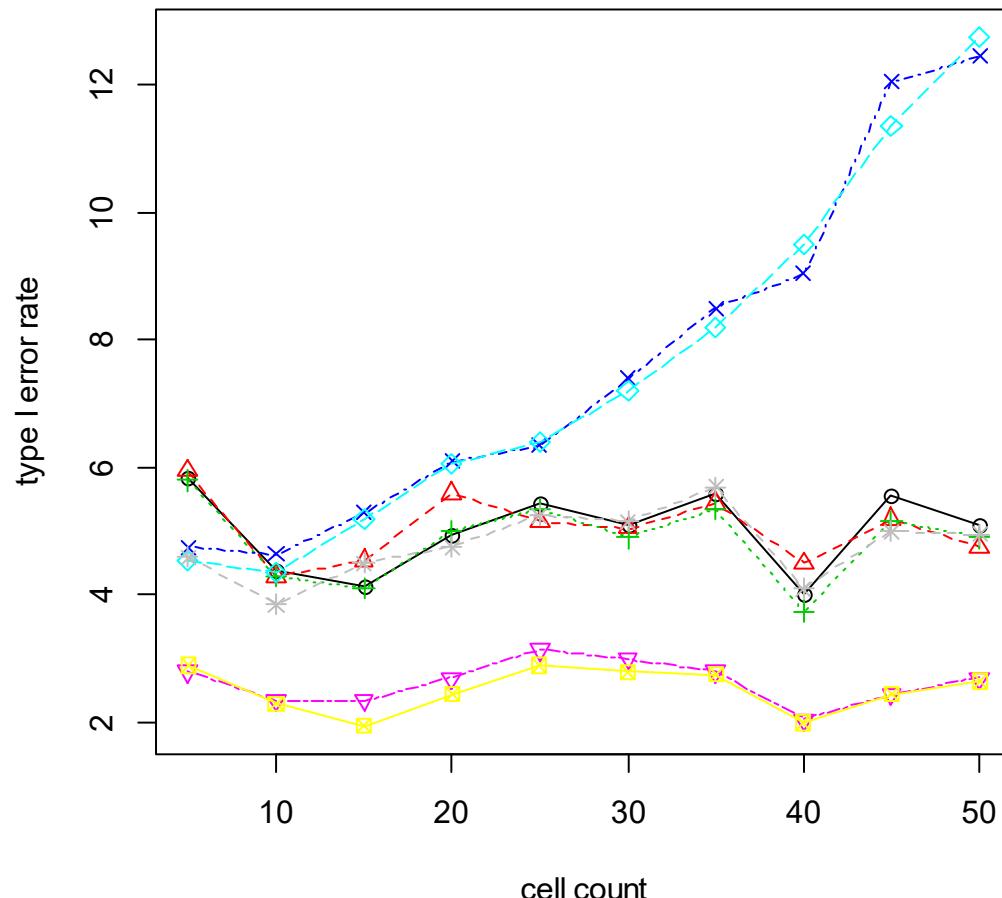
2. 8. 2   normal distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.45	4.95	4.75	5.10	5.20	5.75	5.35	5.00	5.75	5.25
RT	5.60	4.25	4.15	5.20	4.75	5.20	5.40	5.10	4.85	4.95
INT	5.10	3.80	3.70	4.35	3.95	3.95	4.25	4.35	4.25	3.90
ART	4.90	4.55	5.20	6.80	5.65	6.85	9.10	8.75	10.40	11.45
ART+INT	4.55	4.95	4.85	6.35	5.85	6.95	8.30	9.60	11.95	11.95
Puri & Sen	3.05	2.40	2.30	2.65	2.70	2.90	3.05	2.75	2.90	2.85
v.d.Waerden	2.65	2.30	1.80	1.80	2.00	2.70	2.20	2.10	2.20	2.35
ATS	3.90	4.00	4.25	4.65	5.20	5.10	5.65	4.65	5.10	5.15
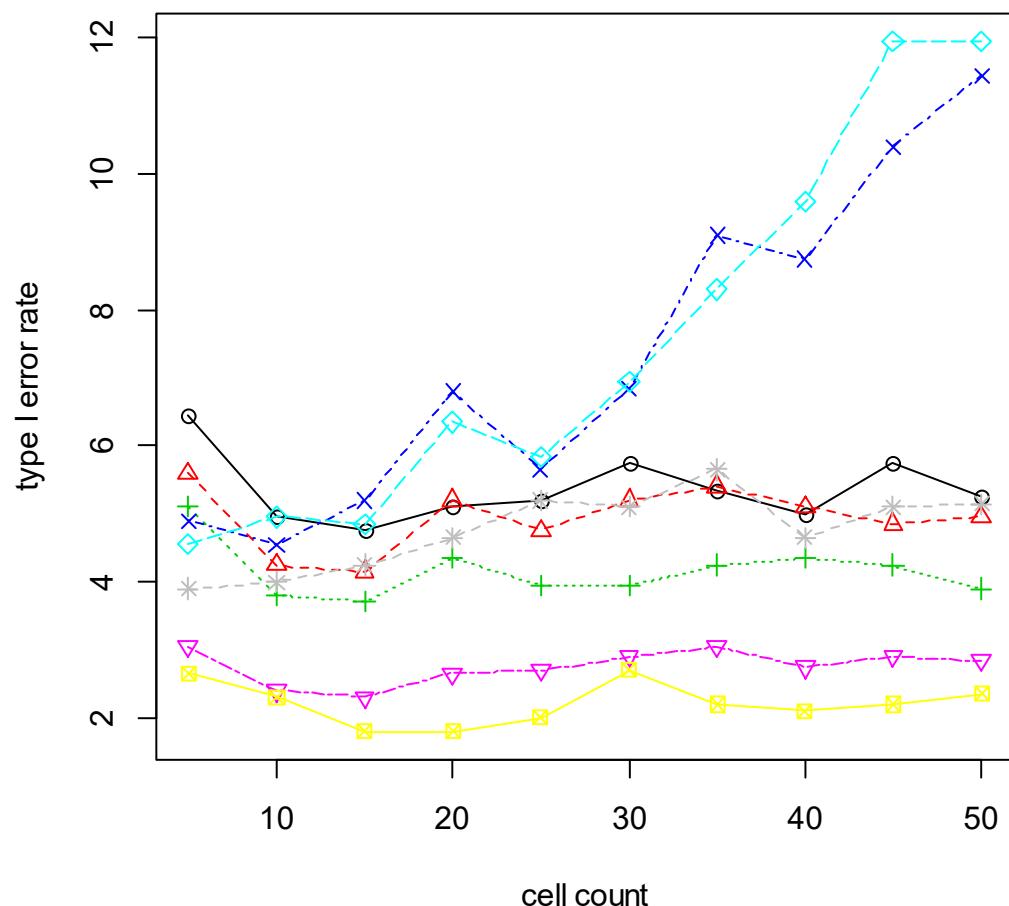
2. 8. 3   normal distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	7.85	6.55	6.25	7.25	7.35	6.85	6.40	6.40	6.60	6.35
RT	6.80	6.90	8.05	9.70	10.05	12.30	13.05	15.30	15.90	16.40
INT	7.15	5.55	6.05	7.60	7.50	8.10	8.95	8.15	9.50	8.10
ART	5.40	5.90	6.40	7.60	7.60	9.20	10.20	11.35	12.75	14.15
ART+INT	5.00	5.40	5.35	7.15	7.10	8.10	9.35	10.60	12.25	13.45
Puri & Sen	3.30	3.85	4.55	5.80	6.10	7.45	8.20	9.15	10.35	10.00
v.d.Waerden	3.95	3.25	2.75	4.00	3.85	4.60	4.65	4.60	5.85	4.80
ATS	4.60	5.40	6.75	8.55	9.85	10.55	10.75	12.40	13.70	14.30
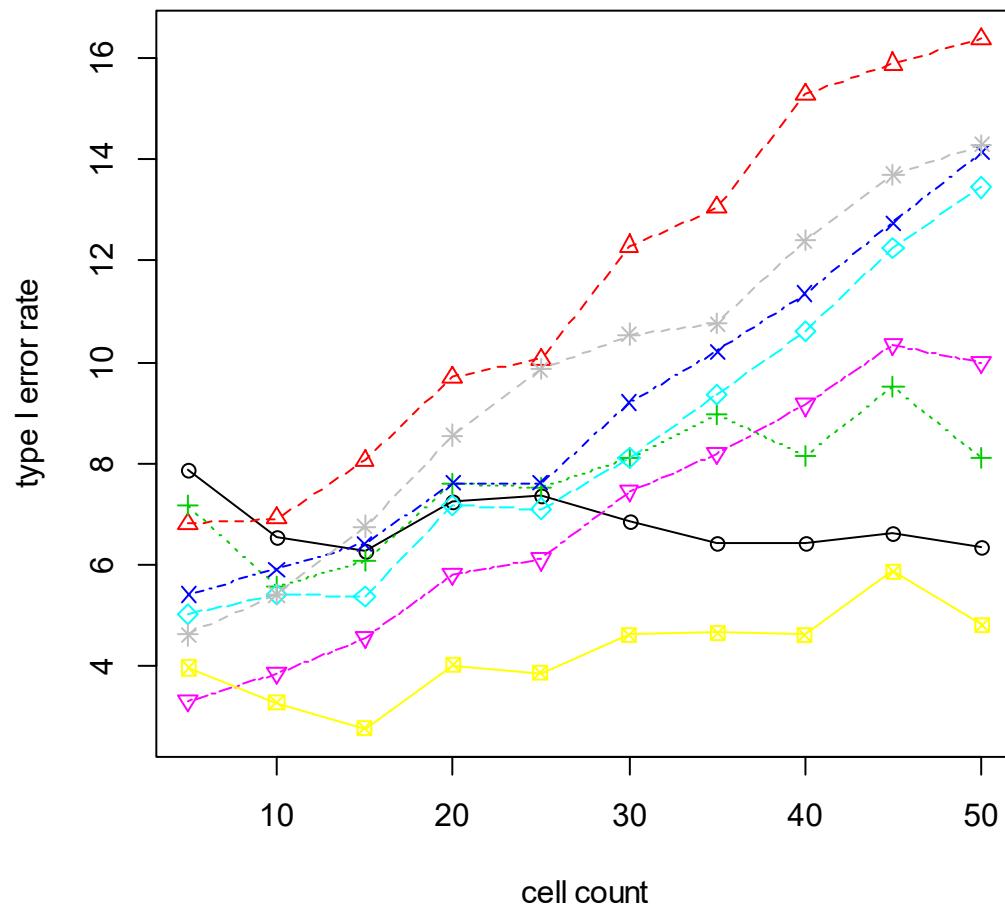
2. 8. 4   right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.30	5.20	6.20	4.80	5.30	5.35	4.45	5.95	4.50	4.80
RT	5.20	5.10	5.40	5.20	5.20	5.60	4.80	5.45	5.25	5.35
INT	5.45	5.60	8.15	6.85	8.25	7.65	8.75	10.20	9.85	11.25
ART	3.70	5.35	6.55	7.85	10.35	11.35	13.20	15.60	17.45	20.55
ART+INT	3.60	4.80	7.05	9.60	12.80	15.65	18.90	23.35	26.50	30.60
Puri & Sen	2.75	2.50	2.45	2.15	2.35	2.55	2.25	2.95	2.40	2.60
v.d.Waerden	2.25	2.50	3.35	2.60	3.05	3.25	3.90	4.90	4.30	5.10
ATS	4.45	4.75	5.30	5.25	4.70	5.50	5.05	5.40	5.10	5.25
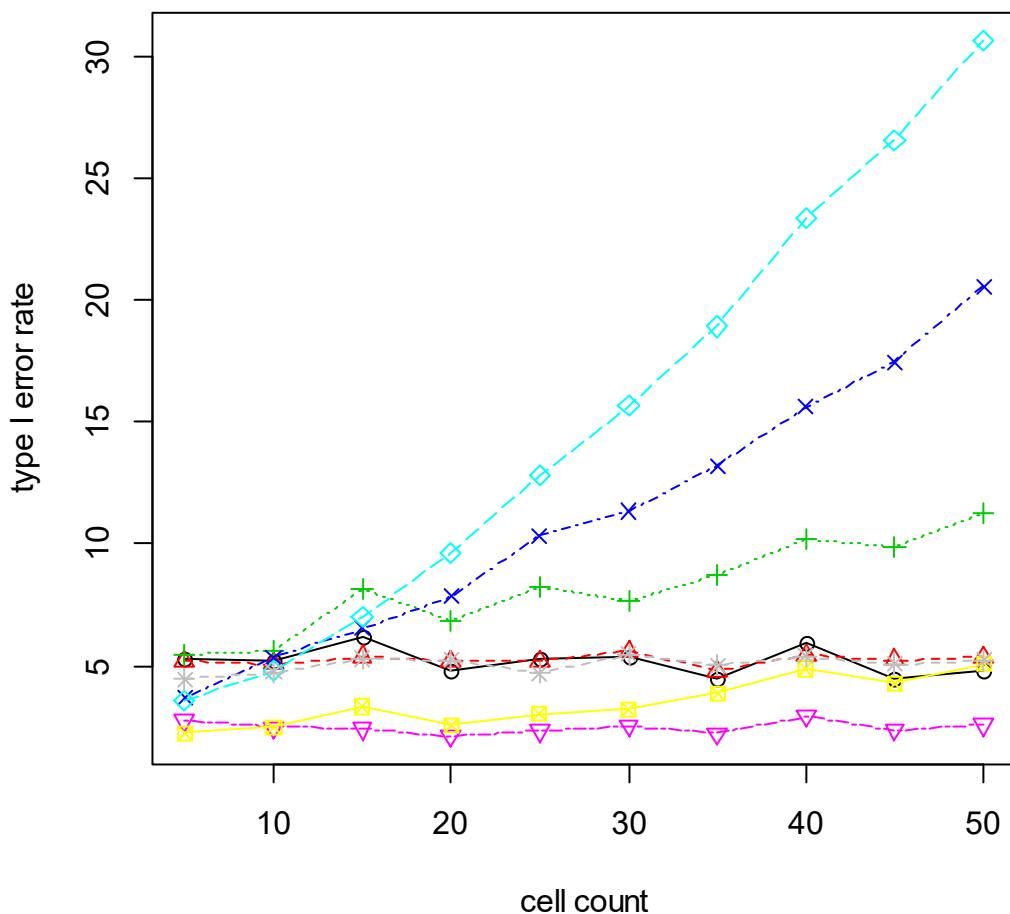
2. 8. 5   exponential distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.25	5.35	4.50	4.55	4.00	5.20	4.20	5.15	5.45	4.20
RT	6.00	6.35	7.35	8.45	9.65	13.05	11.85	14.35	16.75	16.85
INT	5.70	6.20	6.40	7.55	7.30	10.05	8.75	10.55	12.10	11.20
ART	9.35	9.65	11.60	13.55	14.15	17.10	18.70	21.45	22.05	24.25
ART+INT	4.25	4.35	4.85	6.10	6.80	8.70	9.25	12.65	13.70	15.20
Puri & Sen	4.00	4.70	5.15	6.65	7.85	9.85	9.20	11.75	13.00	13.30
v.d.Waerden	3.90	4.40	4.50	4.95	5.65	7.10	6.70	8.05	9.50	8.45
ATS	5.55	5.55	5.95	8.50	8.90	11.35	10.15	12.35	14.70	13.50
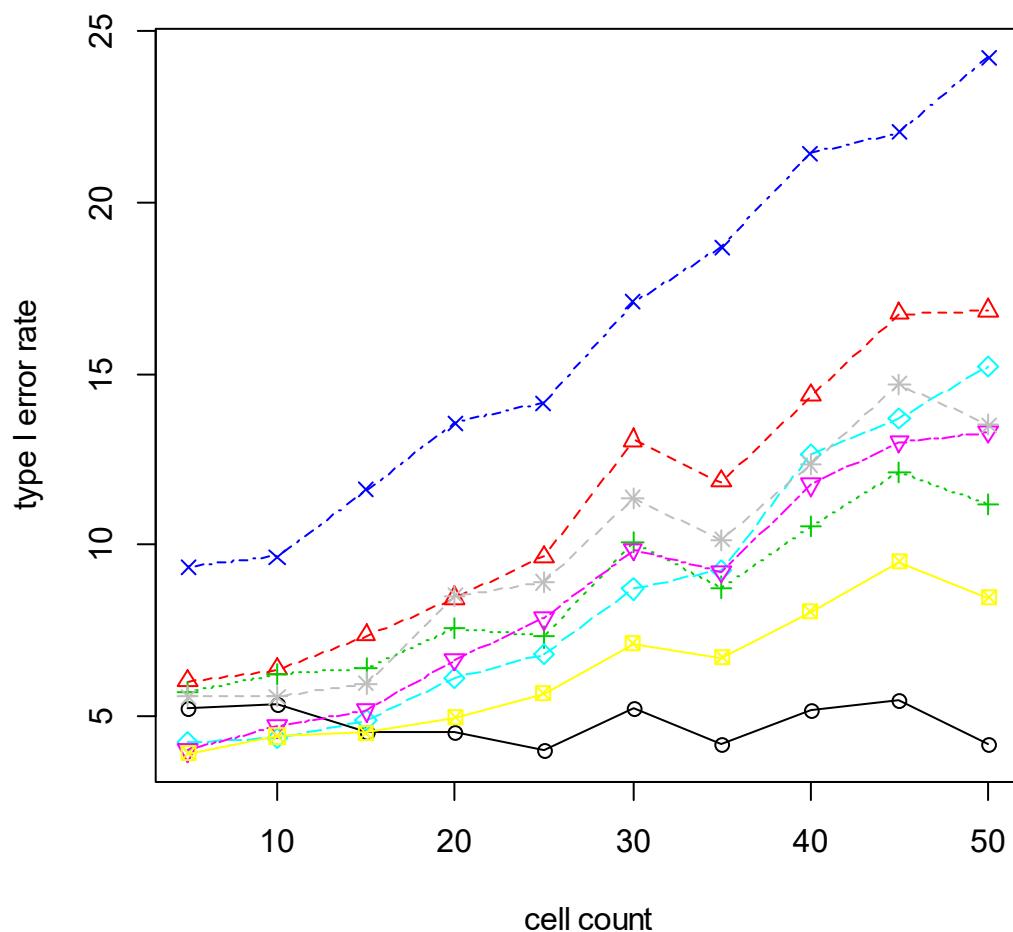
2. 8. 6   exponential distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.95	5.15	4.75	4.90	4.50	5.05	4.30	4.85	5.20	4.60
RT	5.95	5.55	7.15	8.55	9.75	12.10	11.10	13.55	16.15	15.35
INT	5.50	4.80	6.05	7.00	6.95	8.75	7.50	9.75	10.70	10.00
ART	9.75	10.05	12.00	14.55	16.15	18.20	18.95	24.00	25.70	27.20
ART+INT	4.45	4.50	5.25	6.50	7.50	10.05	10.15	13.05	16.30	16.60
Puri & Sen	4.10	4.05	5.15	6.00	7.50	9.30	8.35	10.60	12.40	12.70
v.d.Waerden	3.95	3.35	4.05	4.90	5.10	6.80	5.25	7.30	7.95	7.45
ATS	5.50	5.00	5.95	7.75	8.70	10.45	9.30	11.60	13.50	13.10
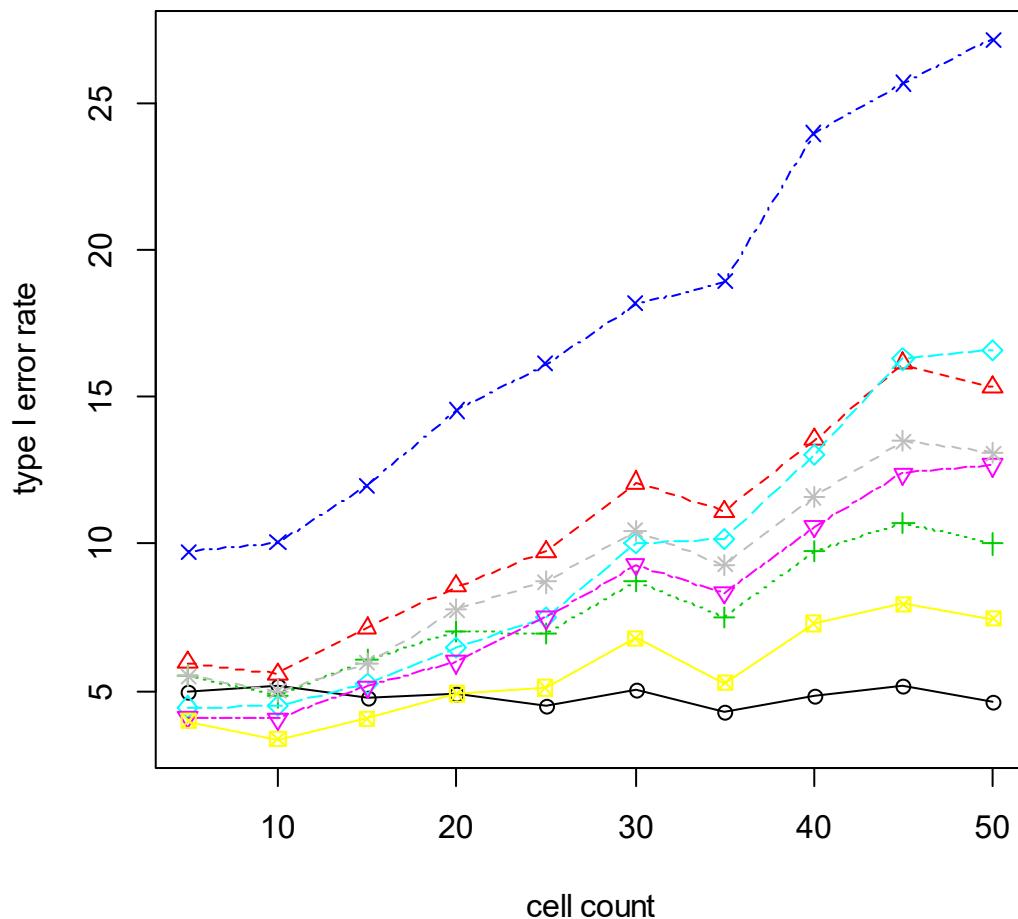
2. 8. 7   lognormal distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.65	5.25	4.85	4.90	5.90	4.95	4.70	5.10	5.35	5.65
RT	4.40	4.85	4.90	5.25	5.30	5.50	4.90	4.75	5.65	5.10
INT	4.45	5.30	4.60	5.30	6.20	5.50	5.35	5.40	6.05	5.80
ART	3.85	5.10	4.05	6.40	8.55	8.75	8.80	11.05	12.35	12.90
ART+INT	3.25	4.85	4.75	6.55	7.85	9.20	9.75	10.95	12.40	13.70
Puri & Sen	1.65	2.50	1.80	2.05	2.85	2.70	2.00	2.50	2.40	2.35
v.d.Waerden	1.80	2.65	2.45	2.15	3.05	2.70	2.60	2.50	2.60	3.05
ATS	3.60	4.65	3.90	4.55	5.40	5.10	4.60	5.05	5.15	5.15
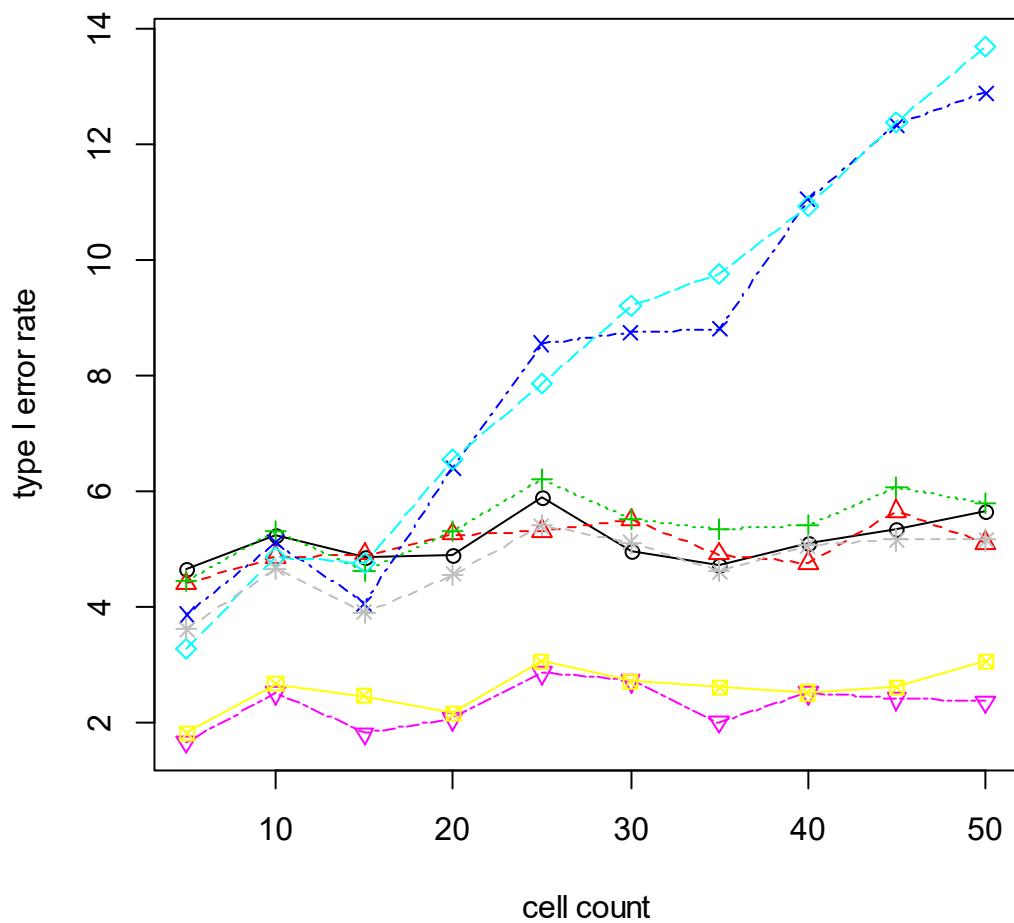
2. 8. 8   uniform distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.45	4.80	6.25	4.85	5.20	5.30	4.95	5.65	4.70	5.50
RT	5.55	4.95	6.15	4.90	5.05	5.10	4.65	5.65	4.95	5.50
INT	5.15	4.70	5.45	4.40	4.90	4.65	4.40	5.35	4.40	5.35
ART	3.60	4.20	5.55	5.85	6.25	7.40	8.55	10.00	9.80	11.65
ART+INT	3.65	4.50	6.30	8.15	9.50	11.85	13.90	16.20	18.95	22.55
Puri & Sen	2.80	2.75	3.10	2.70	2.95	3.05	2.25	3.05	2.70	3.40
v.d.Waerden	2.40	2.50	2.50	2.00	2.10	2.15	1.55	2.15	1.65	2.00
ATS	4.55	4.60	5.80	5.00	4.50	5.45	5.35	5.30	5.05	5.75
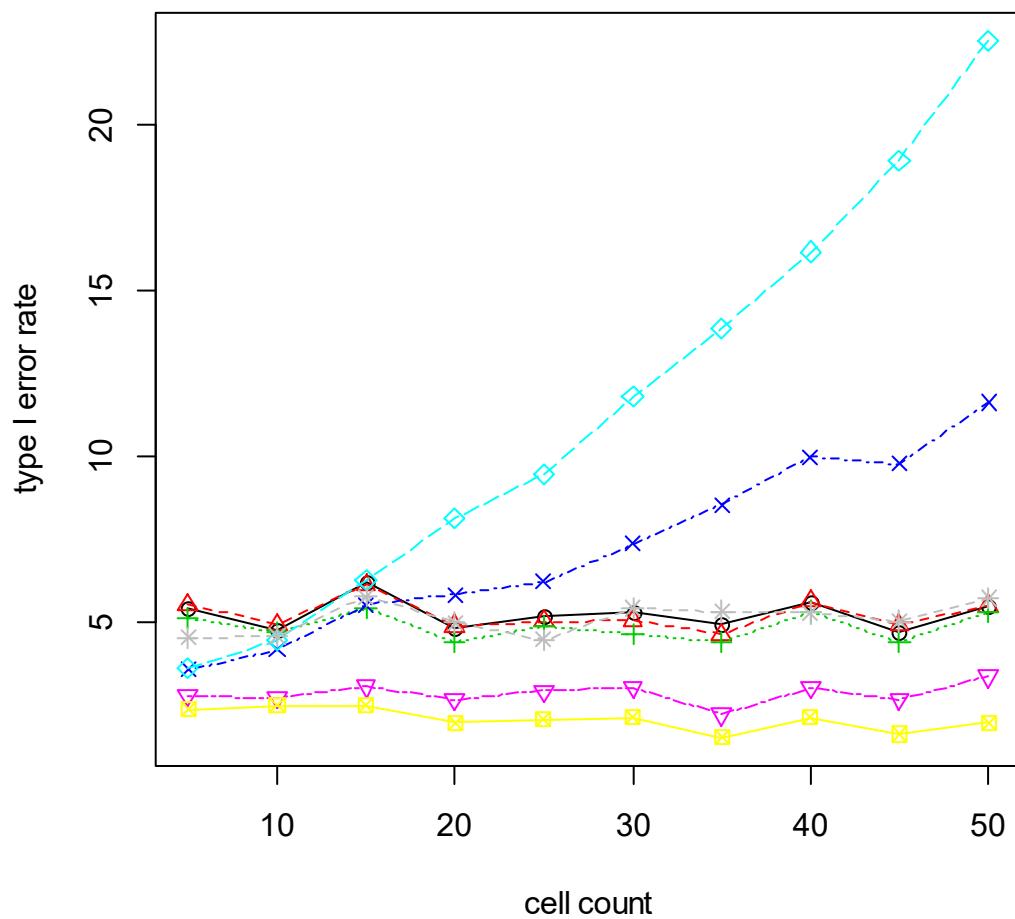
2. 8. 9   uniform distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.45	4.60	5.80	4.50	5.15	5.15	5.10	5.90	4.80	5.40
RT	5.25	4.45	5.90	4.65	5.15	5.15	4.90	5.65	4.95	5.50
INT	5.25	4.65	5.60	4.45	4.70	4.60	4.85	5.95	4.50	5.20
ART	3.85	4.30	5.65	6.50	7.55	9.85	11.30	13.30	14.80	17.25
ART+INT	3.50	4.70	6.60	8.45	10.70	12.85	15.95	20.35	23.80	28.45
Puri & Sen	3.00	2.75	3.50	2.85	3.25	3.00	2.55	3.50	3.15	3.65
v.d.Waerden	2.75	2.65	2.50	2.10	2.45	2.50	1.70	3.00	2.30	2.70
ATS	4.00	4.70	5.70	4.85	4.45	5.55	4.85	6.05	5.10	5.80
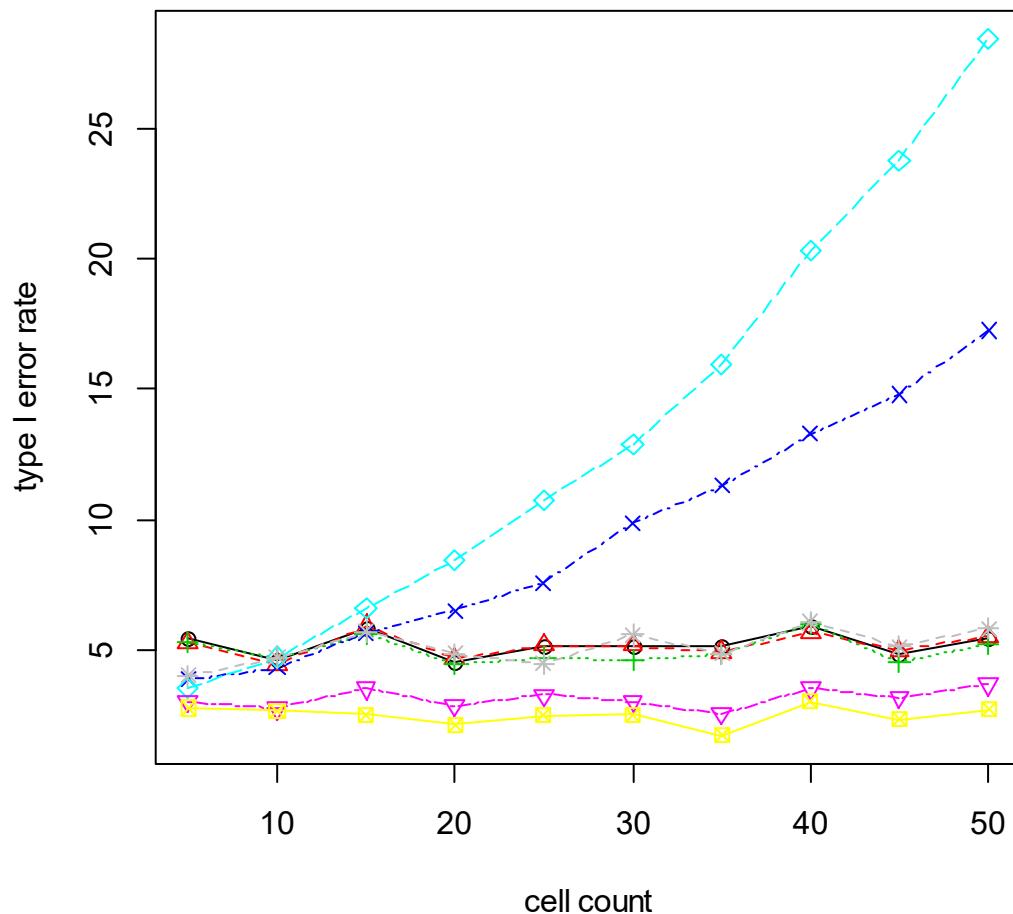
2. 8. 10   left/right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.30	5.20	5.60	4.95	4.95	5.15	4.40	5.20	4.80	5.45
RT	5.05	4.50	5.15	4.70	4.70	5.00	5.00	5.70	5.25	5.60
INT	5.25	5.45	5.90	5.15	4.65	4.95	4.45	5.60	5.00	5.50
ART	3.15	3.85	4.55	4.60	6.90	7.50	7.60	10.20	9.70	11.15
ART+INT	3.70	4.80	7.60	8.80	12.40	15.15	16.95	21.00	23.75	27.65
Puri & Sen	2.75	2.80	2.75	2.60	2.50	2.75	2.95	3.15	3.05	3.35
v.d.Waerden	2.65	2.65	2.70	2.45	2.15	2.20	2.05	3.00	2.40	2.55
ATS	4.85	4.40	5.60	4.90	4.60	5.45	5.35	5.40	5.35	5.90
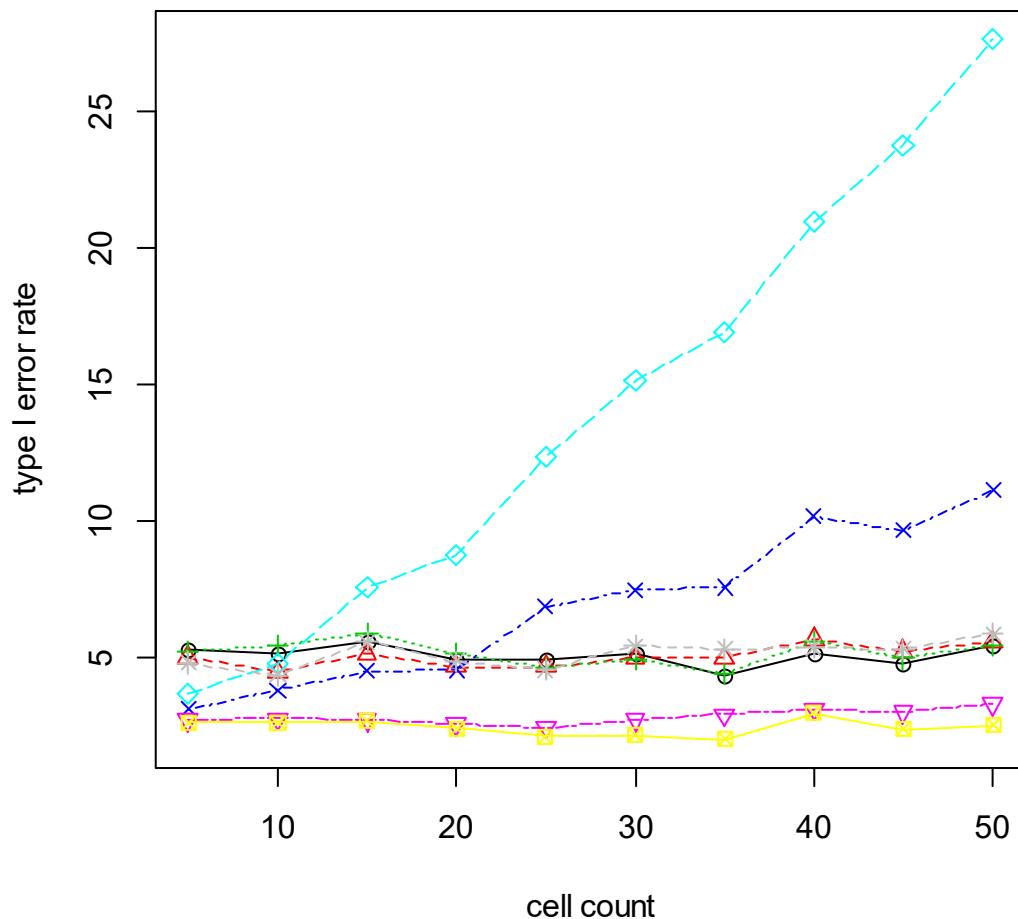
2. 8. 11   left skewed distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.10	5.75	6.55	5.35	5.60	5.50	5.60	6.55	5.30	5.50
RT	5.85	5.85	7.00	6.40	6.25	6.25	6.15	7.70	6.55	7.05
INT	5.60	5.10	5.55	5.60	5.10	5.15	5.65	6.60	5.90	6.55
ART	4.20	5.45	7.35	8.35	9.60	10.80	12.40	14.25	15.55	18.50
ART+INT	4.05	5.40	8.15	10.10	11.55	13.25	15.20	17.55	19.90	23.30
Puri & Sen	3.60	3.85	4.25	3.80	4.15	4.05	4.30	5.10	4.55	4.80
v.d.Waerden	3.20	3.10	3.15	2.95	2.80	3.30	3.15	4.20	3.35	3.25
ATS	4.20	5.30	6.15	5.95	5.85	5.80	5.80	7.35	6.15	7.60
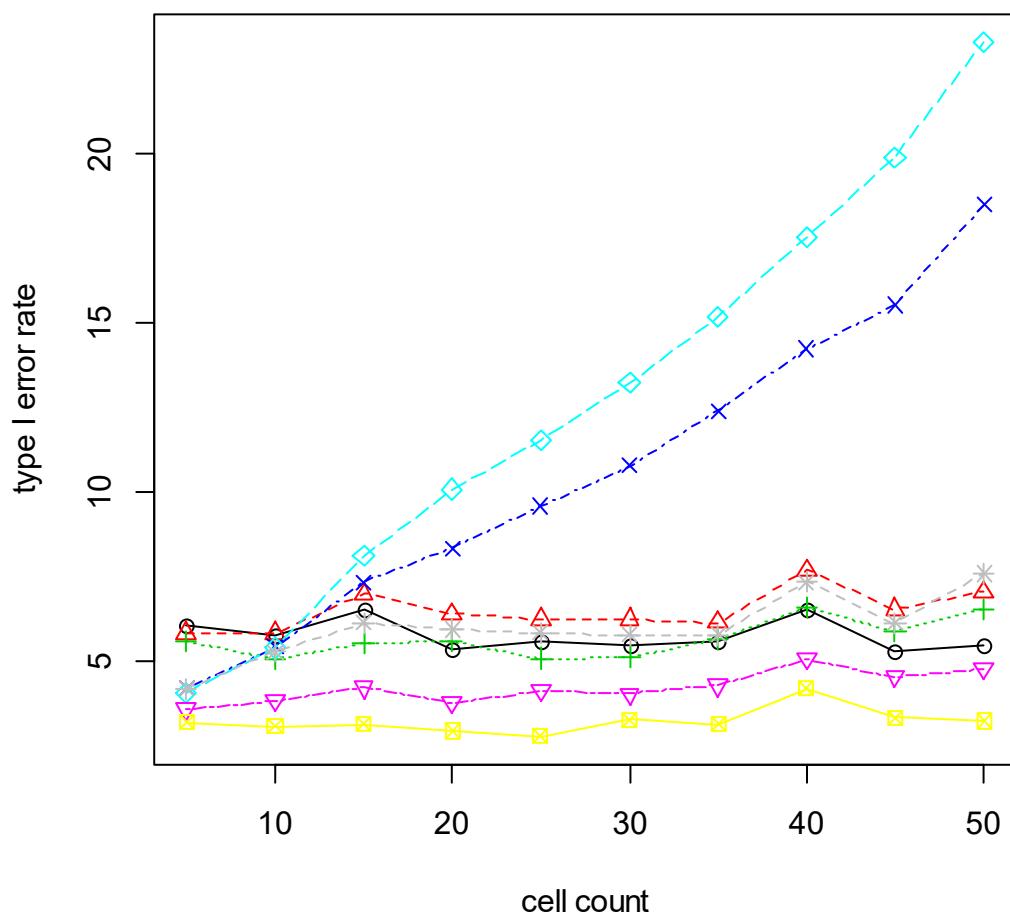
2. 8. 12   left skewed distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	8.50	7.65	8.35	7.80	7.15	7.10	7.85	7.95	6.50	6.95
RT	7.40	7.30	8.35	9.60	10.30	11.75	12.50	13.65	13.80	14.50
INT	7.25	7.35	7.85	8.30	8.35	8.50	8.70	10.00	8.50	9.25
ART	5.35	6.35	7.85	8.55	10.15	10.65	12.20	13.45	12.90	15.80
ART+INT	4.90	5.60	7.45	9.10	10.35	11.75	13.90	15.15	16.65	19.60
Puri & Sen	3.90	4.70	5.70	6.00	6.80	8.05	8.25	9.75	9.40	10.60
v.d.Waerden	3.85	4.00	4.95	4.50	4.40	4.95	5.70	5.50	5.45	5.65
ATS	4.65	5.95	7.25	8.00	9.05	10.65	10.75	12.55	12.05	12.90
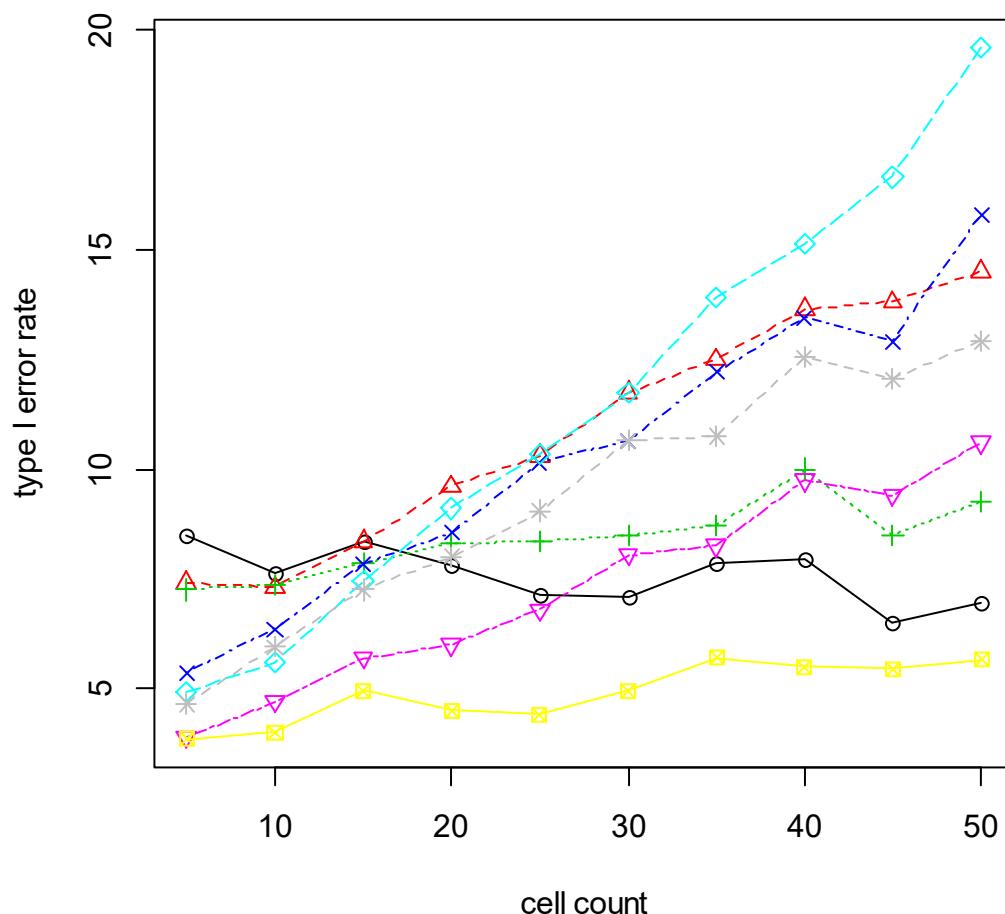
2. 8. 13   normal distribution - unequal variances (small n_i - small s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	1.30	1.00	0.65	1.10	1.00	1.30	1.15	0.90	1.20	1.20
RT	2.00	1.80	1.45	2.30	2.40	2.80	2.75	2.05	2.35	2.60
INT	1.10	0.95	0.75	1.10	1.00	1.35	1.50	1.10	1.20	1.25
ART	6.85	6.60	8.05	10.15	9.35	11.50	12.50	14.40	16.00	16.65
ART+INT	4.40	4.90	5.70	6.95	7.30	9.25	9.25	10.70	13.20	13.95
Puri & Sen	0.75	0.45	0.40	0.85	0.90	1.25	1.10	0.85	0.95	1.15
v.d.Waerden	0.30	0.35	0.25	0.45	0.45	0.70	0.50	0.45	0.65	0.60
ATS	4.90	4.30	4.55	5.40	6.05	5.90	5.95	5.20	5.55	5.55
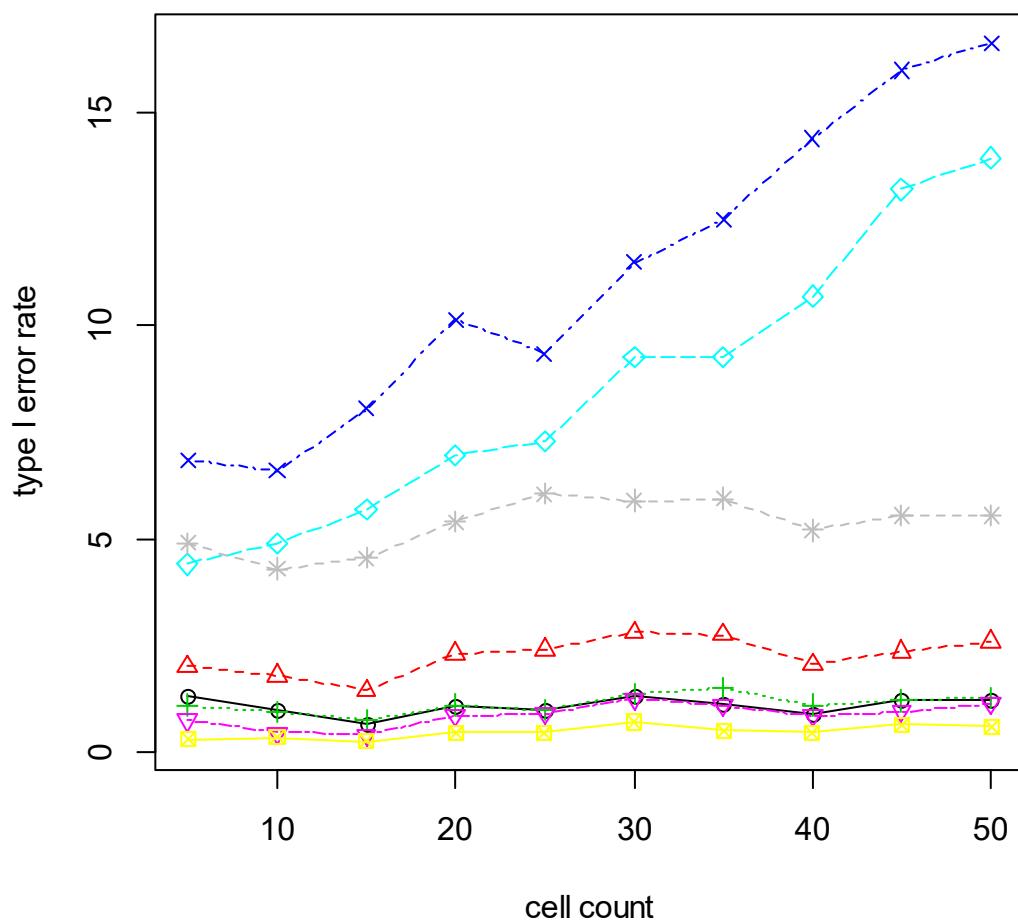
2. 8. 14   normal distribution - unequal variances (small n_i - large s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	19.65	17.35	17.05	17.25	17.05	17.45	17.65	17.20	16.90	17.20
RT	12.05	10.75	10.35	11.55	11.20	11.70	12.60	11.85	12.05	11.70
INT	15.90	14.45	14.45	14.85	15.45	15.75	15.35	15.30	15.00	15.35
ART	4.90	4.75	5.50	6.70	7.00	8.95	9.75	10.55	12.35	13.50
ART+INT	5.90	4.80	5.30	6.50	7.00	8.10	9.30	9.75	11.80	13.25
Puri & Sen	6.15	5.40	5.85	6.45	6.00	6.75	7.35	6.35	7.30	7.15
v.d.Waerden	8.95	7.50	8.35	8.90	9.10	10.15	10.45	8.90	10.20	9.50
ATS	4.60	4.50	5.00	5.00	5.40	5.50	6.05	4.95	5.50	5.35
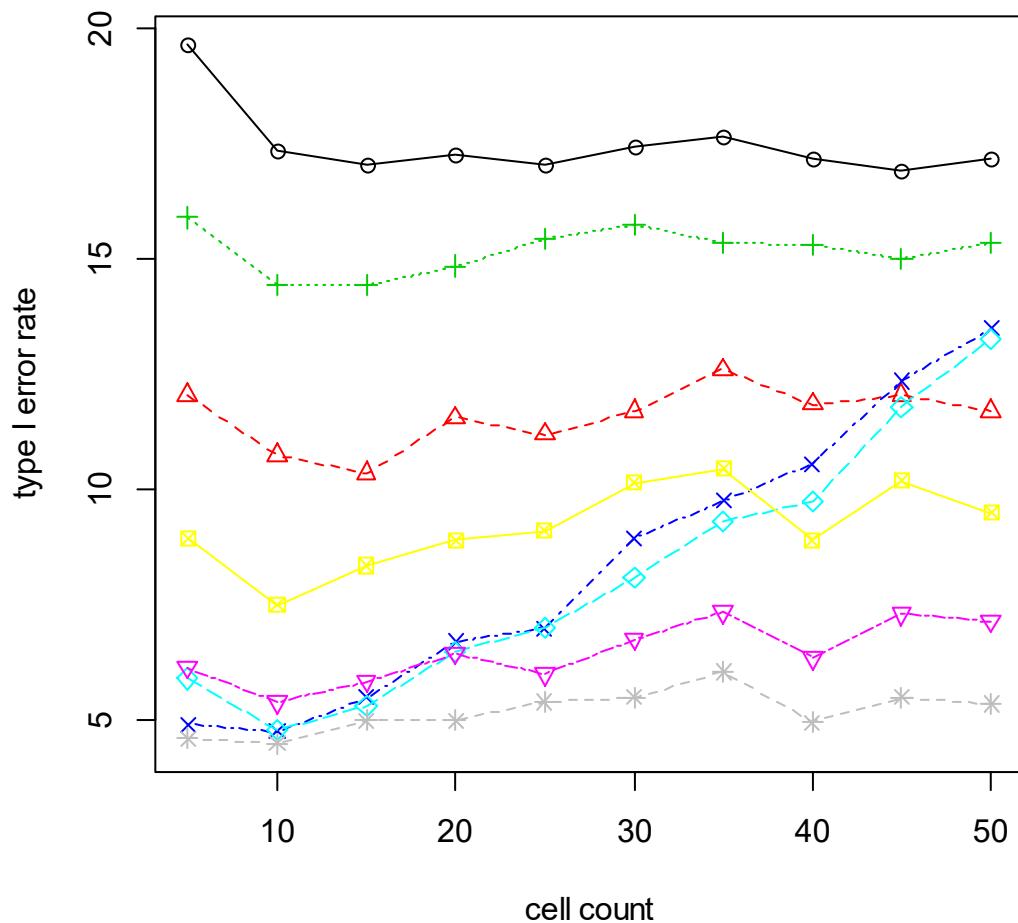
2. 8. 15   left skewed distribution - unequal variances (small n_i - small s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	1.45	1.20	1.05	0.85	1.20	1.40	0.95	1.60	0.90	1.05
RT	2.20	1.80	2.05	1.65	1.90	2.20	1.80	2.35	1.80	2.40
INT	1.45	0.80	0.95	0.65	1.00	1.15	0.75	1.30	0.90	1.00
ART	4.70	5.25	6.30	8.10	8.25	9.00	9.60	11.00	10.85	13.65
ART+INT	2.80	3.15	3.85	5.10	5.85	6.65	6.95	8.70	9.00	10.30
Puri & Sen	1.05	0.90	0.55	0.75	0.95	0.95	0.75	1.35	0.85	1.05
v.d.Waerden	0.55	0.25	0.20	0.45	0.35	0.40	0.35	0.60	0.50	0.40
ATS	4.30	5.20	6.20	5.15	6.10	6.25	5.85	6.55	5.40	6.65
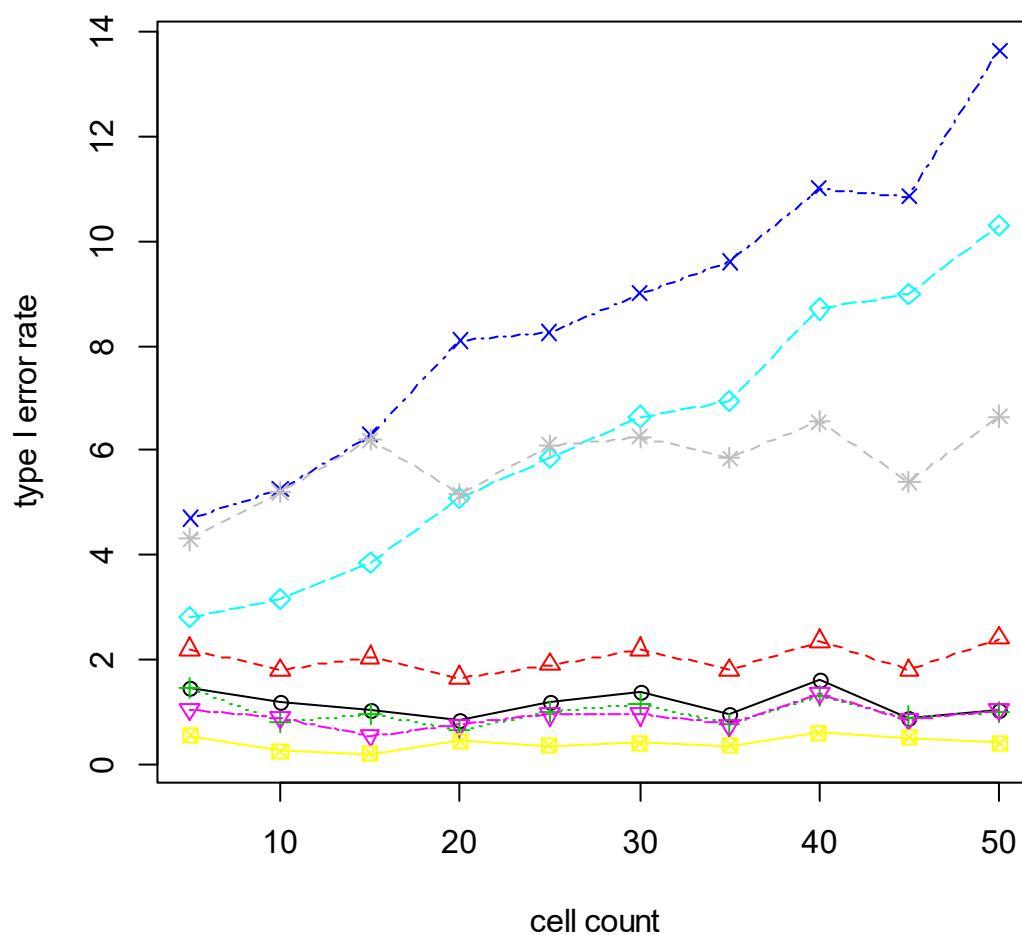
2. 8. 16   left skewed distribution - unequal variances (small n_i - large s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	19.40	18.00	18.35	18.05	17.75	18.90	17.45	18.35	17.85	16.65
RT	14.40	13.60	13.65	13.70	14.00	14.75	15.40	14.85	14.55	14.30
INT	20.35	20.55	20.80	20.35	20.15	21.20	20.15	20.90	19.80	20.95
ART	5.35	6.25	7.45	8.55	9.50	11.50	12.95	14.40	14.40	16.05
ART+INT	5.35	5.60	6.50	8.65	9.45	11.15	12.65	14.75	15.30	18.35
Puri & Sen	7.95	7.80	9.00	8.70	8.55	9.80	9.90	9.50	9.75	9.05
v.d.Waerden	11.85	12.30	13.25	13.20	13.40	13.85	13.10	13.90	13.75	13.35
ATS	5.40	5.50	5.50	5.95	5.60	6.40	6.35	6.20	6.70	6.40
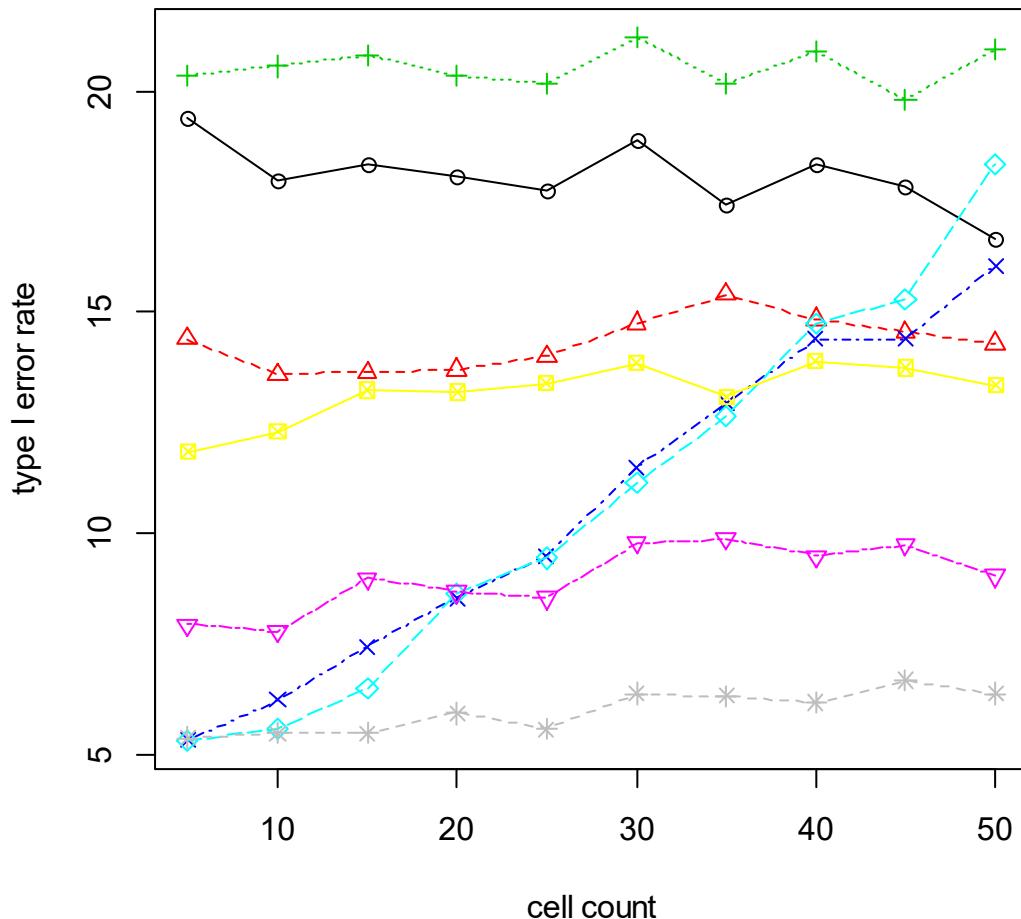
2. 9.   Interaction AB - null model
(equal n_i / # levels = 2*4)

2. 9. 1   normal distribution - equal variances

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.75	4.65	4.90	4.25	4.90	4.85	4.85	5.35	4.95	4.75
RT	4.85	5.10	5.20	4.50	5.00	4.95	4.95	5.55	4.95	4.70
INT	4.95	5.10	4.85	4.15	4.90	5.10	4.80	5.25	4.85	4.65
ART	4.70	5.50	5.35	4.25	4.75	4.90	5.25	5.70	4.90	4.90
ART+INT	4.80	5.25	4.95	4.25	4.80	5.05	4.80	5.45	4.80	4.50
Puri & Sen	4.40	4.40	4.95	4.45	4.80	4.85	4.90	5.55	4.85	4.60
v.d.Waerden	4.25	4.65	4.65	4.00	4.80	5.05	4.75	5.25	4.80	4.65
ATS	4.20	4.95	5.00	4.50	4.95	4.95	4.95	5.50	4.90	4.70
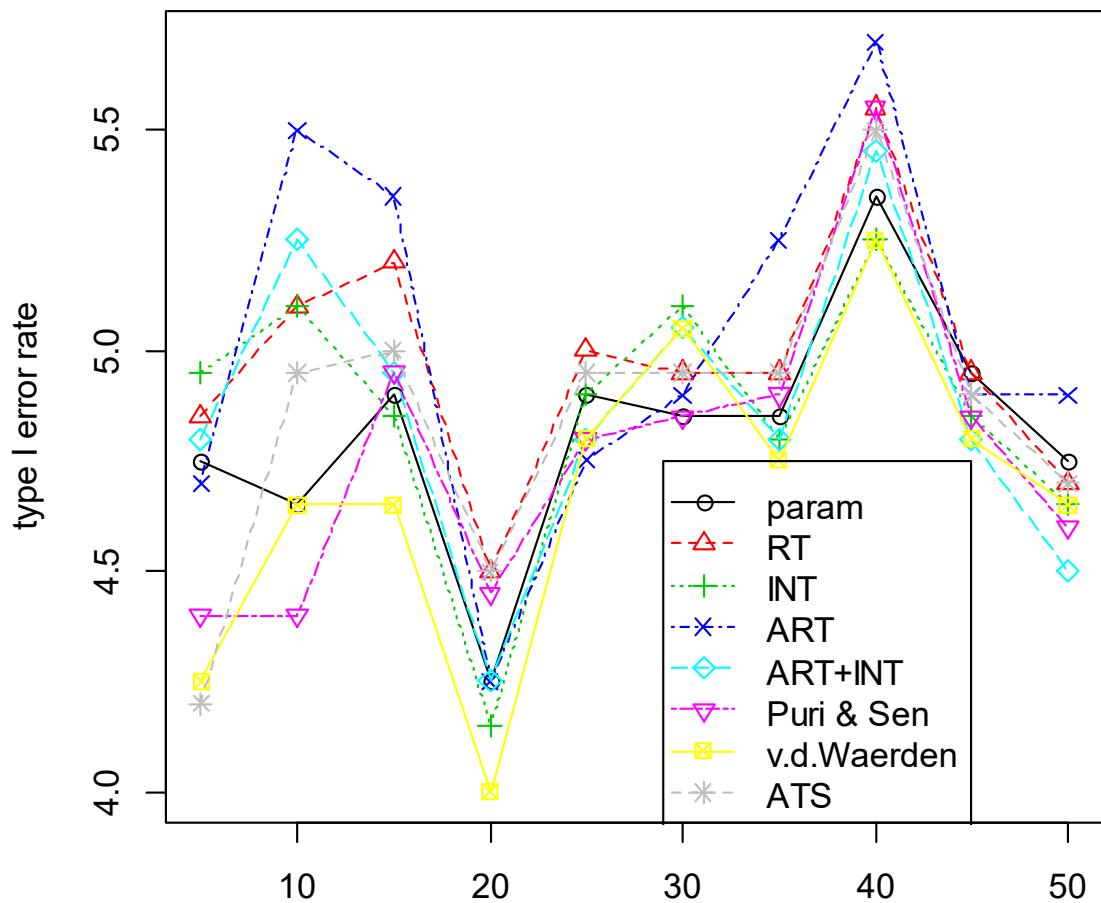
2. 9. 2   normal distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.00	5.85	5.95	6.70	6.10	6.05	6.75	7.05	5.85	6.30
RT	5.55	4.65	5.15	5.80	5.20	4.75	5.50	5.70	5.30	5.50
INT	5.80	5.05	5.30	6.30	5.55	5.90	6.40	6.70	5.15	5.60
ART	6.00	6.15	5.95	6.85	6.20	6.00	6.45	6.55	6.20	6.55
ART+INT	6.45	5.70	6.05	6.80	6.30	6.40	6.75	7.00	5.50	6.00
Puri & Sen	4.55	4.45	4.80	5.70	4.85	4.65	5.45	5.45	5.20	5.35
v.d.Waerden	4.65	4.65	5.30	6.15	5.40	5.50	6.30	6.45	5.10	5.45
ATS	4.45	4.40	4.90	5.70	5.05	4.65	5.45	5.70	5.10	5.40
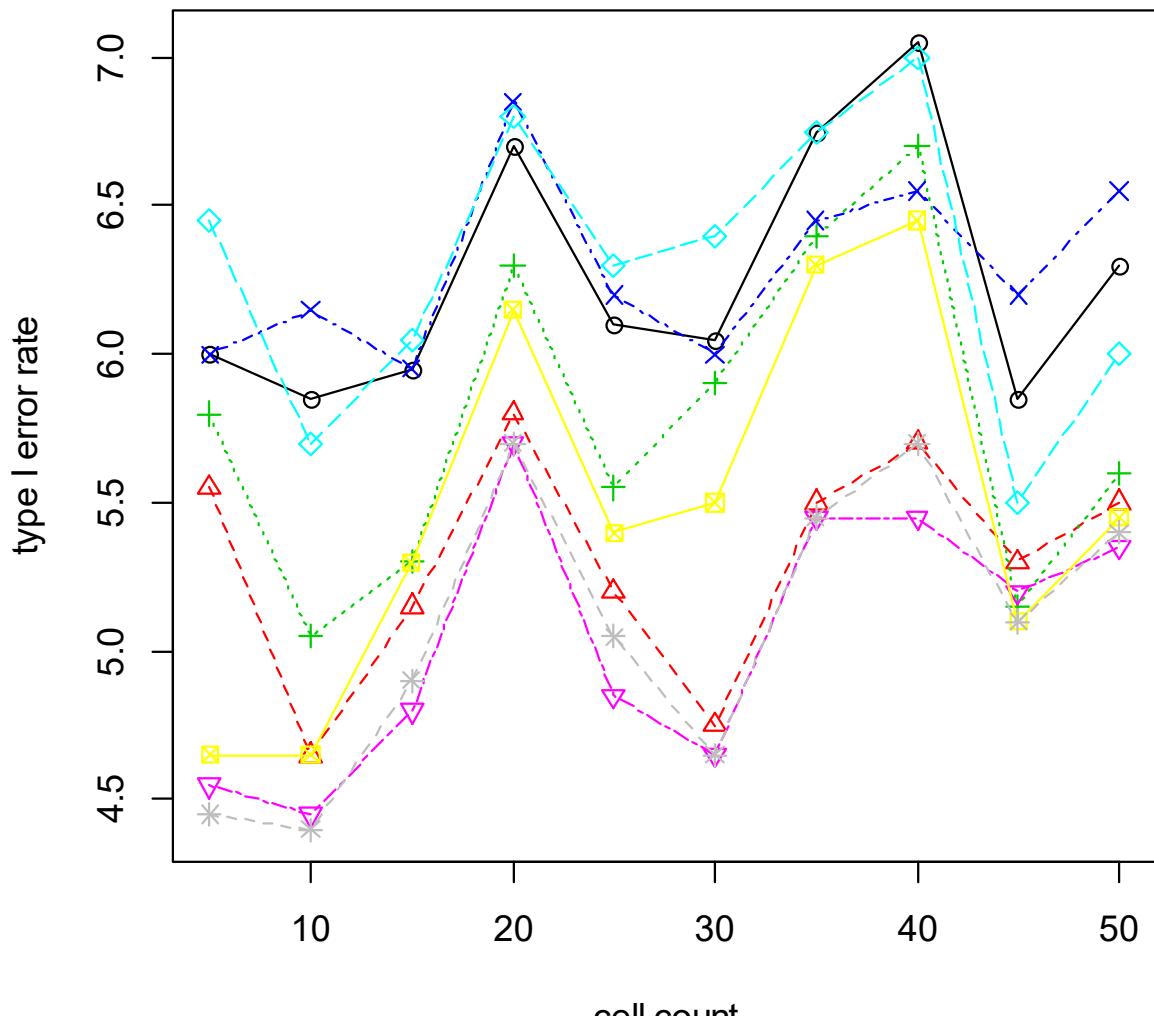
2. 9. 3   normal distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.75	5.60	5.70	6.20	5.50	5.85	6.80	6.40	5.85	6.10
RT	5.10	5.70	5.65	5.60	5.10	5.00	5.35	5.55	4.95	5.75
INT	5.05	5.35	5.75	5.95	4.90	5.25	6.00	5.65	5.10	5.80
ART	6.35	6.75	6.45	6.60	6.40	6.55	6.95	6.65	6.00	6.85
ART+INT	6.10	5.90	6.00	6.20	5.85	5.95	6.45	6.40	6.00	6.40
Puri & Sen	4.20	4.75	5.20	5.45	5.00	4.80	5.25	5.55	4.90	5.75
v.d.Waerden	4.50	4.95	5.20	5.65	4.80	5.25	5.80	5.60	5.05	5.75
ATS	4.40	5.05	5.35	5.55	5.00	4.85	5.25	5.50	4.90	5.75
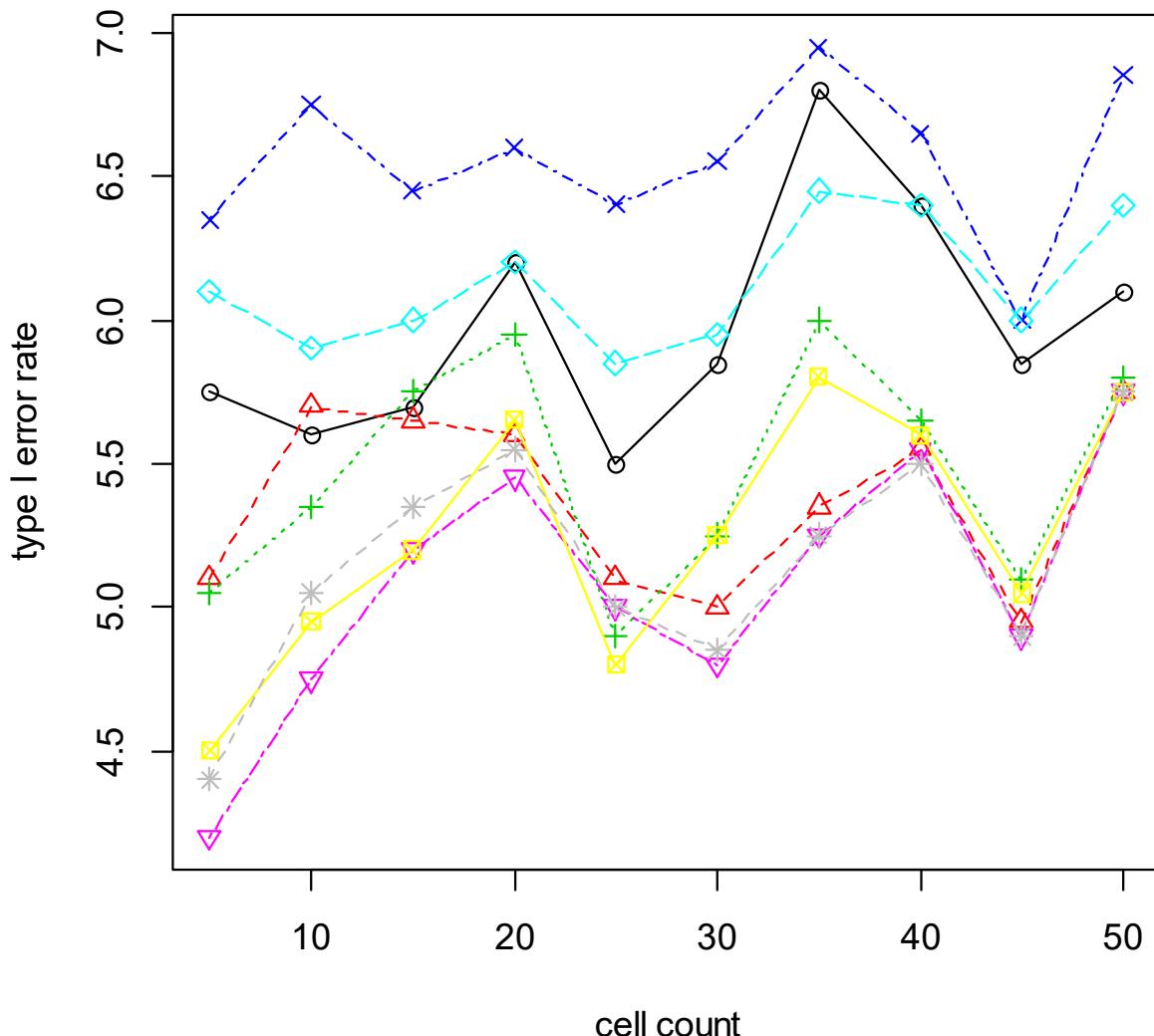
2. 9. 4   right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.30	5.00	3.90	5.20	4.80	4.65	4.70	4.40	5.95	4.50
RT	5.40	5.15	4.30	4.70	5.10	4.60	4.70	4.30	5.20	4.70
INT	4.90	4.80	4.20	4.70	4.80	4.80	4.45	4.65	4.70	4.90
ART	5.45	4.90	4.50	5.10	5.40	4.90	4.85	4.40	5.25	4.60
ART+INT	5.25	4.90	4.55	4.95	5.00	4.80	4.90	4.30	5.00	4.80
Puri & Sen	4.90	5.05	4.00	4.40	4.95	4.55	4.75	4.25	5.15	4.60
v.d.Waerden	4.45	4.65	3.80	4.55	4.55	4.65	4.35	4.60	4.70	4.80
ATS	4.50	4.90	4.05	4.60	5.10	4.60	4.70	4.30	5.20	4.65
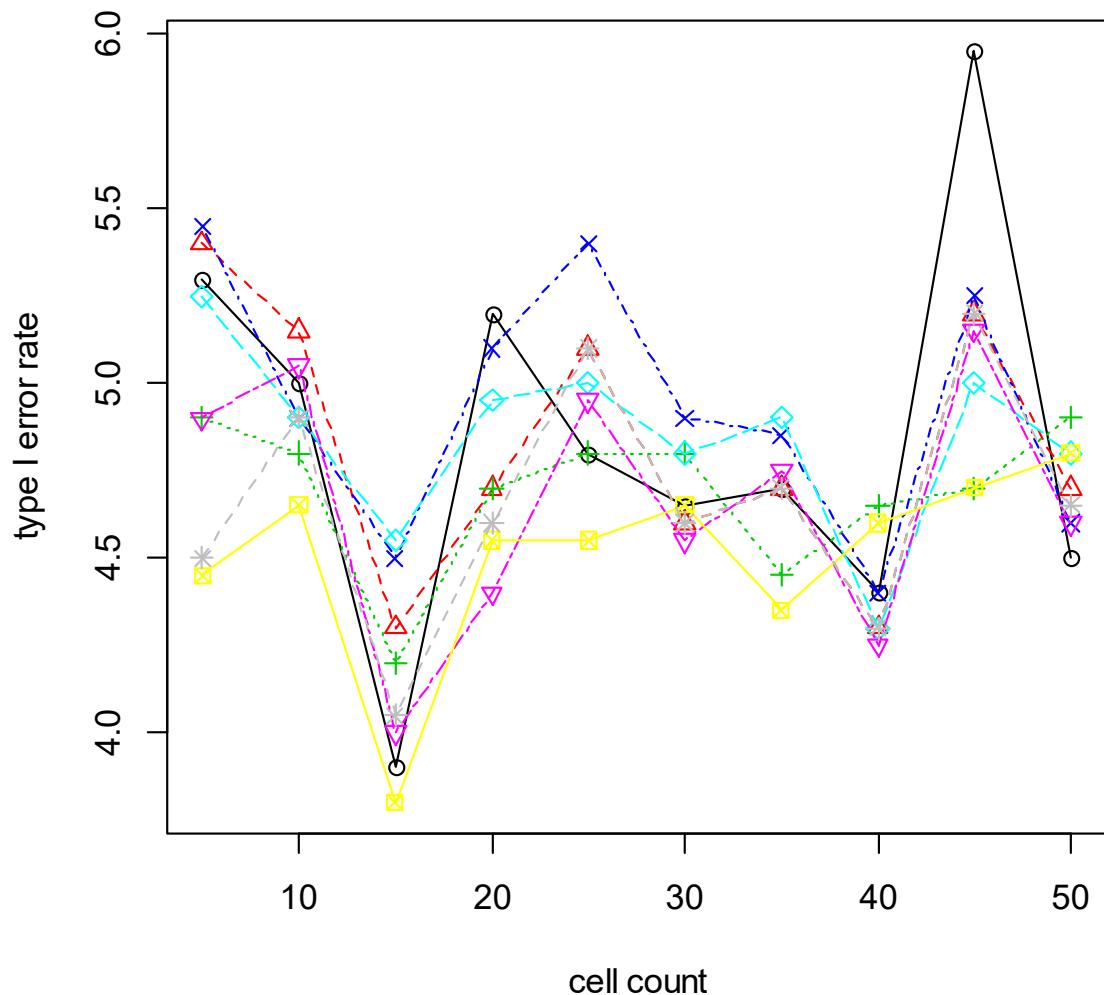
2. 9. 5　exponential distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	3.75	4.65	4.30	5.25	4.80	5.05	5.50	4.95	5.35	5.70
RT	5.40	5.35	5.55	5.30	4.95	4.70	5.65	5.45	5.20	5.80
INT	5.55	5.35	4.60	5.65	4.40	4.70	5.50	5.90	4.95	5.65
ART	5.85	5.70	5.65	5.75	5.60	5.60	5.60	5.90	5.75	6.00
ART+INT	4.95	4.95	5.00	5.45	4.30	4.85	4.80	4.95	5.30	5.40
Puri & Sen	4.70	5.15	5.40	5.10	4.95	4.60	5.40	5.25	5.05	5.85
v.d.Waerden	4.65	4.95	4.30	5.55	4.40	4.60	5.45	5.75	4.90	5.55
ATS	4.40	5.25	5.55	5.25	4.95	4.65	5.50	5.30	5.15	5.75
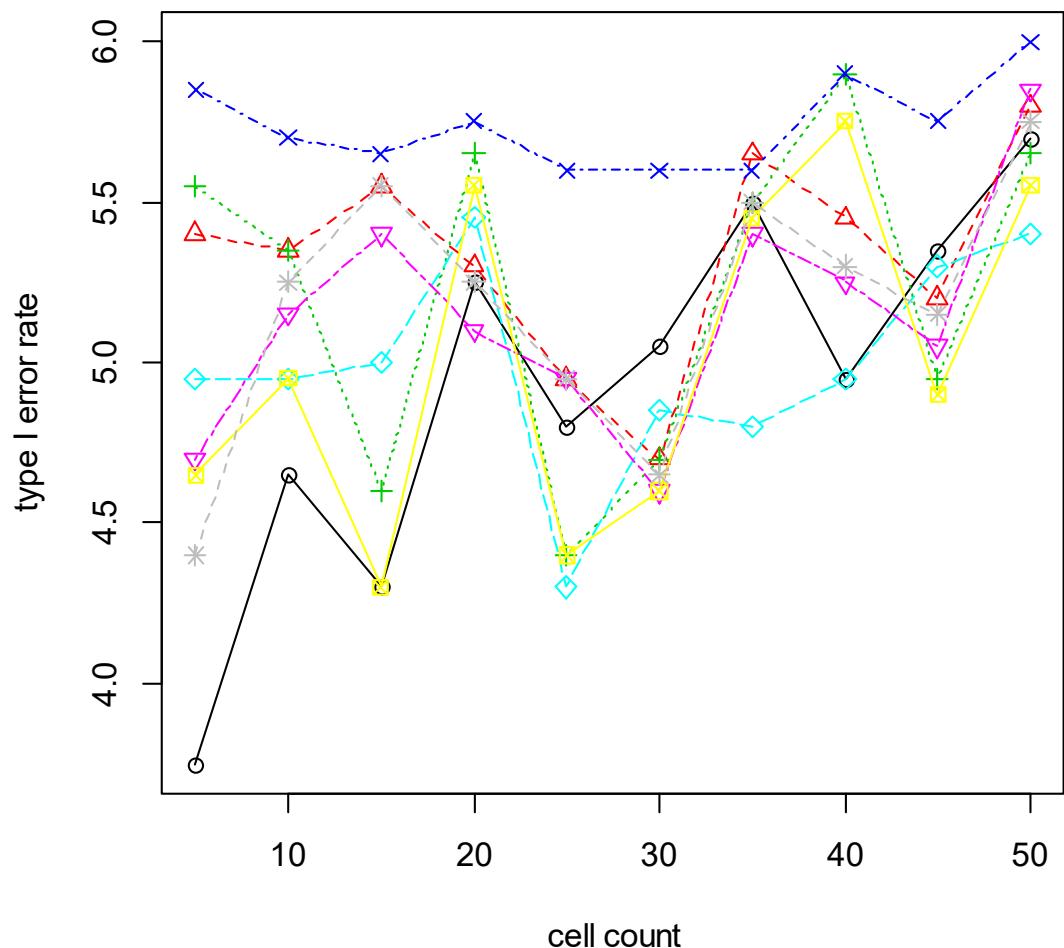
2. 9. 6   exponential distribution - discrete

	cell count									
method	5	10	15	20	25	30	35	40	45	50
parametric	3.60	4.30	4.55	5.50	5.20	4.95	5.25	4.95	5.30	5.50
RT	5.30	5.65	5.30	4.95	4.95	5.05	5.70	5.55	4.90	5.95
INT	5.20	5.65	4.70	5.30	4.50	4.60	5.50	5.40	5.10	6.00
ART	6.00	6.15	6.25	6.30	6.15	6.80	6.75	7.00	6.70	6.85
ART+INT	5.40	5.05	5.25	5.15	5.15	5.45	5.30	6.00	5.55	6.10
Puri & Sen	4.80	5.25	5.15	4.70	4.70	4.85	5.35	5.50	4.90	5.95
v.d.Waerden	4.90	5.30	4.55	5.20	4.50	4.55	5.45	5.30	5.00	6.00
ATS	4.65	5.25	5.25	4.95	4.90	4.95	5.65	5.50	4.85	5.90
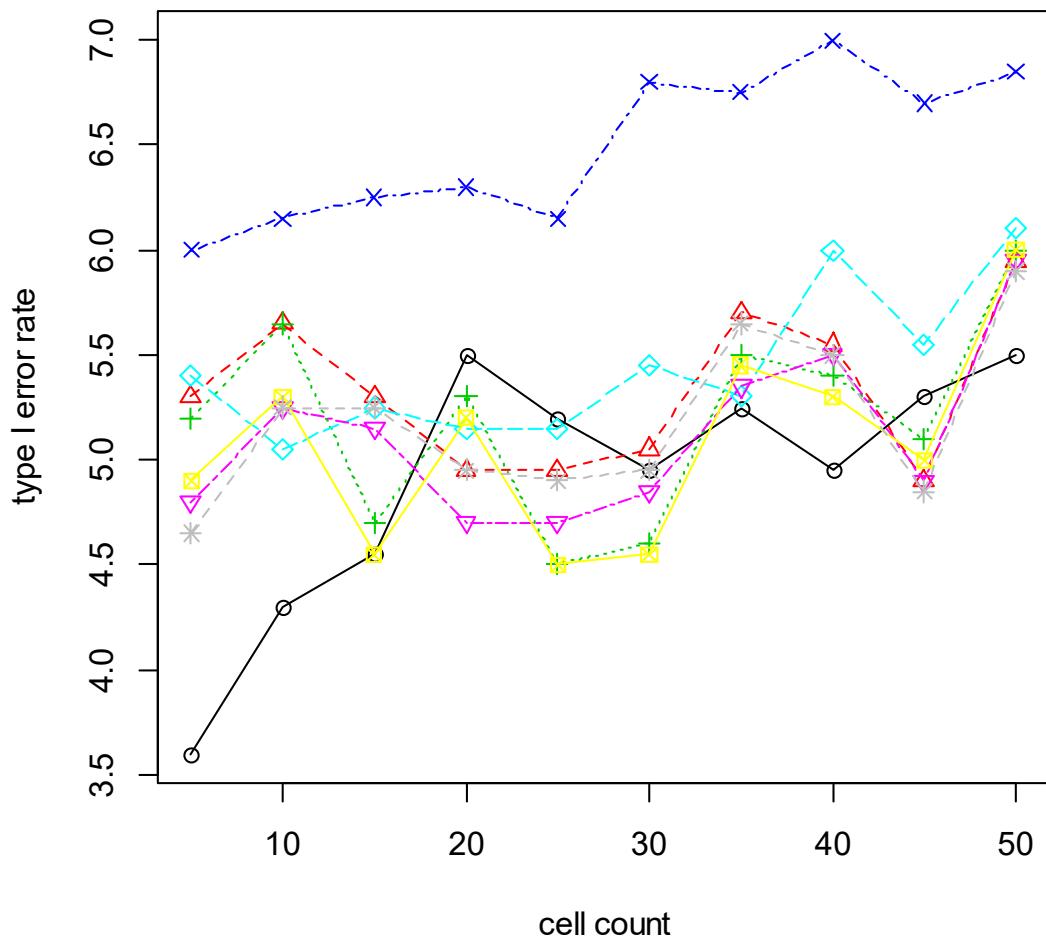
2. 9. 7   lognormal distribution

	cell count									
method	5	10	15	20	25	30	35	40	45	50
parametric	4.50	4.85	5.15	5.20	5.00	5.15	5.25	5.45	5.25	4.85
RT	4.90	3.95	4.90	5.10	4.80	5.05	4.75	5.35	4.95	4.65
INT	4.75	4.45	4.80	5.00	5.15	4.45	4.90	5.95	4.90	4.75
ART	4.05	4.60	5.00	4.90	4.75	5.25	4.75	5.25	5.10	4.90
ART+INT	4.75	4.50	5.15	4.90	5.00	4.45	4.90	5.75	5.05	4.90
Puri & Sen	3.40	3.60	4.60	4.85	4.65	4.85	4.55	5.30	4.60	4.50
v.d.Waerden	3.35	3.90	4.65	4.70	5.05	4.25	4.80	5.75	4.90	4.70
ATS	3.25	3.75	4.65	4.95	4.70	5.00	4.60	5.35	4.80	4.55
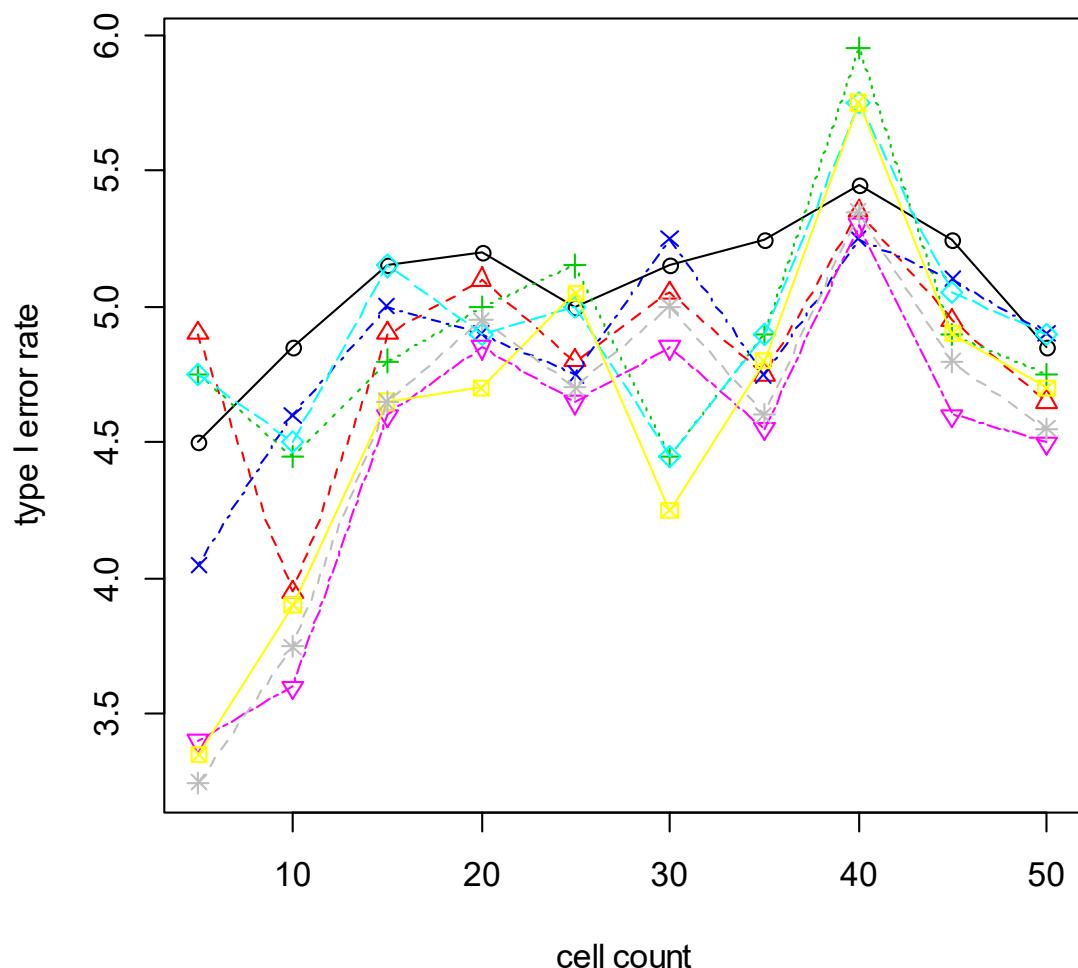
2. 9. 8   uniform distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.30	5.10	4.05	4.85	5.05	4.70	4.85	4.35	5.10	4.55
RT	5.40	5.15	4.30	4.70	5.10	4.60	4.70	4.30	5.20	4.70
INT	4.90	4.80	4.20	4.70	4.80	4.80	4.45	4.65	4.70	4.90
ART	5.25	5.30	4.10	5.00	5.05	4.60	4.70	4.25	5.20	4.55
ART+INT	4.90	5.25	3.75	4.70	4.80	5.05	4.55	4.70	4.75	4.95
Puri & Sen	4.90	5.05	4.00	4.40	4.95	4.55	4.75	4.25	5.15	4.60
v.d.Waerden	4.45	4.65	3.80	4.55	4.55	4.65	4.35	4.60	4.70	4.80
ATS	4.50	4.90	4.05	4.60	5.10	4.60	4.70	4.30	5.20	4.65
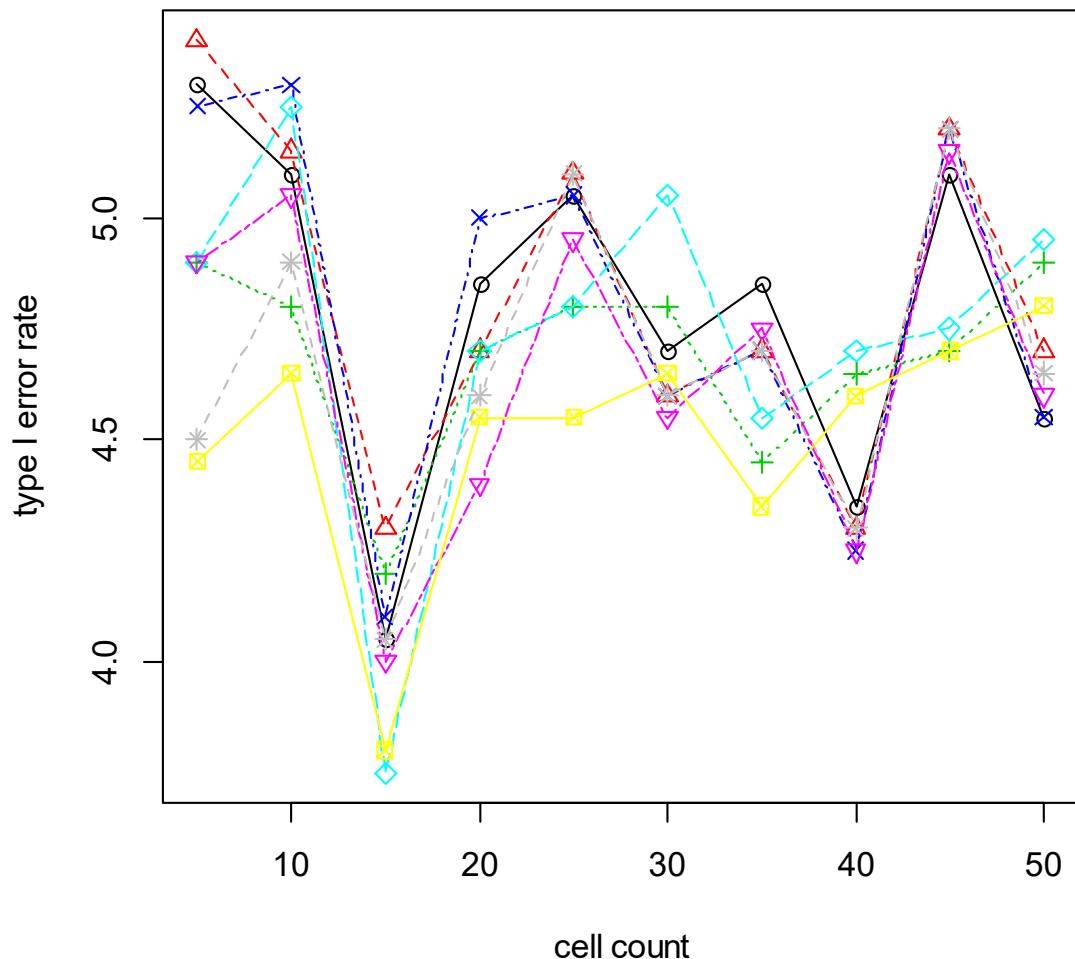
2. 9. 9   uniform distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.70	4.55	4.35	4.80	5.60	4.10	4.30	4.60	5.10	4.80
RT	5.65	4.65	4.40	4.75	5.45	4.05	4.20	4.55	5.05	4.95
INT	5.55	4.85	4.70	4.90	5.45	4.40	4.10	4.45	4.95	5.20
ART	5.75	4.50	4.85	5.00	5.95	5.15	4.85	5.40	6.30	6.15
ART+INT	5.55	4.55	5.15	5.20	5.00	4.95	4.95	4.65	6.00	6.20
Puri & Sen	5.15	4.50	4.15	4.60	5.40	4.00	4.20	4.45	5.10	4.95
v.d.Waerden	5.40	4.55	4.45	5.00	5.30	4.40	4.10	4.25	4.90	5.10
ATS	4.55	4.55	4.20	4.60	5.45	4.05	4.20	4.55	5.05	4.90
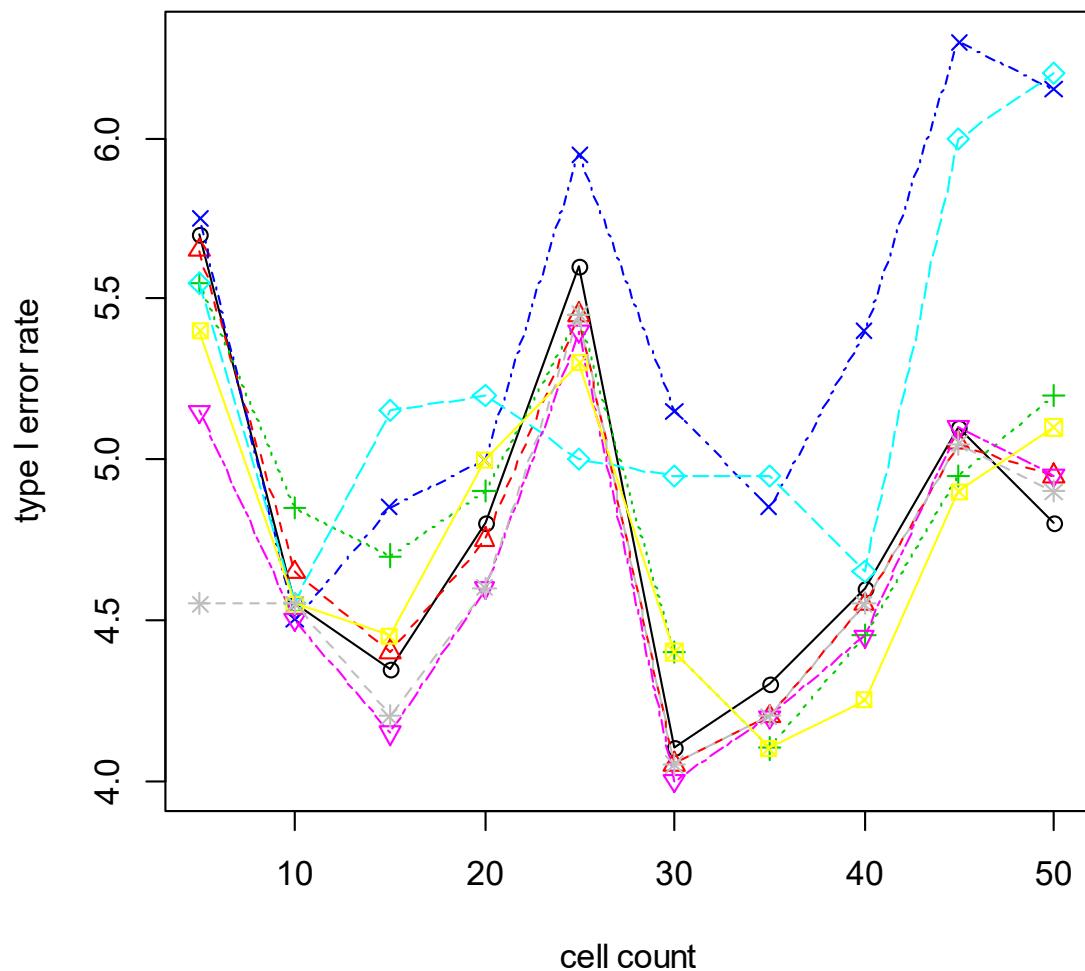
2. 9. 10   left/right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.65	4.75	4.60	5.25	5.15	4.40	4.60	4.7	5.65	5.10
RT	4.90	5.00	4.65	5.20	5.05	4.80	4.65	4.7	5.35	4.80
INT	4.50	4.95	4.60	4.85	5.10	4.85	4.70	4.9	6.10	4.95
ART	4.85	4.90	4.55	5.25	5.05	4.65	4.65	4.5	5.45	4.95
ART+INT	4.75	4.80	4.55	5.40	4.70	5.10	4.65	4.8	6.15	4.65
Puri & Sen	4.40	4.70	4.35	5.10	4.80	4.75	4.50	4.6	5.30	4.85
v.d.Waerden	4.00	4.70	4.45	4.75	4.85	4.85	4.65	4.8	6.05	4.85
ATS	4.20	4.80	4.40	5.10	5.05	4.80	4.65	4.7	5.35	4.80
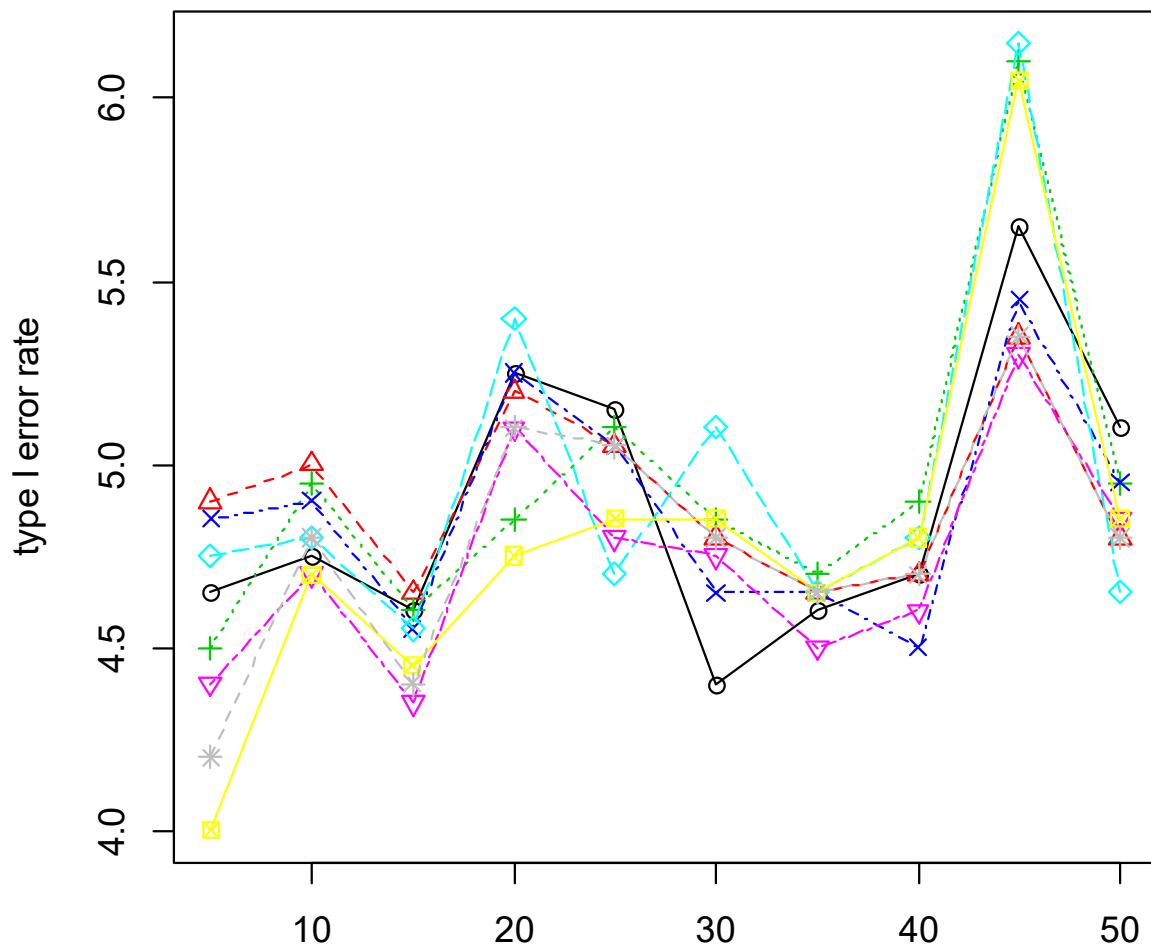
2. 9. 11   left skewed distribution - unequal variances (on B)

	cell count									
method	5	10	15	20	25	30	35	40	45	50
parametric	7.40	6.25	5.80	6.75	6.65	5.90	5.70	6.15	6.45	5.95
RT	6.10	5.70	5.50	5.30	6.05	4.95	4.90	5.50	5.50	5.40
INT	7.05	6.40	6.20	6.60	6.80	5.60	5.75	6.40	6.55	6.45
ART	7.50	6.40	6.65	6.80	6.75	6.00	6.00	6.60	6.85	6.40
ART+INT	7.00	6.05	5.85	6.35	6.60	5.55	5.40	5.90	6.25	6.10
Puri & Sen	5.45	5.25	5.10	5.20	6.00	4.90	4.80	5.45	5.55	5.40
v.d.Waerden	6.30	6.10	5.90	6.45	6.70	5.55	5.65	6.15	6.25	6.35
ATS	5.30	5.30	5.35	5.20	6.00	4.85	4.85	5.30	5.45	5.25
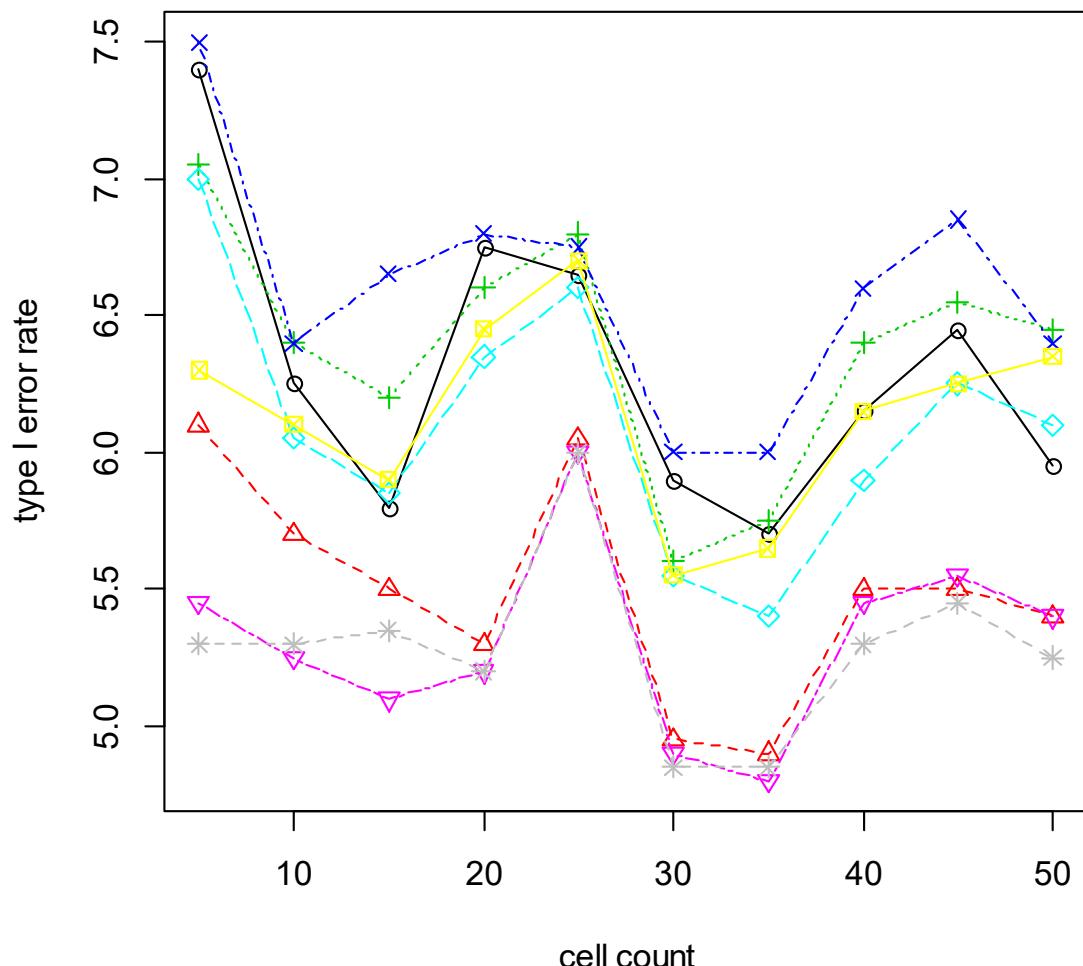
2. 9. 12   left skewed distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.70	5.50	5.20	6.15	6.05	5.80	5.10	5.75	6.30	5.75
RT	6.35	5.30	4.90	5.55	5.65	5.10	5.05	5.65	5.80	5.20
INT	6.70	5.75	5.35	6.50	6.25	5.80	5.20	5.60	6.40	6.35
ART	7.25	6.50	5.85	7.45	7.20	6.95	6.60	7.35	7.35	6.95
ART+INT	6.55	5.90	5.40	6.80	6.20	6.05	5.45	5.65	6.60	6.70
Puri & Sen	5.50	4.95	4.80	5.40	5.45	4.95	5.00	5.40	5.75	5.15
v.d.Waerden	6.05	5.40	5.10	6.40	6.00	5.70	5.10	5.50	6.25	6.20
ATS	5.05	5.05	4.80	5.50	5.55	5.00	4.95	5.45	5.70	5.10
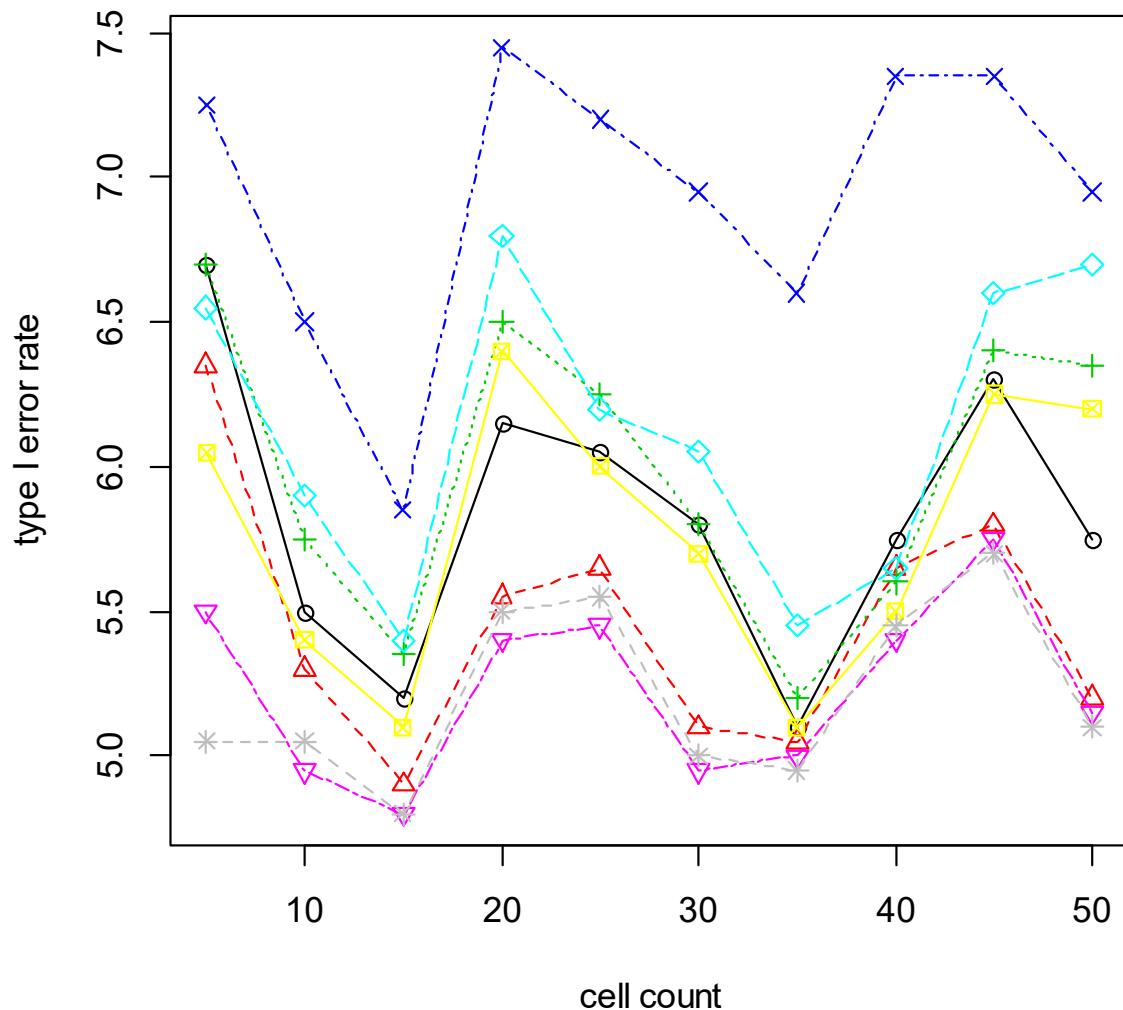
2. 10. Interaction AB - null model
(unequal n$_i$ / # levels = 4*5)

2. 10. 1   normal distribution - equal variances

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.75	5.30	5.05	4.45	4.15	3.90	4.30	4.55	5.15	4.35
RT	5.00	4.95	5.00	3.95	4.50	4.55	4.85	4.70	4.95	4.25
INT	5.70	5.25	5.05	4.25	4.10	4.05	4.50	4.60	5.30	4.25
ART	4.80	4.90	4.95	4.00	4.65	4.65	4.60	4.80	5.15	4.45
ART+INT	5.80	5.50	5.30	4.20	4.05	4.00	4.65	4.40	5.20	4.15
Puri & Sen	4.05	4.35	4.60	3.75	4.15	4.35	4.70	4.70	4.95	4.20
v.d.Waerden	4.40	4.55	4.65	3.95	3.95	4.00	4.35	4.35	5.00	4.10
ATS	4.15	4.50	4.25	4.35	4.70	4.85	4.60	4.80	4.95	4.10
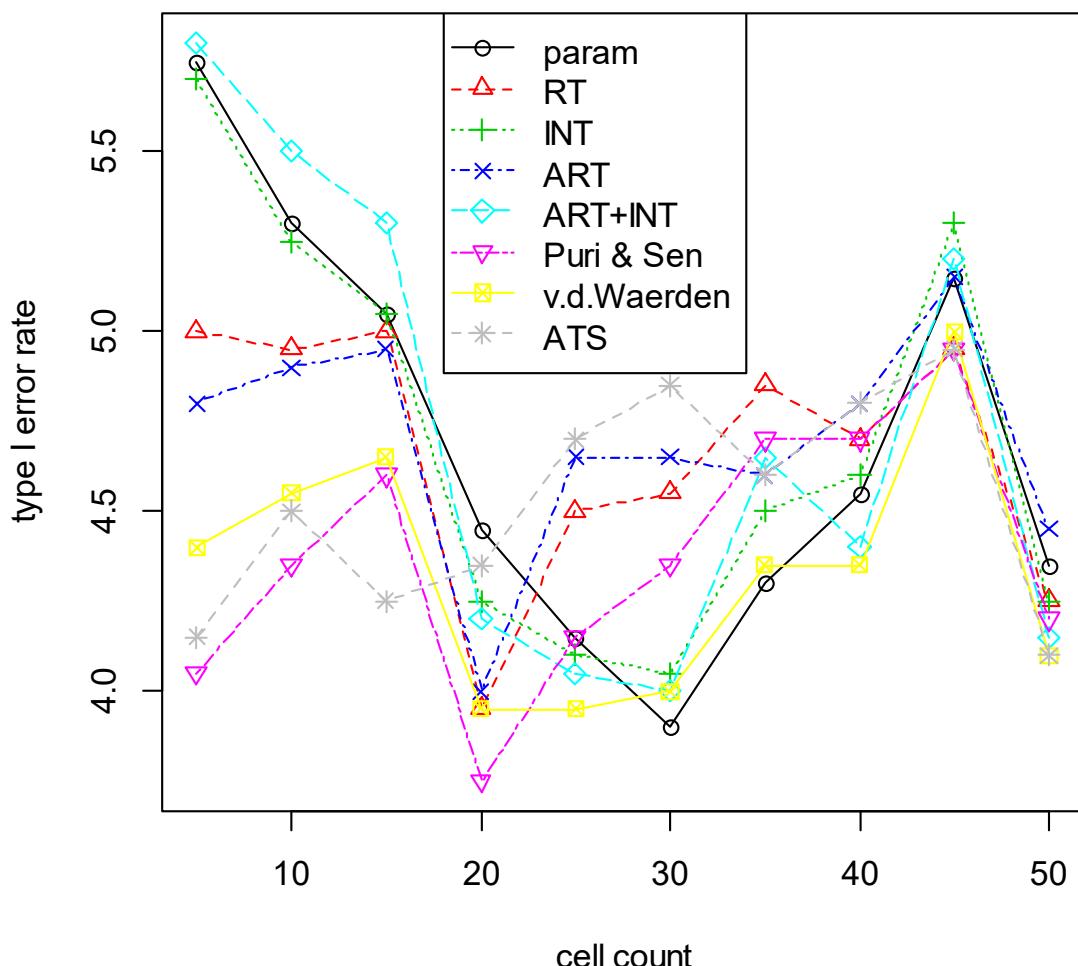
2. 10. 2   normal distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.00	6.10	5.35	4.90	4.70	5.00	4.95	5.75	5.90	5.45
RT	5.10	4.65	4.50	3.85	4.25	4.65	4.15	4.55	4.80	4.10
INT	5.80	5.20	4.85	4.25	4.45	4.70	4.45	5.30	5.45	4.75
ART	6.45	5.20	5.80	4.70	5.35	5.55	5.85	6.40	5.75	5.20
ART+INT	6.20	5.70	5.30	4.65	4.70	5.10	4.95	6.10	6.05	5.30
Puri & Sen	3.85	4.15	4.15	3.50	4.20	4.45	4.05	4.35	4.70	4.00
v.d.Waerden	4.80	4.70	4.75	4.20	4.25	4.65	4.45	5.30	5.40	4.55
ATS	3.90	3.75	4.10	4.15	4.20	4.40	4.65	4.75	4.55	4.40
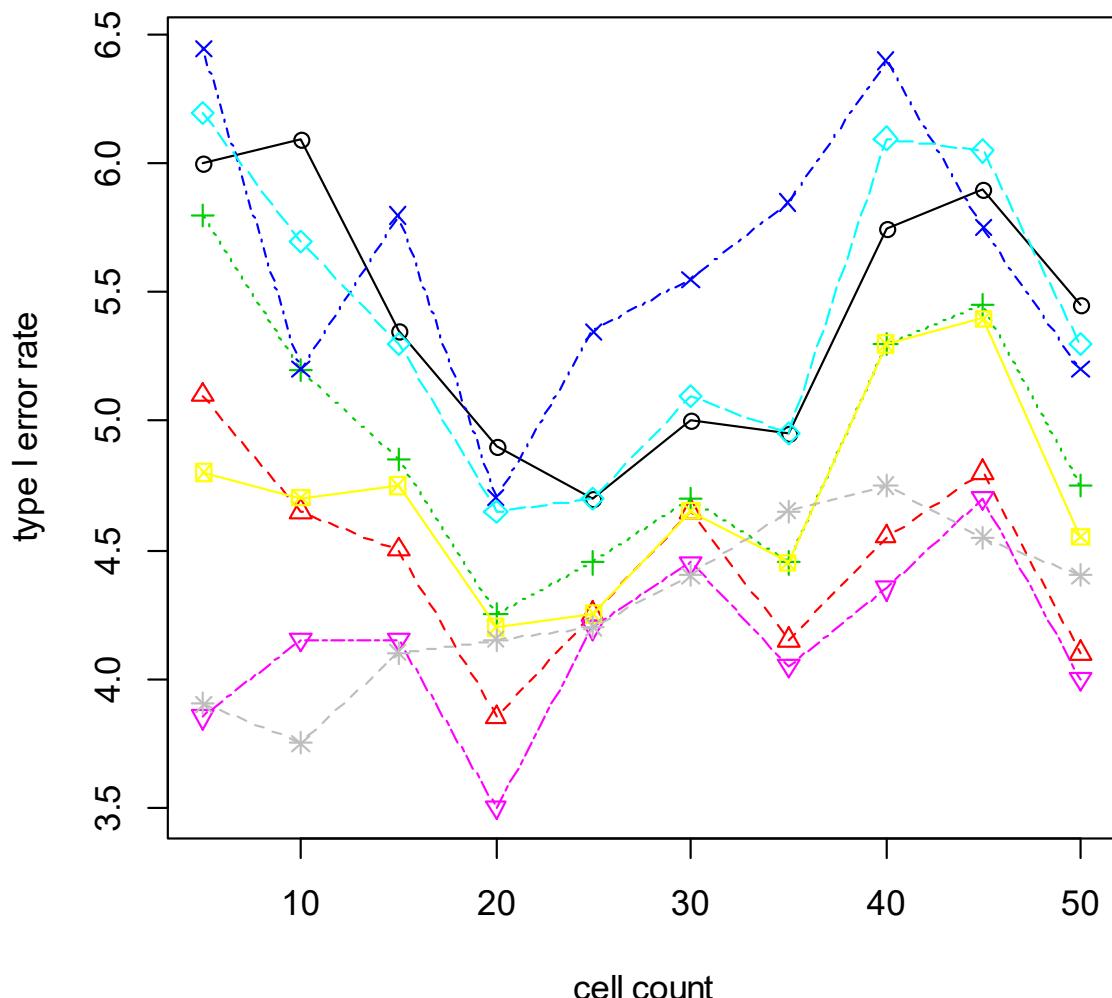
2. 10. 3   normal distribution - unequal variances (on A and B)

	cell count									
method	5	10	15	20	25	30	35	40	45	50
parametric	8.55	7.80	7.95	7.95	7.70	7.80	7.00	8.30	7.90	7.65
RT	5.35	5.40	5.60	4.55	5.05	5.20	4.20	5.35	5.30	4.35
INT	6.95	6.05	6.55	6.10	5.15	6.45	5.35	6.45	6.65	5.90
ART	6.80	6.00	6.90	5.70	6.25	6.10	5.40	7.05	6.35	5.55
ART+INT	7.75	6.90	7.25	6.75	6.10	6.85	5.90	7.35	7.10	6.55
Puri & Sen	4.20	4.70	5.30	4.35	4.60	5.15	4.10	5.20	5.25	4.25
v.d.Waerden	5.55	5.55	6.40	5.65	4.95	6.00	5.20	6.20	6.45	5.90
ATS	3.65	4.25	3.75	3.80	4.55	4.65	4.85	5.10	4.90	4.20
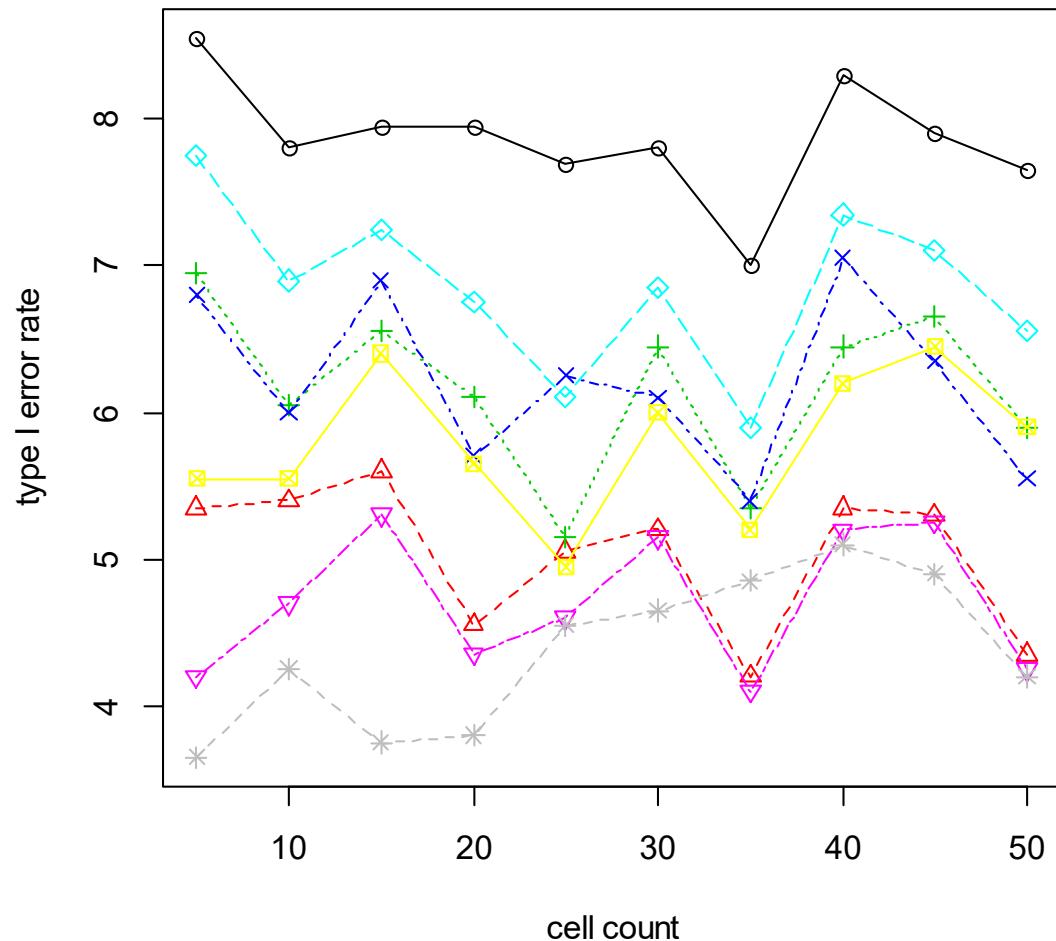
2. 10. 4   right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.65	5.75	5.35	5.70	4.80	4.15	4.50	4.10	4.60	4.50
RT	5.50	5.30	5.20	5.90	4.45	4.50	4.60	4.25	4.55	4.45
INT	6.70	5.60	4.75	6.10	4.85	4.60	4.50	4.75	4.90	4.35
ART	5.40	5.70	5.40	6.00	4.45	4.60	5.00	4.90	4.75	4.80
ART+INT	6.00	5.65	5.55	6.10	5.00	4.90	4.75	5.25	4.95	4.80
Puri & Sen	4.40	4.85	4.75	5.50	4.35	4.35	4.40	4.20	4.50	4.35
v.d.Waerden	5.30	5.15	4.55	5.90	4.70	4.30	4.25	4.70	4.75	4.25
ATS	3.95	4.90	6.05	5.65	4.90	4.45	4.45	4.35	4.50	4.25
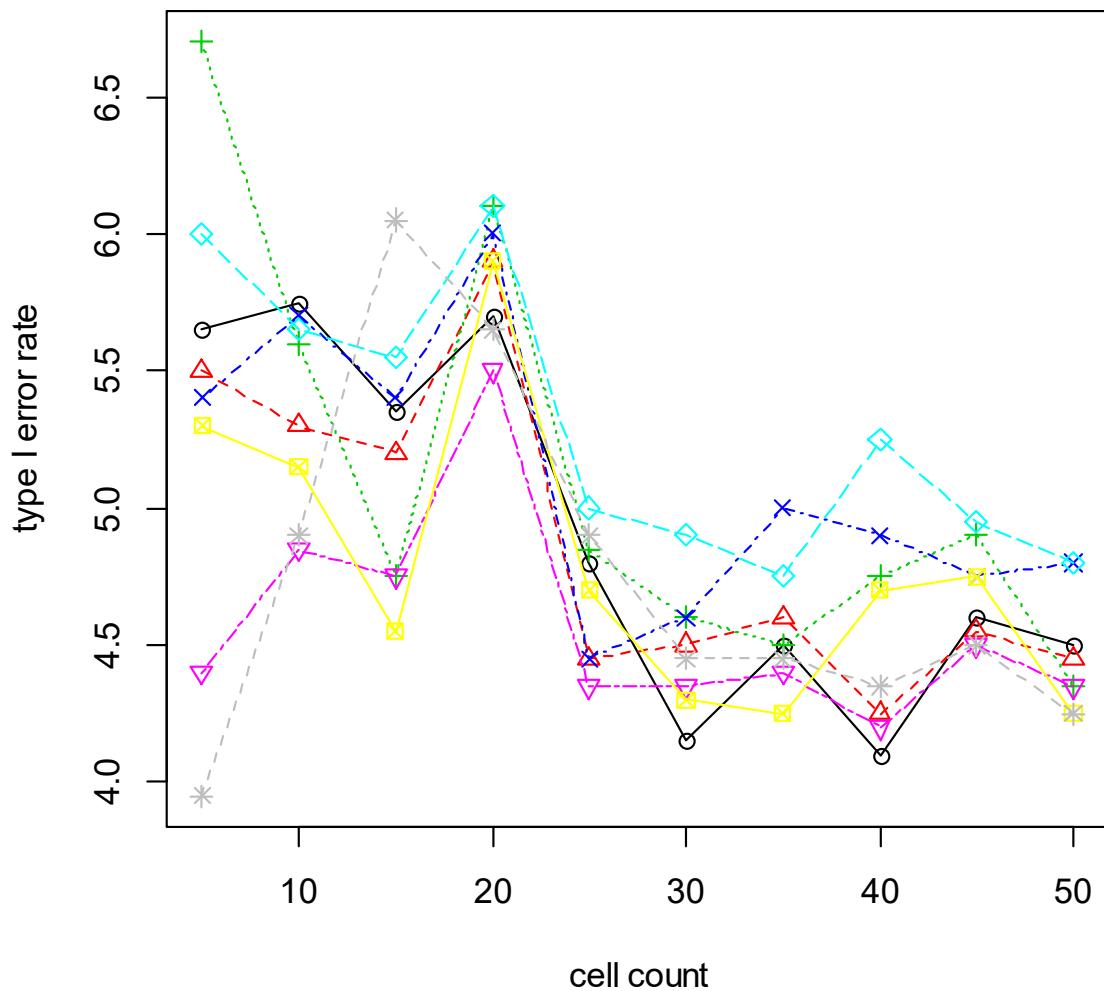
2. 10. 5   exponential distribution - continuous

method	5	10	15	20	25	30	35	40	45	50
					cell count					
parametric	6.15	4.65	5.50	5.50	5.10	4.55	4.75	5.80	4.60	4.85
RT	5.35	4.45	4.90	5.25	4.55	5.55	4.80	5.45	4.30	4.65
INT	5.40	4.60	4.70	4.85	4.95	5.15	5.00	5.70	4.50	4.95
ART	6.65	5.35	4.85	5.55	4.70	5.20	4.85	5.55	4.65	4.65
ART+INT	6.10	5.00	5.30	5.55	5.20	5.40	4.85	6.05	5.20	5.25
Puri & Sen	4.00	4.00	4.50	4.60	4.35	5.45	4.70	5.30	4.20	4.65
v.d.Waerden	3.95	4.15	4.20	4.55	4.75	4.85	5.00	5.60	4.40	4.90
ATS	4.65	4.05	4.40	4.55	4.75	5.50	4.95	5.30	4.35	5.20
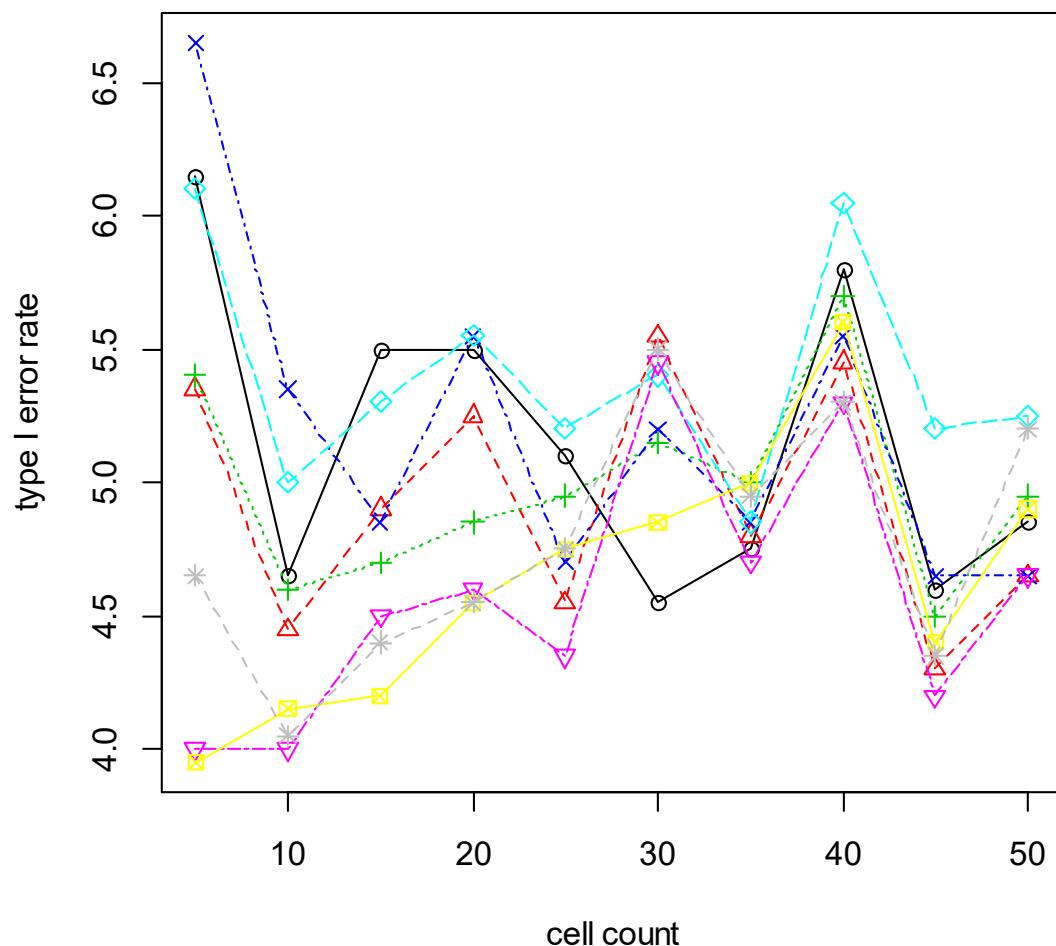
2. 10. 6   exponential distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.35	4.85	5.70	5.65	5.30	4.45	4.65	5.85	4.20	4.75
RT	5.40	4.60	4.55	5.15	4.30	4.70	4.65	4.90	4.70	4.75
INT	5.70	4.65	4.60	5.05	4.50	4.85	4.65	6.00	4.70	4.40
ART	7.10	5.60	5.40	7.25	6.65	6.65	6.90	8.50	8.05	8.50
ART+INT	6.20	6.00	6.05	6.90	5.85	6.75	7.90	9.30	8.20	9.55
Puri & Sen	3.80	4.10	4.20	4.85	4.05	4.50	4.65	4.75	4.60	4.70
v.d.Waerden	3.80	4.05	4.55	4.65	4.15	4.65	4.60	5.65	4.65	4.35
ATS	4.45	3.95	4.70	4.80	4.65	4.75	5.45	5.45	4.70	4.70
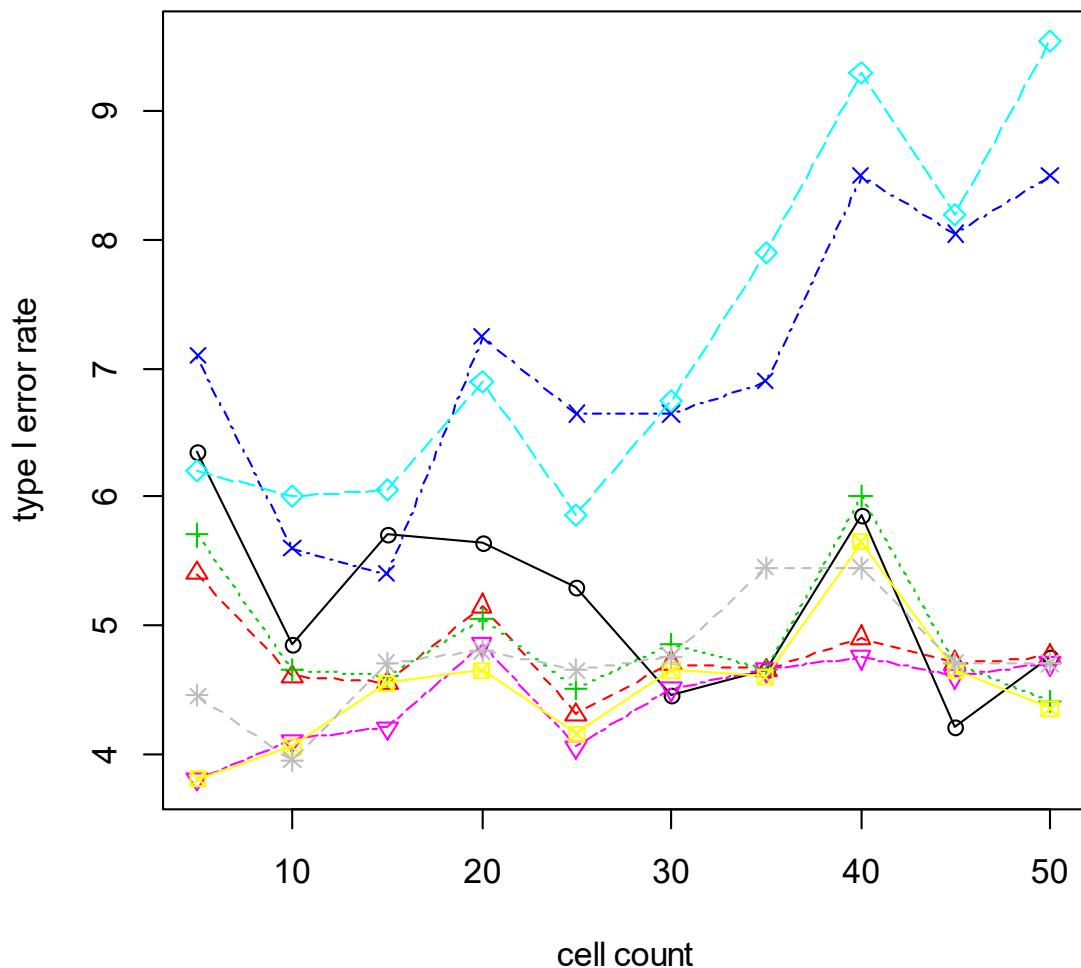
2. 10. 7 lognormal distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.80	4.80	5.60	4.70	5.40	5.70	4.45	5.00	4.80	4.75
RT	4.90	4.60	4.20	4.30	4.85	5.30	4.40	4.70	4.50	5.00
INT	4.90	4.60	4.75	4.70	5.15	5.65	4.45	4.75	4.60	4.80
ART	4.80	4.70	4.25	4.45	5.00	5.45	4.50	4.60	4.65	4.80
ART+INT	5.25	4.95	4.95	4.45	5.25	5.70	4.20	4.90	4.80	4.70
Puri & Sen	3.80	4.15	3.95	4.10	4.75	5.20	4.35	4.60	4.40	4.85
v.d.Waerden	3.85	4.15	4.45	4.45	4.75	5.50	4.25	4.75	4.60	4.65
ATS	4.30	4.70	4.70	4.80	5.05	5.20	4.40	4.55	5.10	4.15
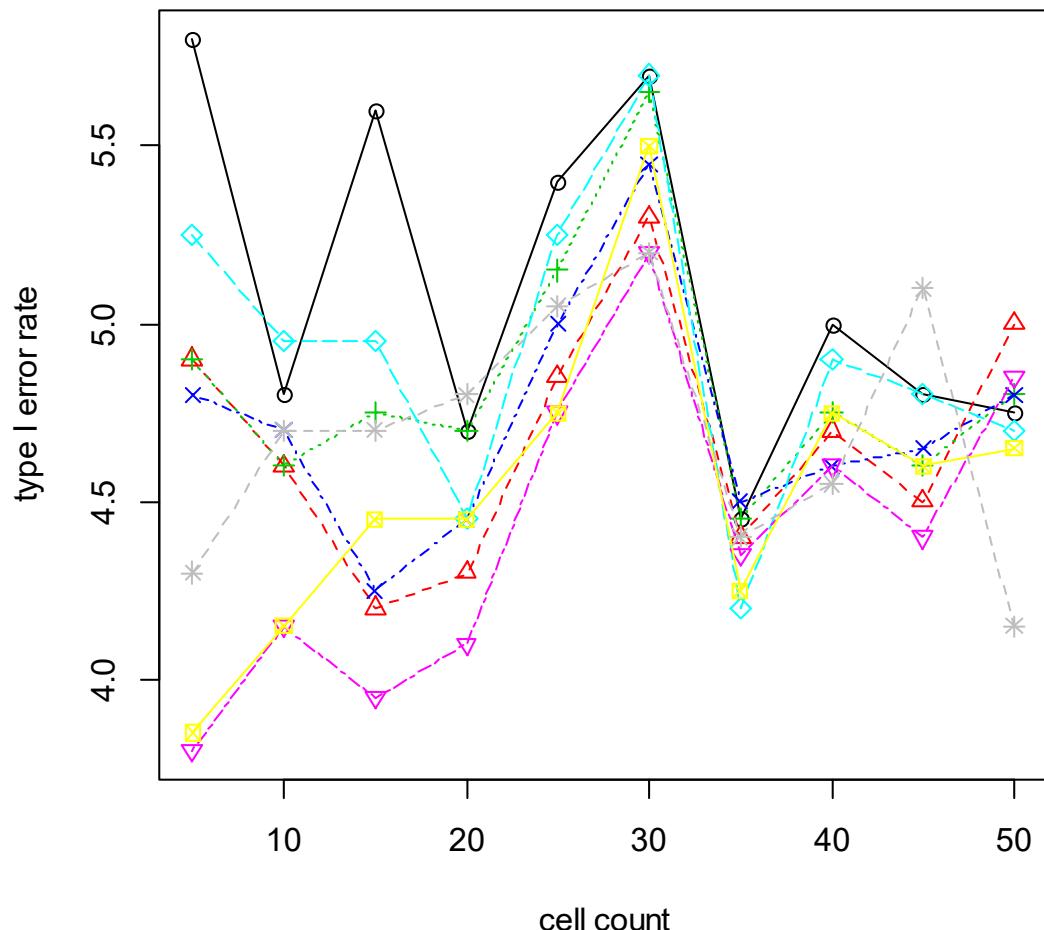
2. 10. 8   uniform distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.55	5.45	5.30	5.75	4.45	4.50	4.40	4.20	4.65	4.55
RT	5.50	5.30	5.20	5.90	4.45	4.50	4.60	4.25	4.55	4.45
INT	6.70	5.60	4.75	6.10	4.85	4.60	4.50	4.75	4.90	4.35
ART	5.50	5.55	5.30	5.80	4.35	4.45	4.60	4.20	4.65	4.40
ART+INT	5.80	5.40	5.20	5.65	4.60	4.50	4.40	4.90	4.95	4.60
Puri & Sen	4.40	4.85	4.75	5.50	4.35	4.35	4.40	4.20	4.50	4.35
v.d.Waerden	5.30	5.15	4.55	5.90	4.70	4.30	4.25	4.70	4.75	4.25
ATS	3.95	4.90	6.05	5.65	4.90	4.45	4.45	4.35	4.50	4.25
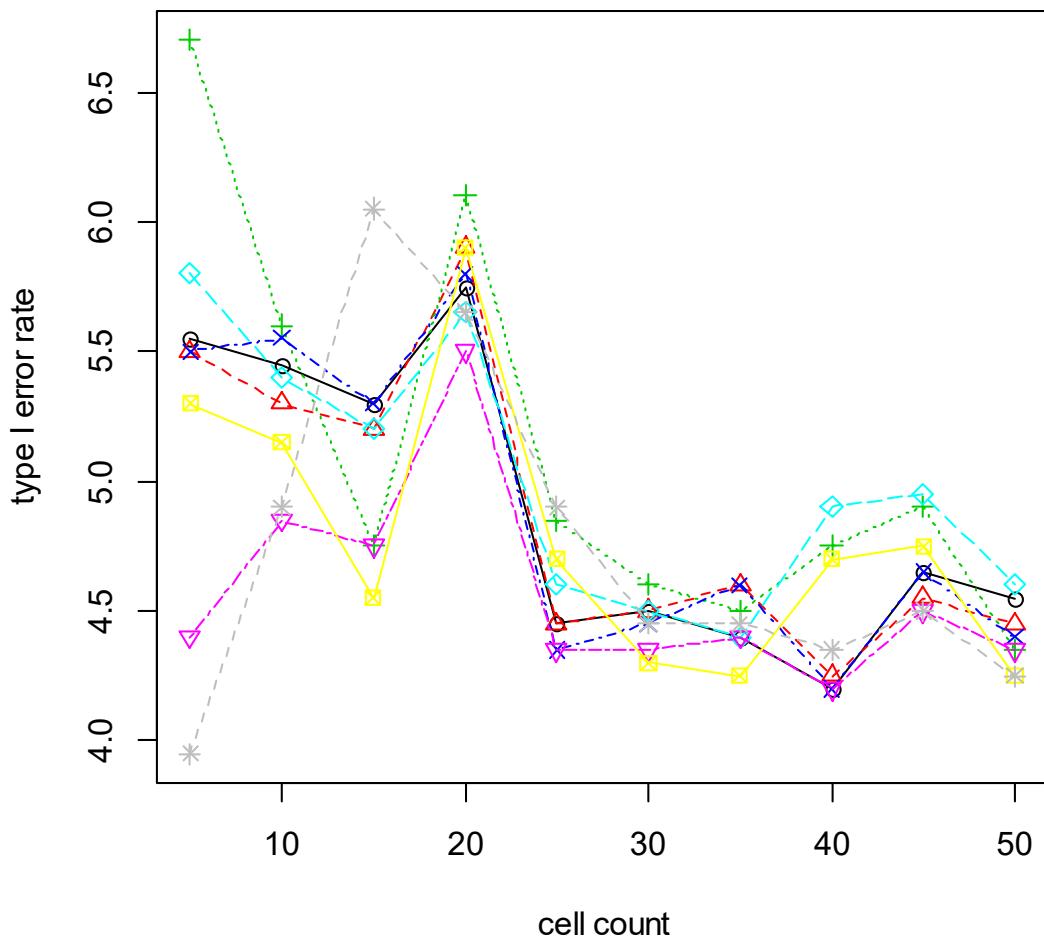
2. 10. 9   uniform distribution - discrete

method	cell count
	5	10	15	20	25	30	35	40	45	50
parametric	5.65	5.50	4.85	6.15	5.10	4.35	4.65	4.60	4.70	4.55
RT	5.75	5.25	5.10	6.20	5.10	4.40	4.65	4.70	4.85	4.55
INT	5.70	5.60	5.20	6.10	4.85	4.15	4.65	4.55	4.70	4.50
ART	5.55	5.95	5.85	6.80	6.30	5.80	6.70	7.35	7.70	7.60
ART+INT	5.95	6.25	6.25	6.85	6.65	6.60	6.75	7.60	7.15	8.20
Puri & Sen	4.35	4.80	4.55	5.65	4.95	4.15	4.35	4.50	4.70	4.40
v.d.Waerden	4.25	4.90	4.85	5.80	4.70	4.05	4.30	4.40	4.50	4.45
ATS	4.35	4.95	6.60	5.85	5.30	4.35	4.95	4.45	4.50	4.25
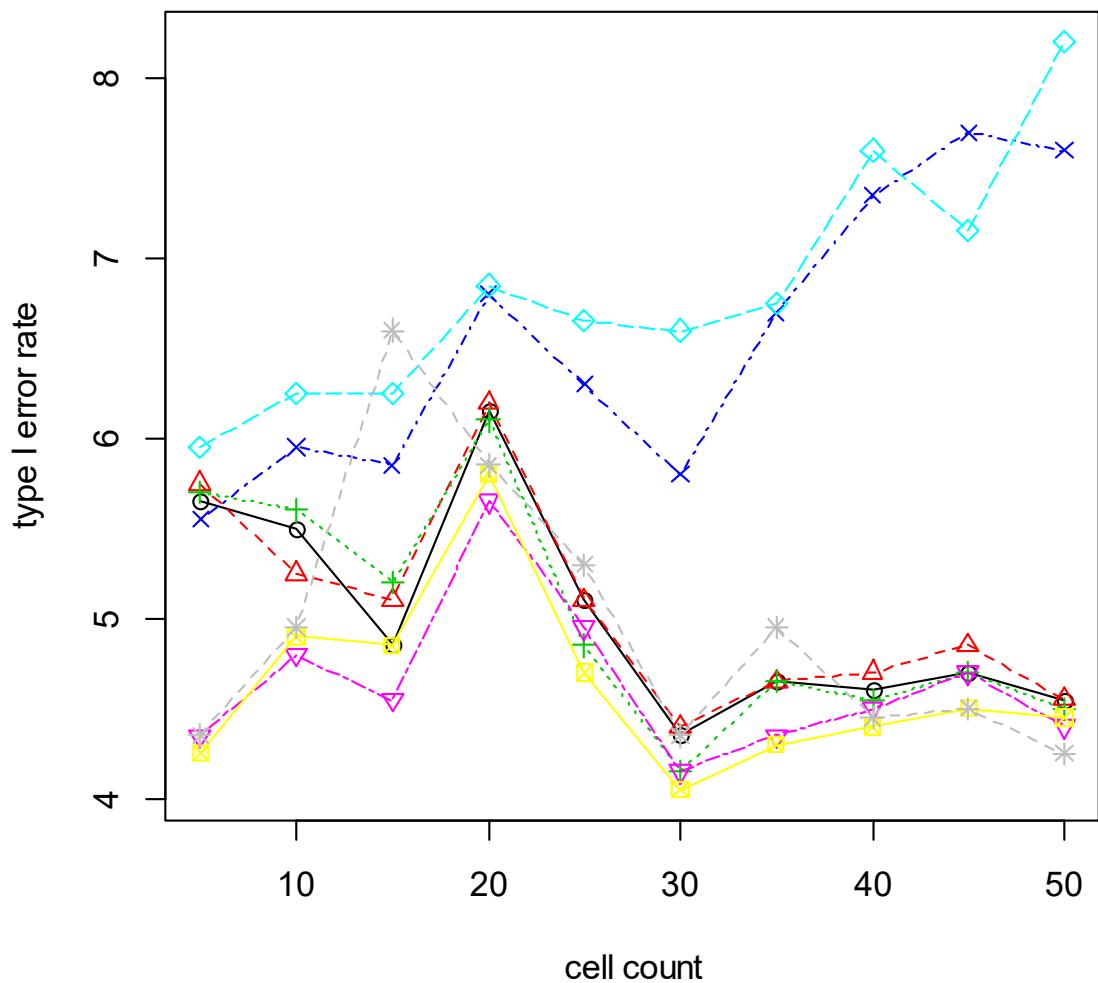
2. 10. 10 left/right skewed distribution

	cell count									
method	5	10	15	20	25	30	35	40	45	50
parametric	6.10	5.20	5.20	5.20	5.35	4.90	5.15	4.50	4.65	4.90
RT	6.15	5.05	4.85	5.15	5.15	5.20	5.40	4.25	4.95	5.10
INT	6.30	5.65	5.10	5.55	4.75	4.80	4.95	5.45	4.75	4.50
ART	5.75	5.00	5.00	5.15	4.95	5.35	5.55	4.40	5.05	5.00
ART+INT	5.95	5.60	4.85	5.40	4.80	4.95	5.20	5.25	4.60	4.50
Puri & Sen	4.70	4.30	4.55	4.90	4.95	4.85	5.20	4.10	4.85	4.95
v.d.Waerden	4.55	5.05	4.55	4.95	4.45	4.55	4.70	5.25	4.45	4.40
ATS	4.70	4.95	5.75	5.40	5.05	4.75	4.60	4.60	4.05	4.00
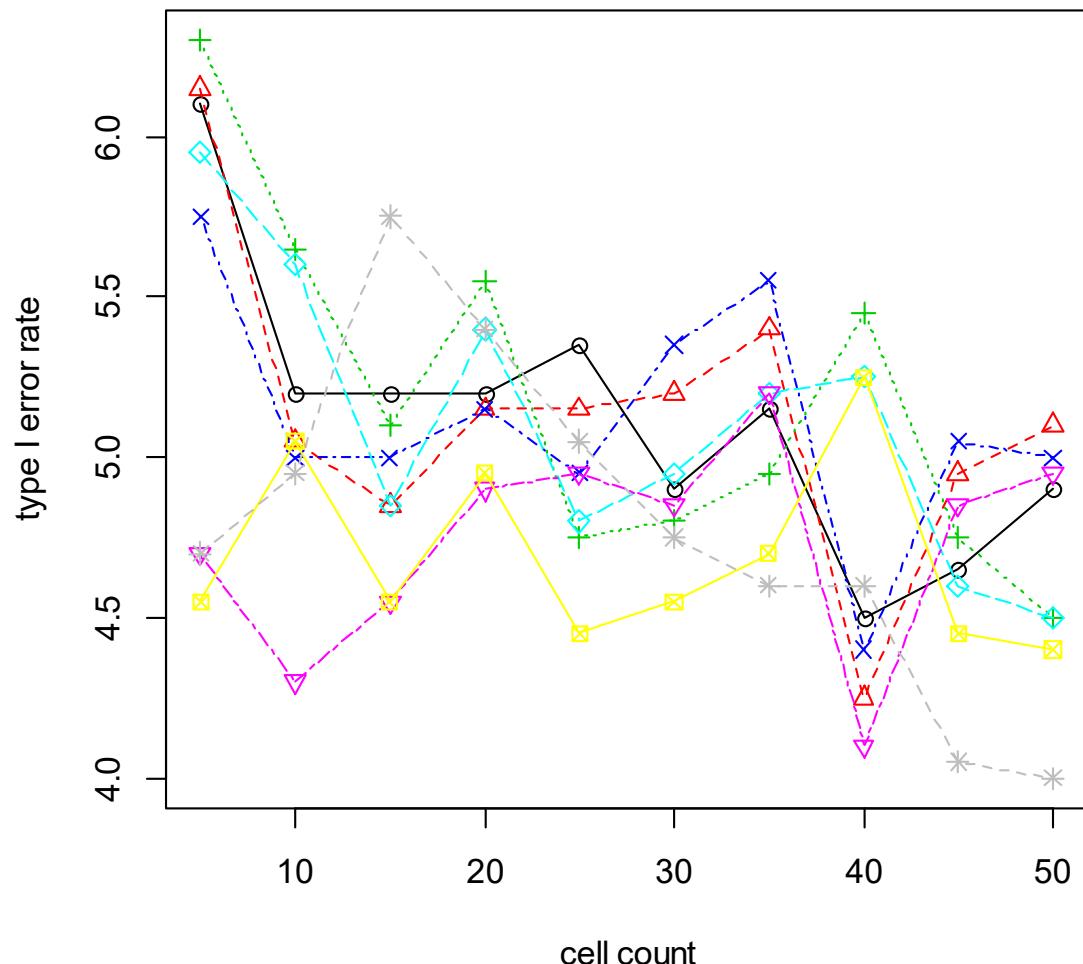
2. 10. 11 left skewed distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.45	6.60	6.75	7.10	6.30	5.50	5.50	5.70	6.35	6.55
RT	5.25	5.80	5.75	6.35	5.25	4.90	4.50	5.20	5.00	5.30
INT	6.95	7.05	7.25	7.00	6.95	6.05	5.75	5.75	6.60	6.70
ART	6.75	7.80	7.10	7.55	7.10	6.00	6.10	6.35	6.50	6.80
ART+INT	6.80	6.65	6.65	6.60	6.30	5.45	5.25	5.75	6.20	6.50
Puri & Sen	4.20	5.35	5.25	6.15	5.15	4.70	4.35	4.85	5.00	5.15
v.d.Waerden	5.35	6.35	6.85	6.75	6.80	5.70	5.60	5.70	6.45	6.55
ATS	3.50	5.20	5.60	5.55	4.75	4.60	4.80	4.55	4.55	4.75
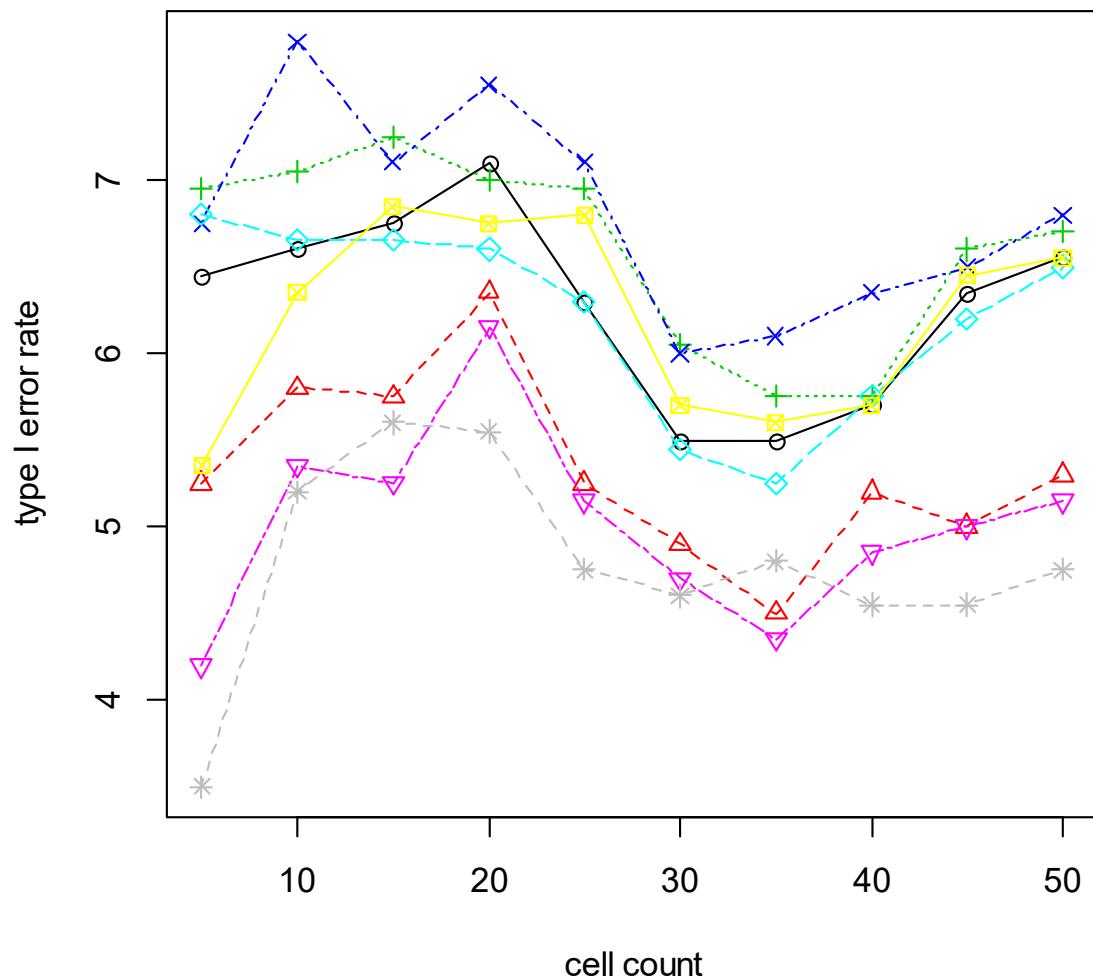
2. 10. 12 left skewed distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	10.40	10.40	9.35	9.05	9.05	8.55	8.10	7.90	7.85	7.70
RT	6.50	7.10	6.65	7.40	6.20	5.75	5.55	5.75	5.85	6.65
INT	9.65	9.30	9.60	9.40	9.20	8.65	8.35	8.15	8.95	8.55
ART	8.95	8.80	8.50	9.30	8.45	7.80	7.50	7.65	8.00	8.80
ART+INT	11.30	10.65	10.65	10.20	10.25	9.60	9.30	9.30	9.90	10.20
Puri & Sen	5.15	6.50	6.10	6.80	6.00	5.50	5.45	5.45	5.75	6.45
v.d.Waerden	7.80	8.65	8.80	9.20	8.95	8.45	8.05	8.05	8.90	8.55
ATS	4.20	5.40	5.80	5.75	5.35	4.35	4.75	4.40	4.75	4.20
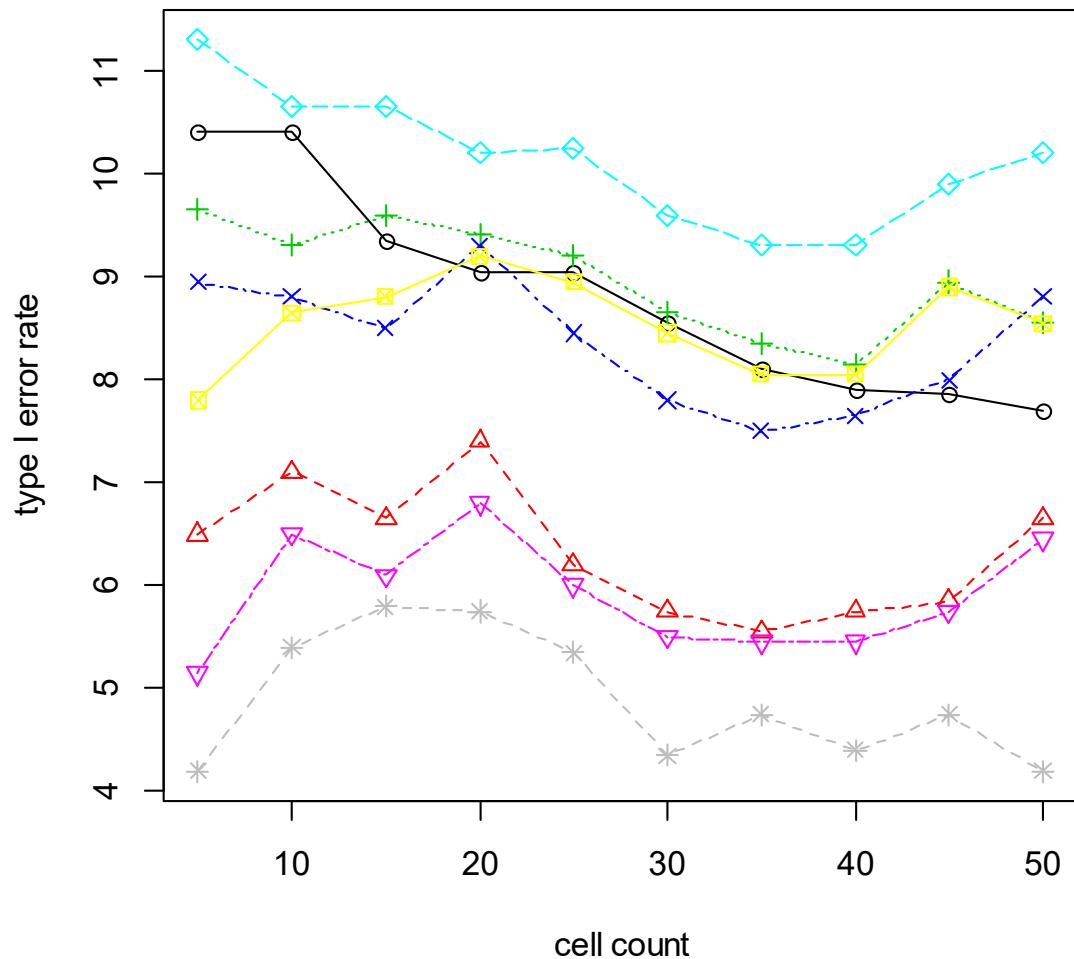
2. 10. 13 normal distribution - unequal variances (small n$_i$ ~ small s$_i$)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	1.20	0.55	1.15	1.10	1.00	1.45	1.15	1.05	1.15	0.75
RT	2.10	1.60	2.00	1.90	1.85	1.70	1.85	1.80	2.00	1.60
INT	1.50	0.80	1.35	1.05	1.05	1.40	1.05	1.05	1.25	0.80
ART	2.20	2.20	2.70	2.25	2.35	2.15	2.35	2.35	2.35	2.15
ART+INT	1.60	0.90	1.40	1.30	1.05	1.50	1.15	1.20	1.30	1.05
Puri & Sen	1.55	1.25	1.80	1.85	1.80	1.60	1.85	1.75	1.90	1.55
v.d.Waerden	0.90	0.70	1.15	1.05	1.05	1.35	1.00	1.00	1.25	0.80
ATS	3.90	4.35	4.75	4.35	4.80	4.35	4.80	4.70	4.65	4.25
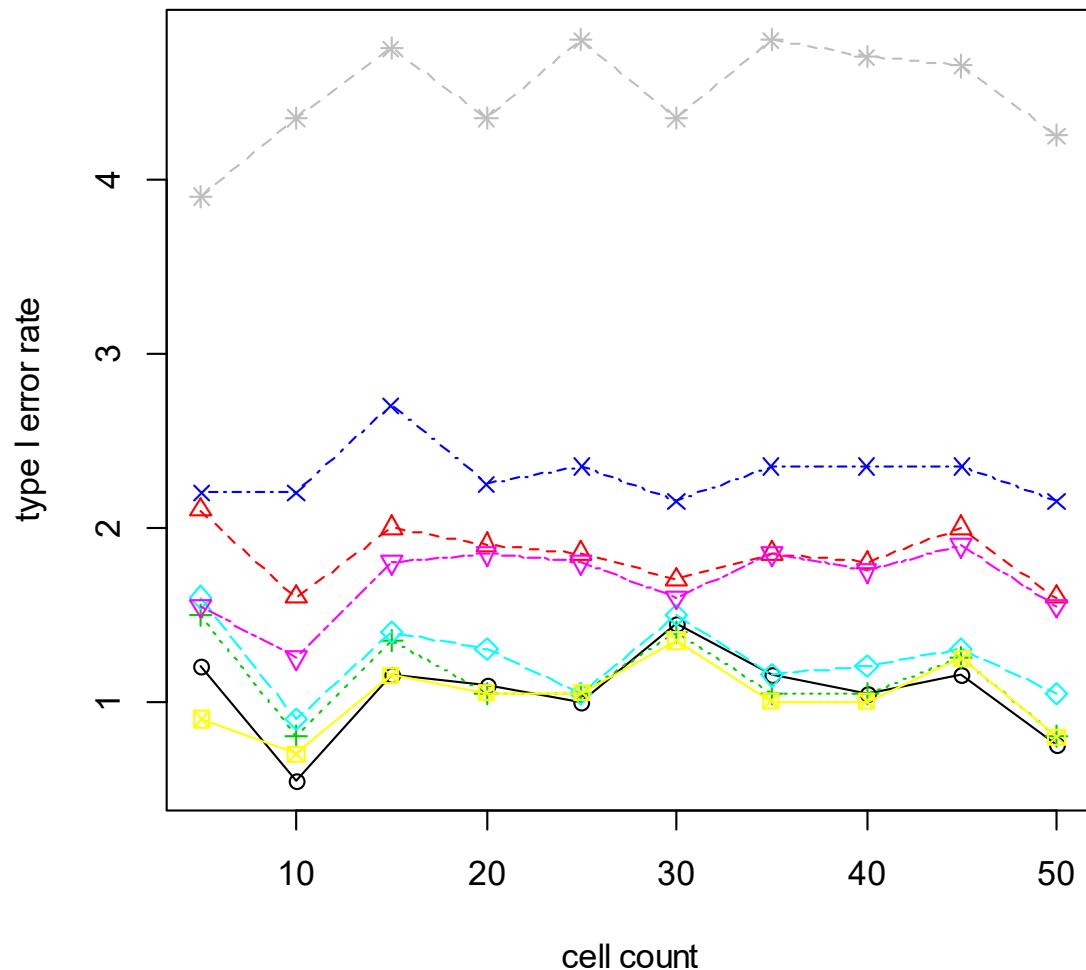
2. 10. 14 normal distribution - unequal variances (small n_i ~ large s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	23.85	21.95	21.35	20.25	21.55	21.55	21.05	21.65	21.10	21.35
RT	11.15	11.40	11.15	10.15	10.70	10.55	10.95	11.60	10.40	10.15
INT	17.10	18.35	17.80	16.00	16.95	16.60	16.30	17.70	17.25	17.45
ART	13.90	14.15	13.75	11.75	12.25	12.65	12.35	13.05	12.15	12.35
ART+INT	19.35	19.60	18.65	16.90	18.00	17.40	17.15	18.65	18.25	17.85
Puri & Sen	9.15	10.25	10.45	9.75	10.20	10.30	10.70	10.95	10.10	10.05
v.d.Waerden	13.95	16.55	16.80	15.30	16.35	16.20	16.05	17.35	16.95	16.85
ATS	5.20	4.45	4.75	4.55	5.40	5.40	5.30	5.10	4.95	3.90
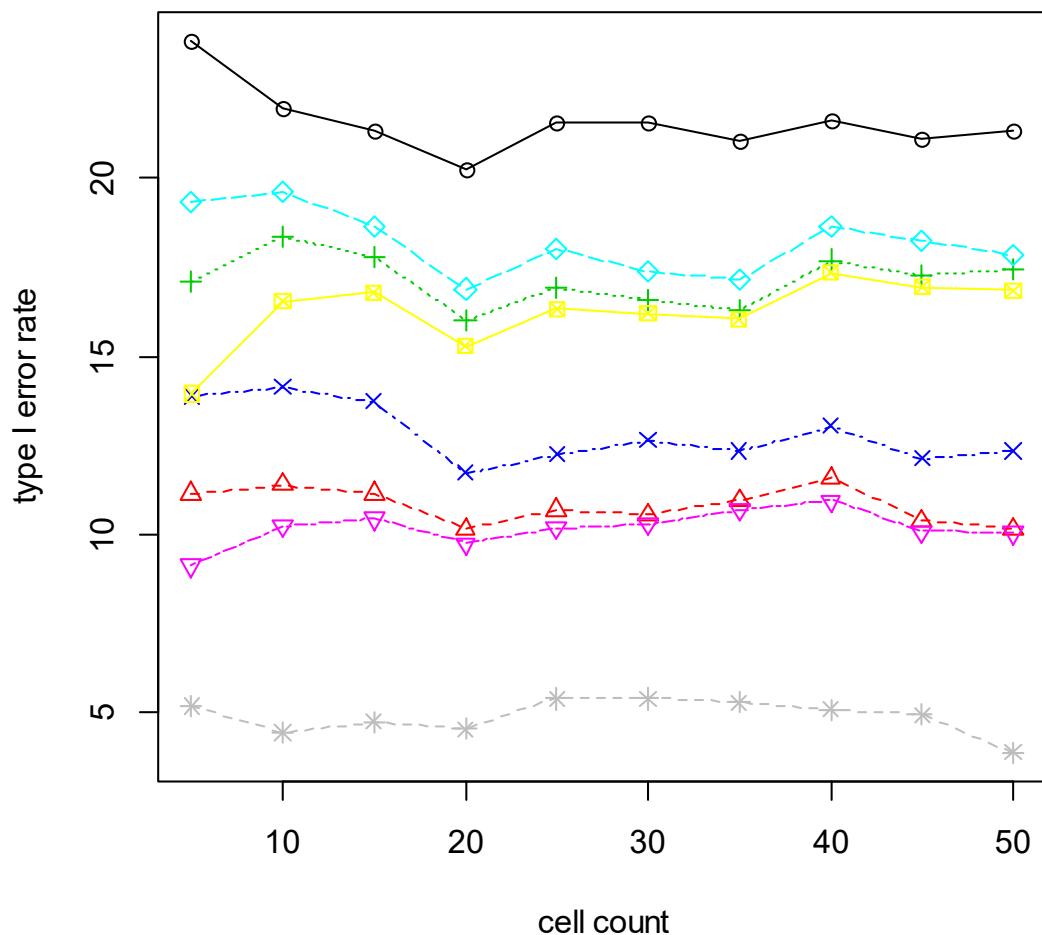
2. 10. 15 left skewed distribution - unequal variances (small n$_i$ ~ small s$_i$)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	1.55	1.75	1.10	1.40	1.55	1.45	1.45	1.25	1.40	1.10
RT	2.15	1.95	1.75	2.15	2.20	2.05	1.85	2.25	2.15	2.25
INT	1.25	1.40	0.80	1.10	1.25	1.15	1.60	1.55	1.45	1.55
ART	2.60	2.25	2.05	2.70	2.50	2.65	2.35	2.80	2.90	2.80
ART+INT	1.30	1.40	0.90	1.05	1.10	0.75	1.10	1.10	1.15	1.15
Puri & Sen	1.35	1.65	1.50	2.00	2.10	1.90	1.80	2.20	2.15	2.20
v.d.Waerden	0.70	1.20	0.80	1.05	1.20	1.10	1.50	1.55	1.40	1.50
ATS	3.50	5.30	5.10	6.45	6.00	5.65	6.35	6.20	6.35	6.75
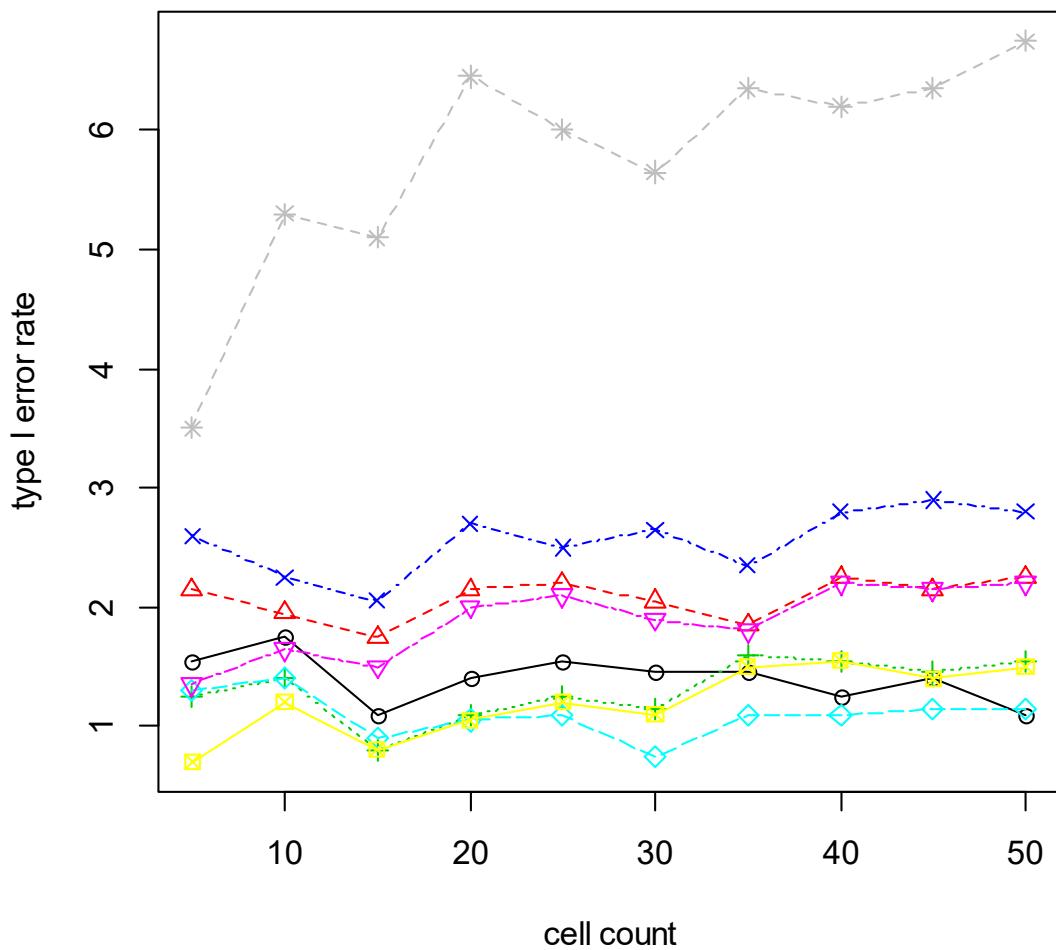
2. 10. 16 left skewed distribution - unequal variances (small n$_i$ ~ large s$_i$)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	24.10	23.85	23.30	21.95	20.90	20.60	20.70	20.80	21.30	20.85
RT	15.30	16.00	15.55	16.00	14.60	14.55	15.90	14.80	15.00	15.40
INT	27.55	27.60	27.35	26.85	27.30	27.05	28.45	28.45	29.10	29.75
ART	17.70	18.55	18.40	18.35	17.45	17.05	18.55	16.85	16.75	17.95
ART+INT	26.15	26.95	26.00	26.50	26.00	25.45	27.80	27.95	27.55	28.80
Puri & Sen	12.75	14.65	14.75	15.20	14.15	14.00	15.50	14.55	14.65	15.25
v.d.Waerden	23.10	25.65	26.10	25.95	26.45	26.65	27.90	28.00	28.65	29.50
ATS	5.20	5.35	6.55	5.85	5.50	4.65	5.45	4.90	4.75	4.95
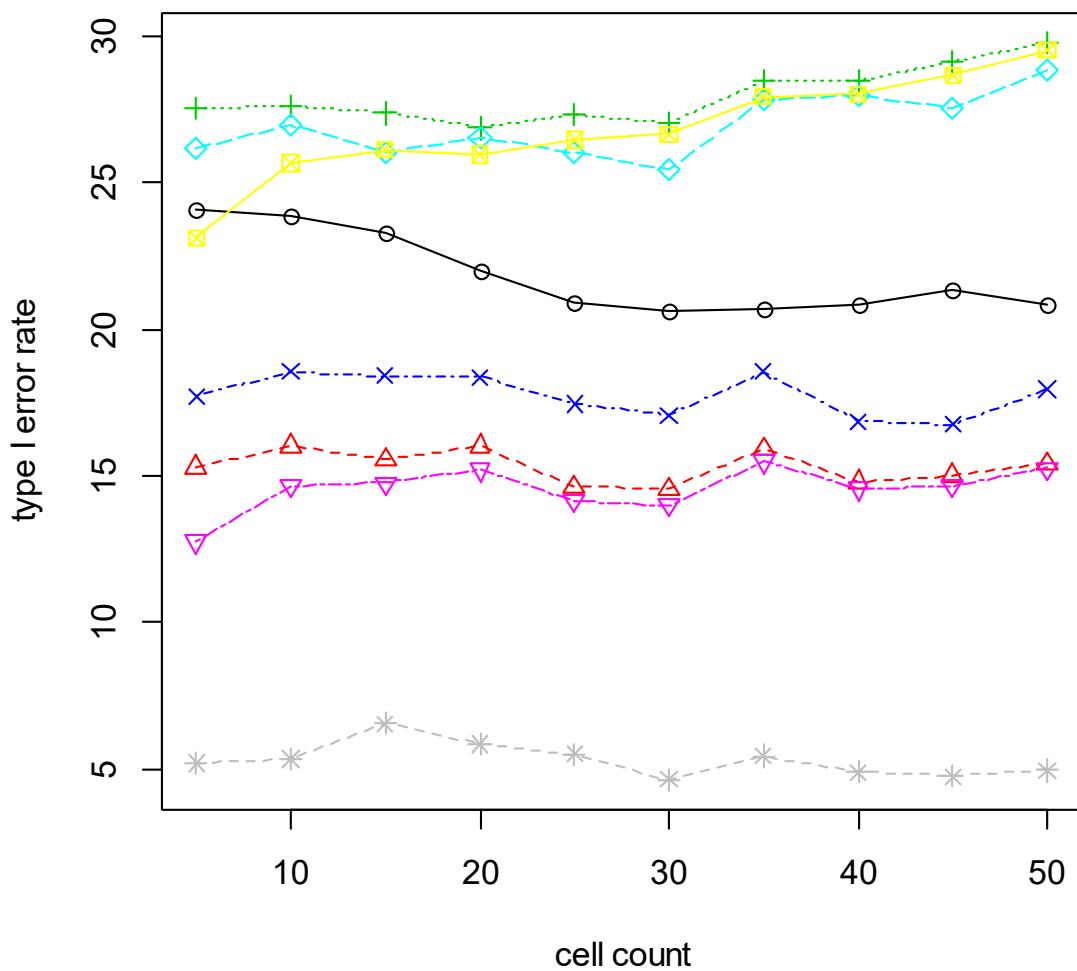
2. 11. Interaction AB - A significant (effects $a_i = 0.6*s$ / equal n_i / # levels = 2*4)

2. 11. 1   normal distribution - equal variances

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.75	4.65	4.90	4.25	4.90	4.85	4.85	5.35	4.95	4.75
RT	4.40	4.65	5.40	4.30	5.15	4.50	4.70	5.80	5.25	4.75
INT	5.10	4.95	4.85	4.10	4.85	4.95	4.55	5.20	4.95	4.75
ART	4.70	5.50	5.35	4.25	4.75	4.90	5.25	5.70	4.90	4.90
ART+INT	4.80	5.25	4.95	4.25	4.80	5.05	4.80	5.45	4.80	4.50
Puri & Sen	3.15	2.90	3.35	3.05	3.40	3.10	3.10	4.25	3.45	3.35
v.d.Waerden	3.15	3.10	3.35	3.30	3.55	3.30	3.25	4.00	3.45	3.20
ATS	4.15	4.30	5.25	4.15	4.85	4.45	4.70	5.75	5.25	4.70
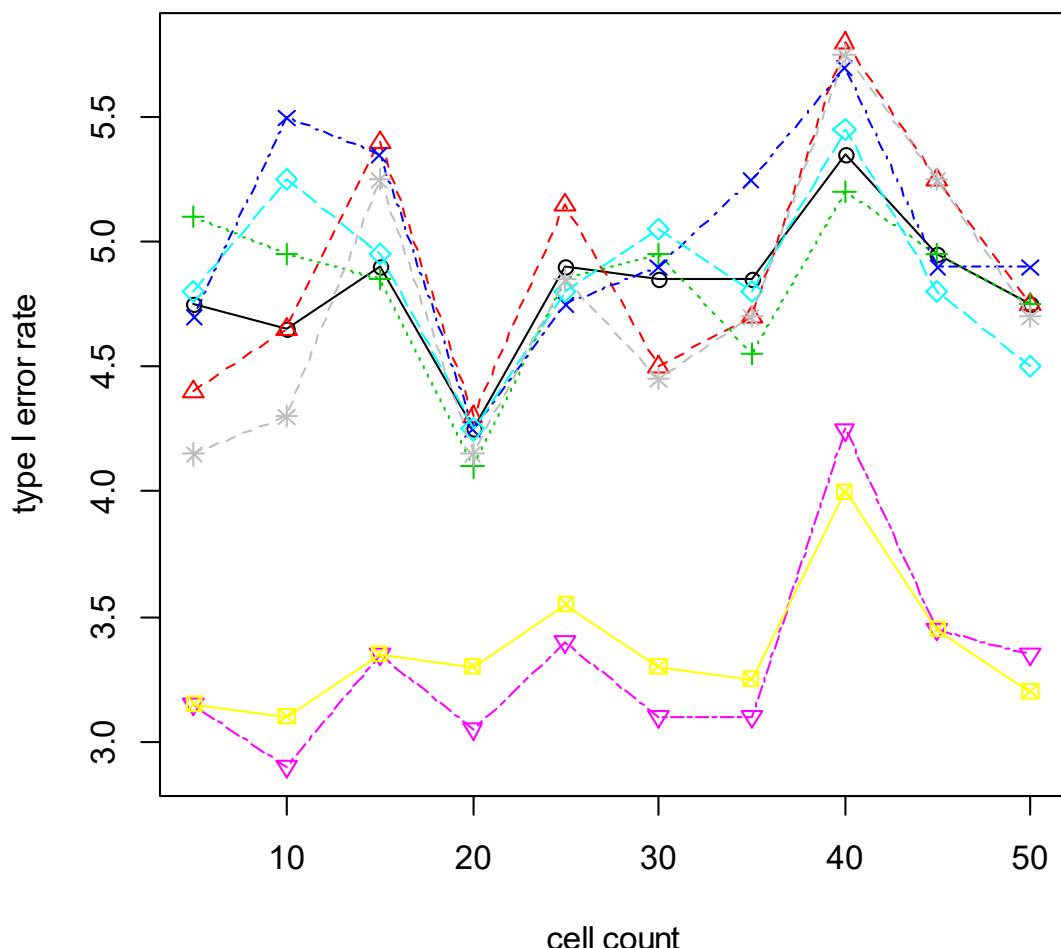
2. 11. 2   normal distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.00	5.85	5.95	6.70	6.10	6.05	6.75	7.05	5.85	6.30
RT	5.85	5.60	7.35	8.25	8.10	8.30	9.55	10.05	10.30	11.25
INT	6.10	5.45	6.25	6.45	6.20	6.25	6.85	7.20	5.75	6.05
ART	6.00	6.15	5.95	6.85	6.20	6.00	6.45	6.55	6.20	6.55
ART+INT	6.45	5.70	6.05	6.80	6.30	6.40	6.75	7.00	5.50	6.00
Puri & Sen	3.80	4.00	5.30	6.25	5.80	6.70	7.25	7.95	8.05	8.70
v.d.Waerden	4.30	3.95	4.00	4.85	4.45	4.50	5.10	5.70	4.60	4.65
ATS	4.95	5.15	7.10	7.90	8.00	8.15	9.50	9.75	10.25	11.05
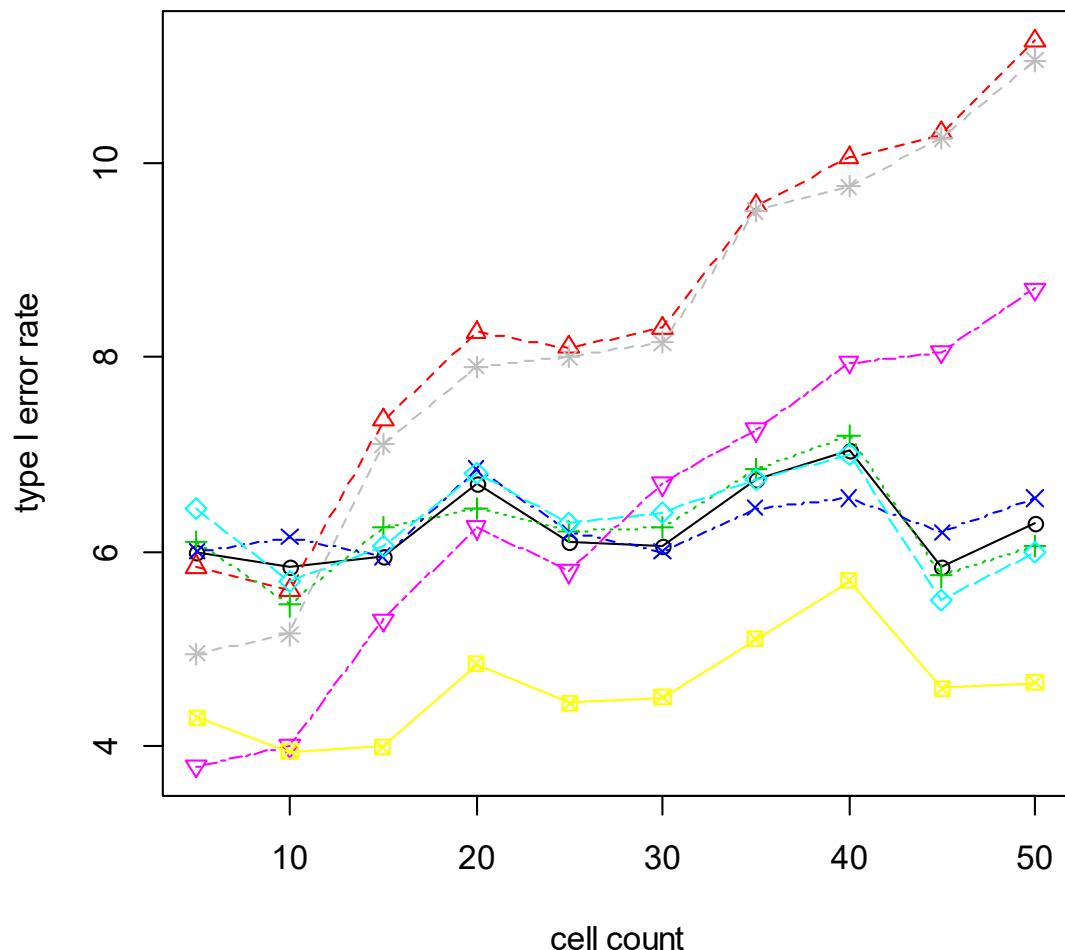
2. 11. 3   normal distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.75	5.60	5.70	6.20	5.50	5.85	6.80	6.40	5.85	6.10
RT	6.10	6.05	7.25	7.35	7.40	7.90	8.80	9.85	9.05	10.55
INT	5.70	5.60	5.55	6.20	5.15	5.60	6.15	6.70	6.00	5.85
ART	6.35	6.75	6.45	6.60	6.40	6.55	6.95	6.65	6.00	6.85
ART+INT	6.10	5.90	6.00	6.20	5.85	5.95	6.45	6.40	6.00	6.40
Puri & Sen	3.65	4.30	5.10	5.70	5.30	5.65	6.90	7.65	7.15	7.80
v.d.Waerden	3.60	3.90	3.95	4.90	4.10	4.40	4.65	5.05	4.80	4.40
ATS	5.05	5.60	6.85	7.20	7.25	7.65	8.75	9.85	9.05	10.50
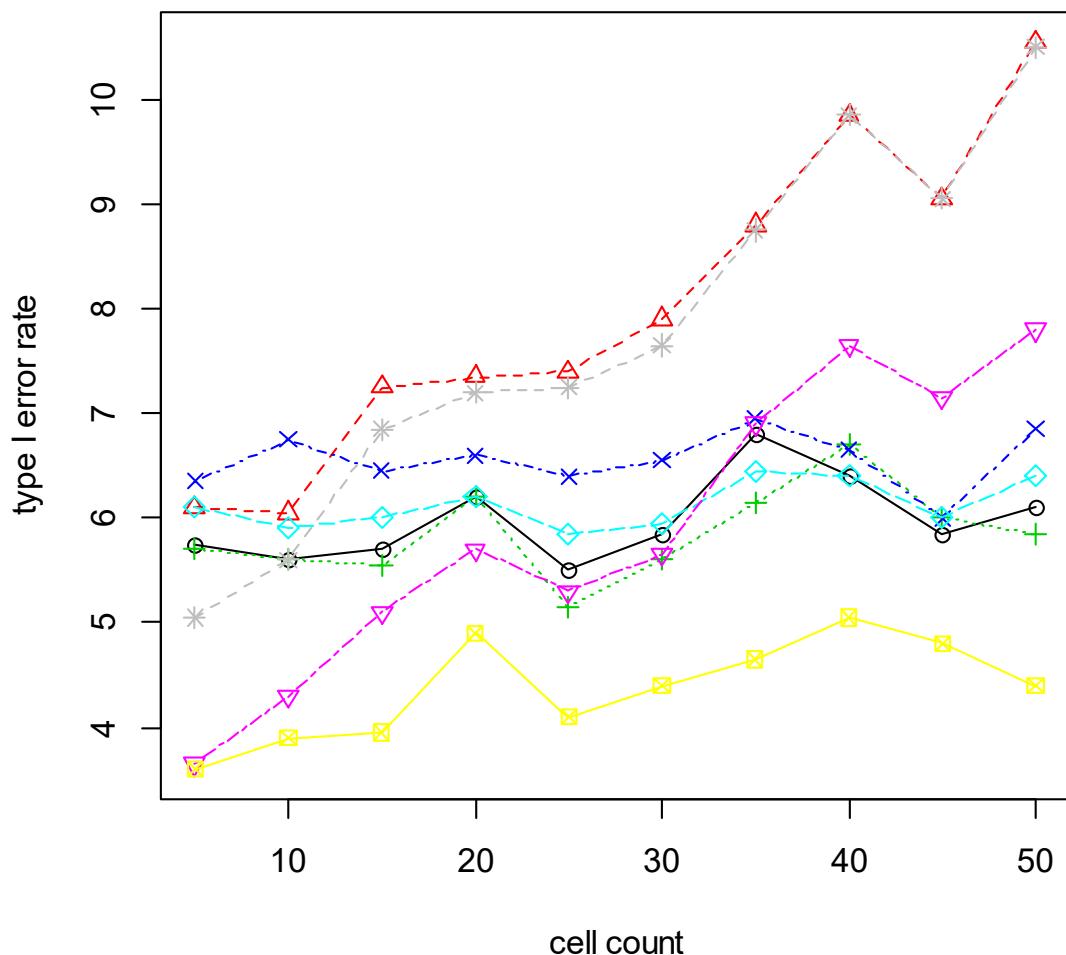
2. 11. 4   right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.30	5.00	3.90	5.20	4.80	4.65	4.70	4.40	5.95	4.50
RT	5.05	5.00	4.15	4.55	5.25	4.95	4.20	4.40	5.45	4.45
INT	5.05	5.15	4.15	5.15	4.65	4.90	4.75	4.20	5.35	5.05
ART	5.45	4.90	4.50	5.10	5.40	4.90	4.85	4.40	5.25	4.60
ART+INT	5.25	4.90	4.55	4.95	5.00	4.80	4.90	4.30	5.00	4.80
Puri & Sen	3.15	3.40	2.55	2.85	3.35	3.05	3.10	3.35	3.70	3.50
v.d.Waerden	3.05	2.85	2.70	3.00	2.95	3.10	3.25	2.95	3.10	3.05
ATS	4.30	4.75	4.00	4.35	4.95	4.65	4.10	4.35	5.30	4.30
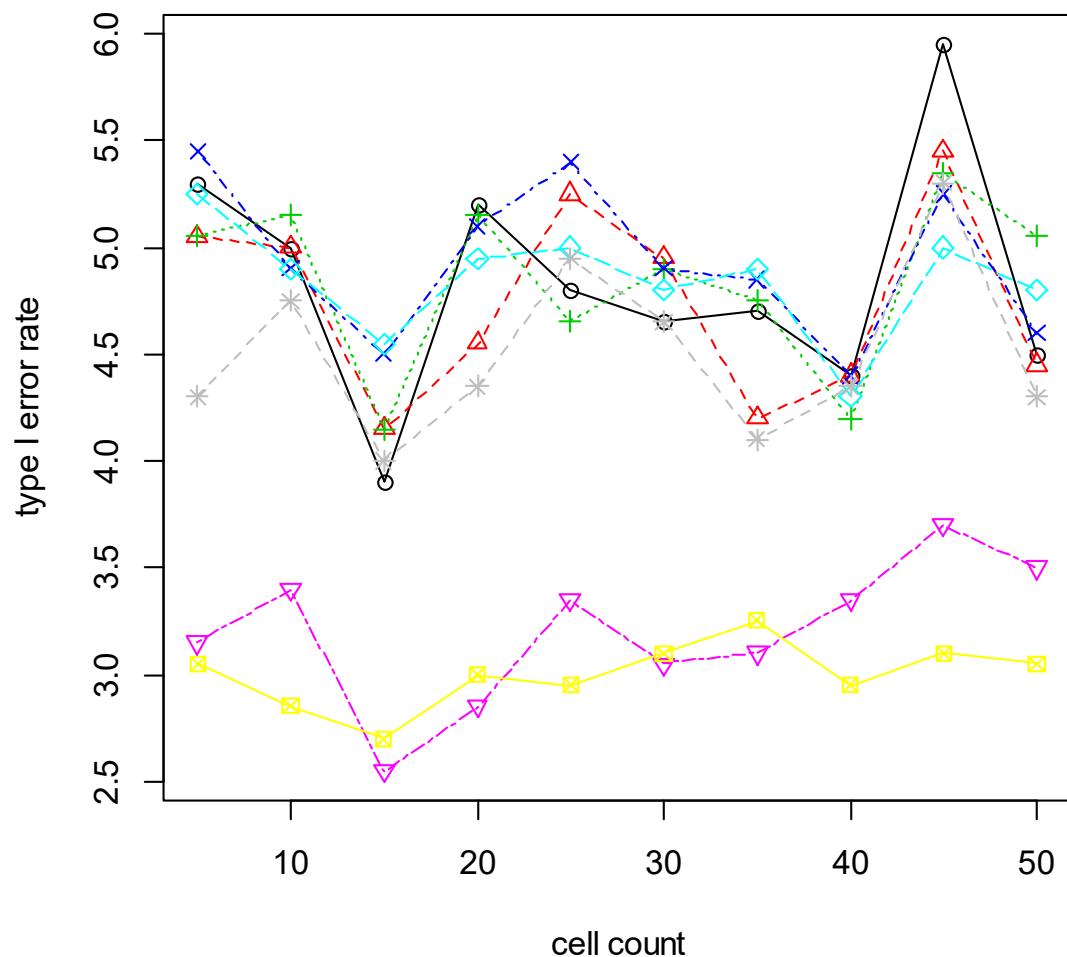
2. 11. 5   exponential distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.85	4.40	5.65	4.10	5.25	5.10	5.25	4.40	4.35	5.05
RT	5.60	5.10	4.95	4.80	5.30	5.40	5.05	5.10	5.70	4.95
INT	5.40	4.95	5.30	5.00	5.45	5.25	5.35	5.25	5.80	4.75
ART	7.65	7.90	8.40	7.40	8.50	7.20	8.55	8.25	7.80	7.40
ART+INT	5.80	4.60	4.60	3.65	4.50	3.80	4.05	3.65	3.60	3.90
Puri & Sen	3.95	4.00	3.85	4.20	4.60	4.25	4.25	4.60	4.70	4.25
v.d.Waerden	3.75	3.70	4.45	4.10	4.65	4.60	4.70	4.25	4.90	3.95
ATS	4.70	4.75	4.80	4.80	5.20	5.35	4.95	5.10	5.60	4.85
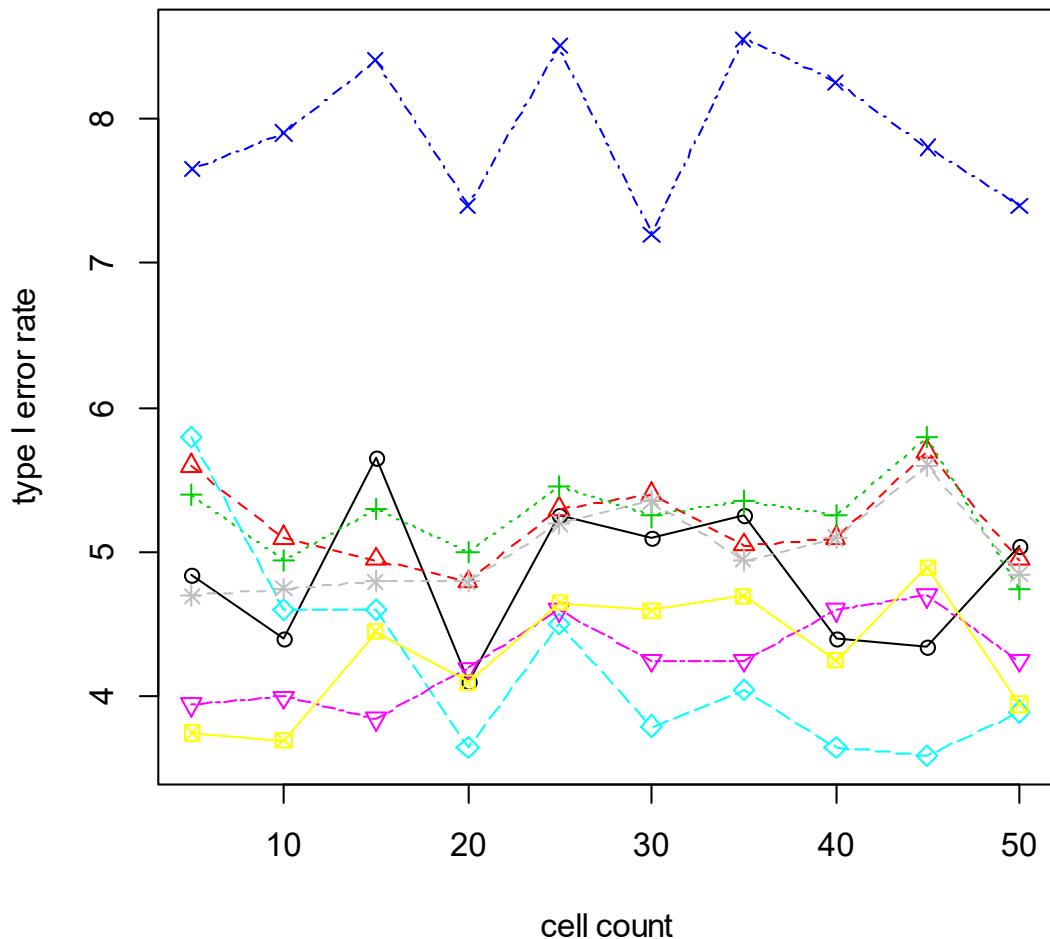
2. 11. 6   exponential distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.95	4.70	5.45	4.00	5.35	4.95	5.40	4.25	4.30	5.05
RT	5.80	4.85	5.20	5.10	5.25	4.80	5.25	5.35	5.20	5.40
INT	5.20	4.75	5.70	5.15	5.45	5.10	5.15	5.30	5.10	5.20
ART	8.20	7.65	8.95	8.25	9.25	7.60	9.25	8.70	8.65	9.40
ART+INT	6.25	4.80	4.85	4.00	4.10	3.85	4.30	3.60	3.50	3.75
Puri & Sen	3.90	3.95	4.45	4.00	4.35	4.30	4.45	4.30	4.60	4.50
v.d.Waerden	3.90	3.75	4.75	3.60	4.40	4.20	4.20	3.95	4.40	4.45
ATS	4.80	4.45	5.05	4.95	5.20	4.75	5.20	5.30	5.20	5.35
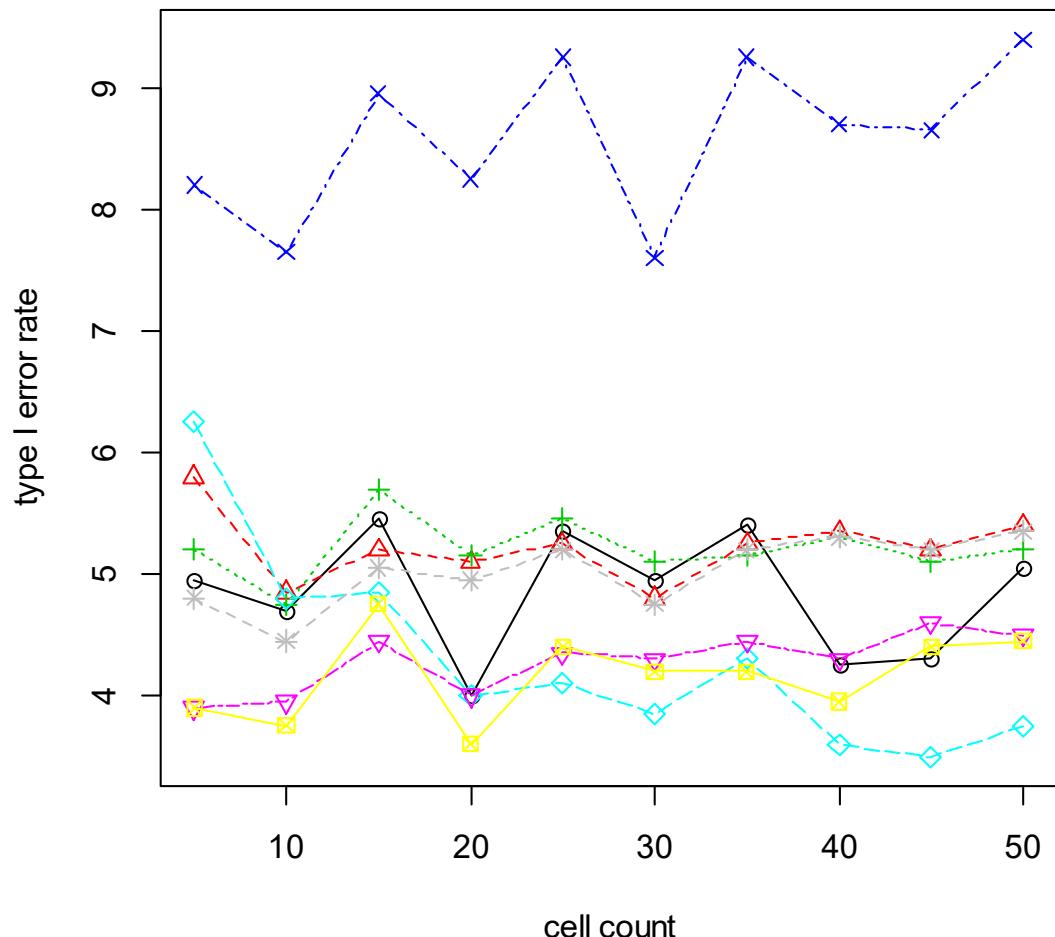
2. 11. 7   lognormal distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.75	4.00	5.15	5.10	5.35	5.30	5.65	4.75	5.50	4.90
RT	5.35	4.55	4.75	5.40	5.40	4.80	5.45	4.40	5.35	4.25
INT	5.00	4.20	4.70	5.35	5.20	4.95	5.70	4.75	5.30	4.65
ART	5.15	4.85	5.60	5.30	5.45	5.00	5.95	4.60	6.00	4.60
ART+INT	4.75	4.50	5.10	5.60	5.40	5.10	5.70	4.90	5.45	5.00
Puri & Sen	3.70	3.10	3.20	3.75	3.70	3.30	3.90	3.15	3.80	3.25
v.d.Waerden	3.20	2.85	3.30	3.65	3.65	3.80	4.15	3.30	3.80	3.60
ATS	4.90	4.30	4.45	5.30	5.15	4.75	5.40	4.35	5.35	4.25
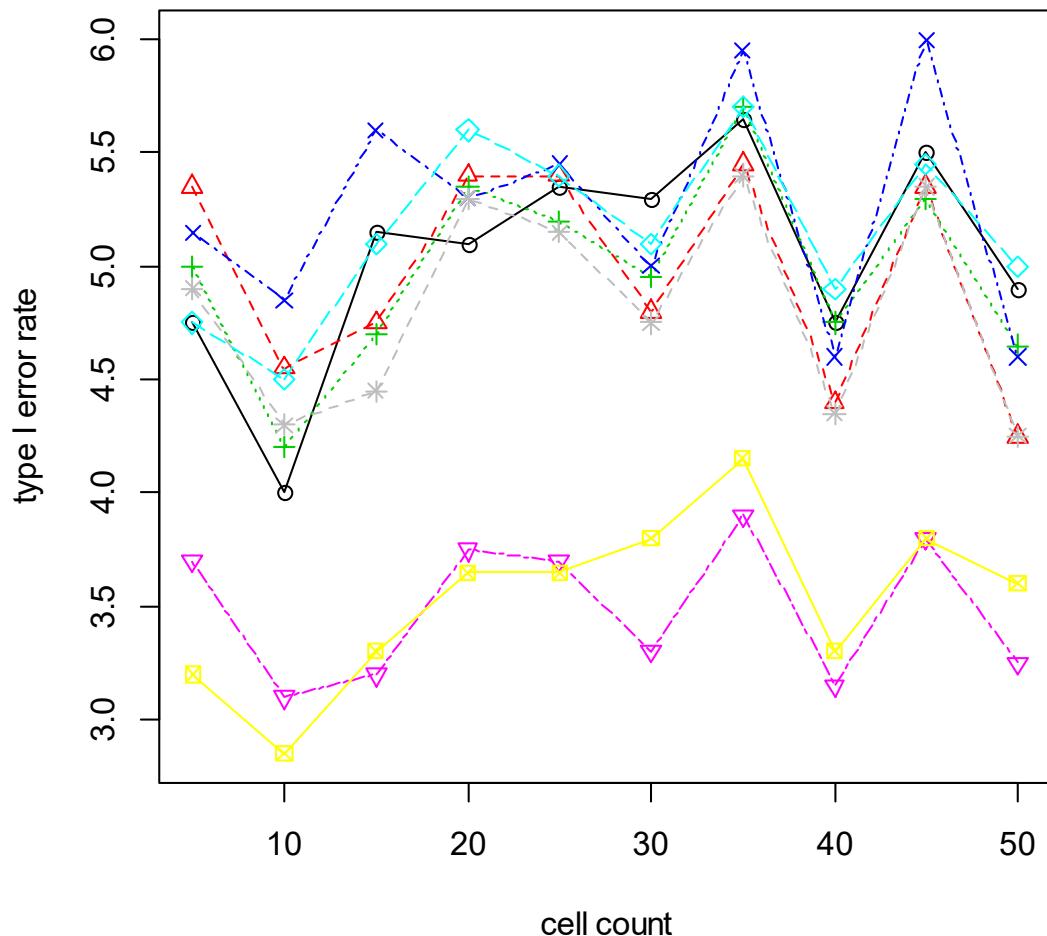
2. 11. 8   uniform distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.30	5.10	4.05	4.85	5.05	4.70	4.85	4.35	5.10	4.55
RT	5.05	5.35	4.45	4.80	5.15	4.75	4.65	4.35	5.25	4.50
INT	4.85	5.10	4.45	5.10	5.15	5.05	4.70	4.35	4.90	4.75
ART	5.25	5.30	4.10	5.00	5.05	4.60	4.70	4.25	5.20	4.55
ART+INT	4.90	5.25	3.75	4.70	4.80	5.05	4.55	4.70	4.75	4.95
Puri & Sen	3.95	4.80	3.60	4.25	4.55	4.10	4.30	4.25	4.65	4.15
v.d.Waerden	3.75	4.50	3.65	4.20	4.40	4.25	4.20	3.95	4.40	4.25
ATS	4.10	5.20	4.25	4.65	5.05	4.50	4.65	4.30	5.20	4.50
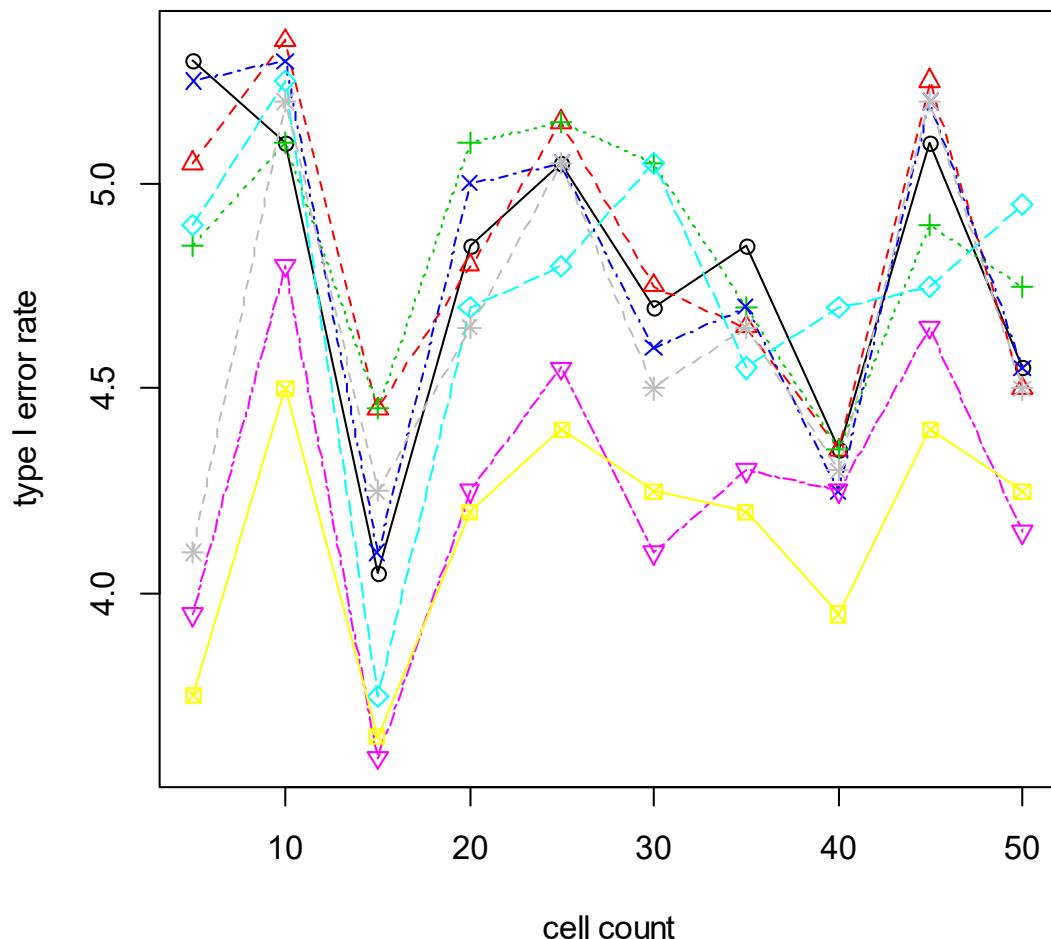
2. 11. 9   uniform distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.50	4.60	4.55	4.95	5.65	4.30	4.65	4.65	4.75	4.80
RT	5.75	4.90	4.30	4.95	5.05	4.40	4.70	4.85	4.85	4.60
INT	5.25	5.00	4.90	4.85	5.60	4.50	4.80	4.35	4.95	5.15
ART	5.75	5.00	4.75	5.25	5.85	4.85	5.05	5.35	5.60	5.90
ART+INT	5.10	4.85	4.50	5.15	5.75	4.80	5.05	4.90	5.30	5.45
Puri & Sen	3.75	3.55	3.25	3.55	3.75	2.85	3.55	3.25	3.30	3.70
v.d.Waerden	3.30	3.60	2.80	3.20	3.55	2.95	3.20	3.05	3.00	3.10
ATS	4.65	4.75	4.15	4.90	5.00	4.35	4.70	4.70	4.85	4.60
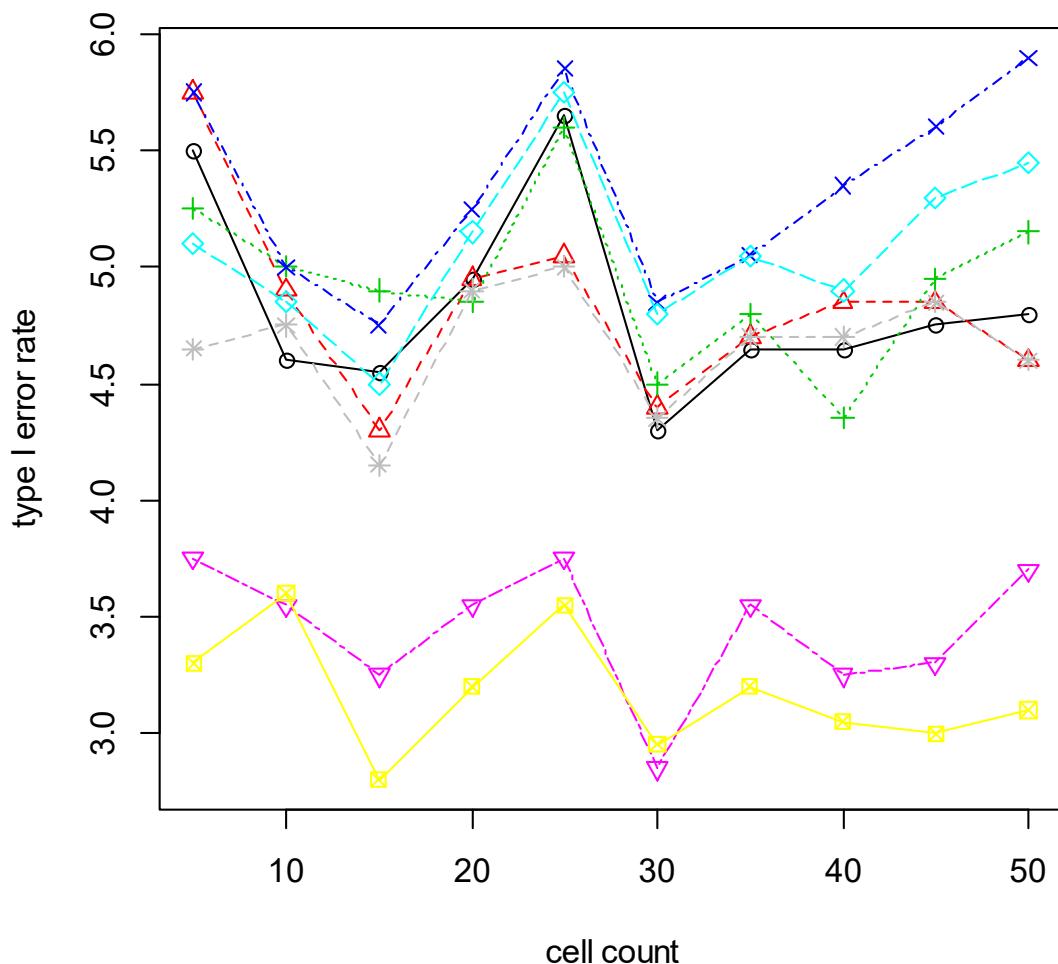
2. 11. 10 left/right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.65	4.75	4.60	5.25	5.15	4.40	4.60	4.70	5.65	5.10
RT	4.95	5.35	4.65	5.35	4.80	4.80	4.60	4.65	5.35	4.95
INT	4.60	4.75	4.30	5.10	5.00	4.40	4.50	4.85	5.45	4.60
ART	4.85	4.90	4.55	5.25	5.05	4.65	4.65	4.50	5.45	4.95
ART+INT	4.75	4.80	4.55	5.40	4.70	5.10	4.65	4.80	6.15	4.65
Puri & Sen	3.35	3.40	3.05	3.95	3.70	3.65	3.65	3.50	4.20	3.65
v.d.Waerden	3.00	3.35	3.00	3.45	3.25	3.05	3.10	3.05	3.60	3.10
ATS	3.85	4.95	4.50	5.30	4.75	4.65	4.55	4.65	5.35	4.95
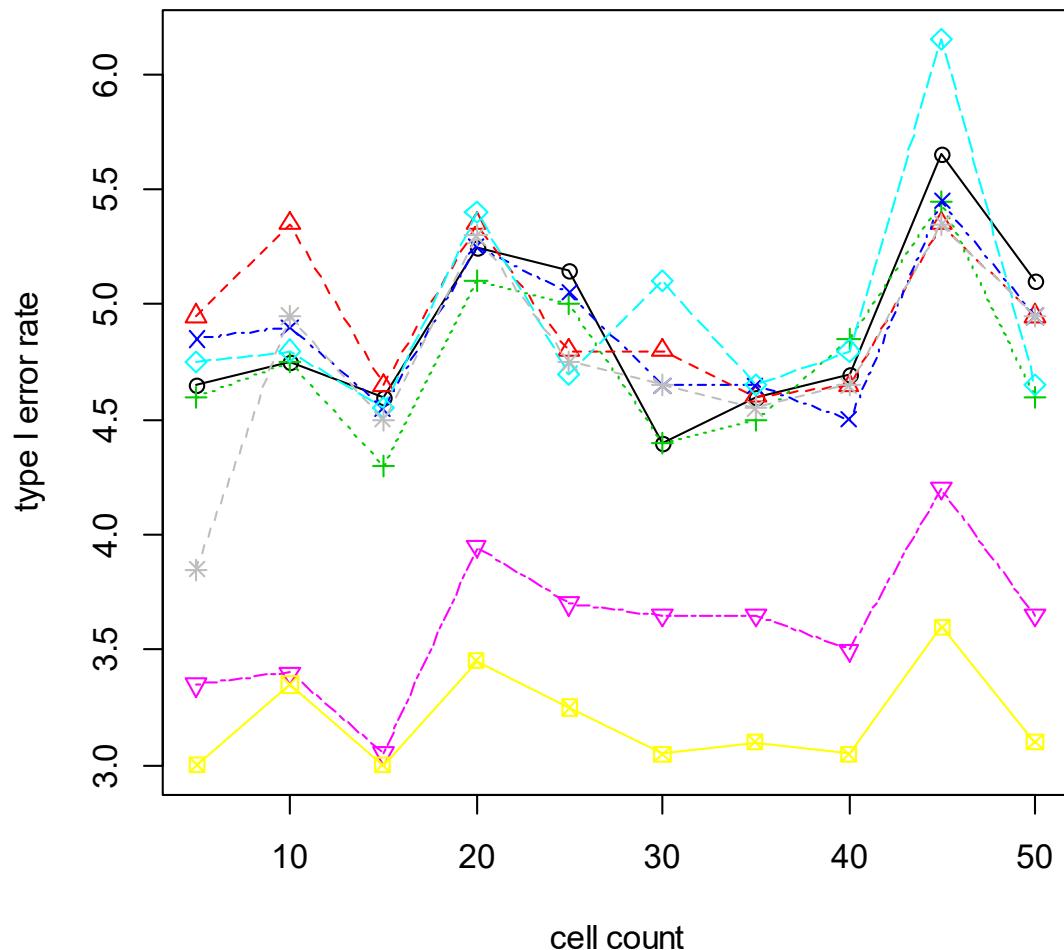
2. 11. 11   left skewed distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	7.40	6.25	5.80	6.75	6.65	5.90	5.70	6.15	6.45	5.95
RT	6.25	5.85	6.80	7.20	7.85	8.35	8.05	9.35	11.05	9.75
INT	6.95	5.95	5.90	6.20	6.40	5.85	5.30	6.05	6.20	6.00
ART	7.50	6.40	6.65	6.80	6.75	6.00	6.00	6.60	6.85	6.40
ART+INT	7.00	6.05	5.85	6.35	6.60	5.55	5.40	5.90	6.25	6.10
Puri & Sen	4.95	4.40	5.50	6.15	6.25	6.30	6.55	7.70	9.15	7.65
v.d.Waerden	5.10	4.10	4.10	4.25	4.95	4.45	3.85	4.35	4.75	4.60
ATS	5.15	5.40	6.70	7.05	7.35	8.10	7.95	9.20	11.00	9.50
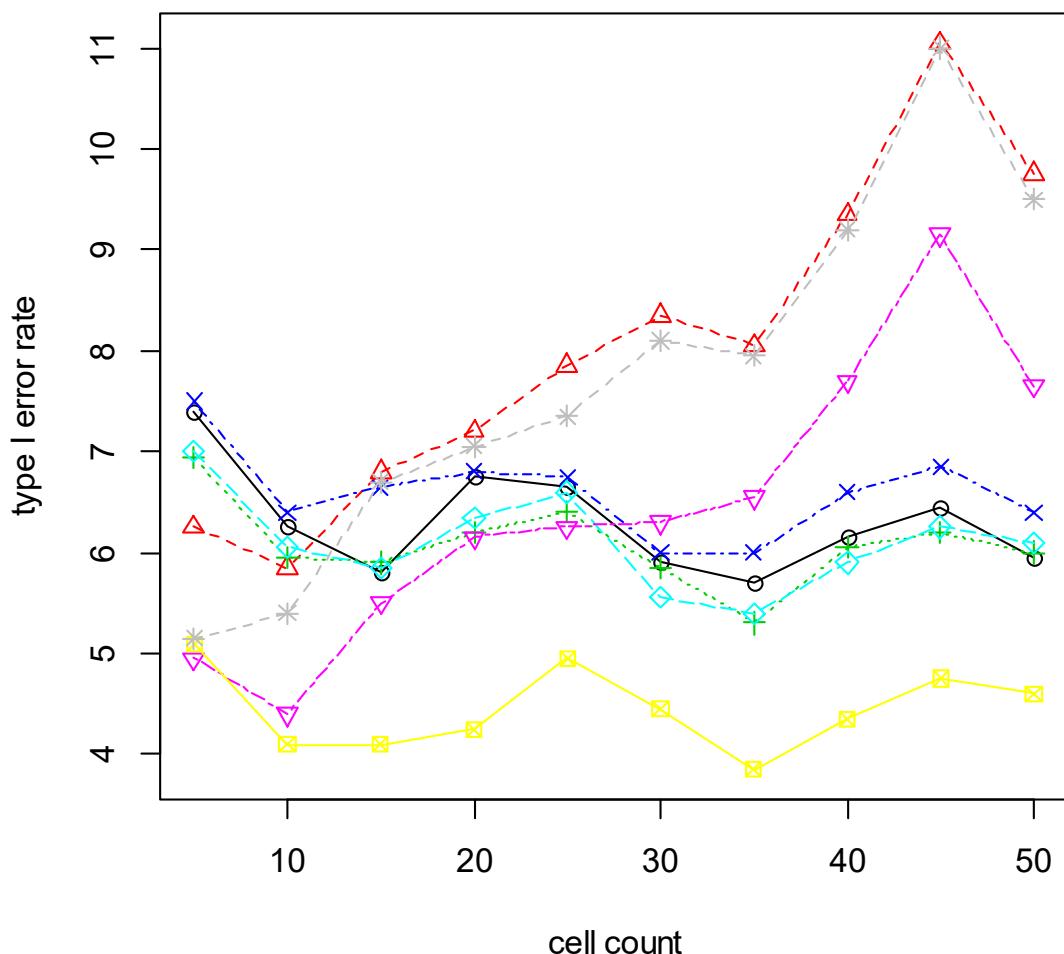
2. 11. 12 left skewed distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.70	5.50	5.20	6.15	6.05	5.80	5.10	5.75	6.30	5.75
RT	5.90	5.70	5.90	6.90	7.05	7.15	6.70	8.05	8.40	7.90
INT	6.20	5.45	5.00	6.00	6.15	5.45	4.95	5.65	5.95	5.40
ART	7.25	6.50	5.85	7.45	7.20	6.95	6.60	7.35	7.35	6.95
ART+INT	6.55	5.90	5.40	6.80	6.20	6.05	5.45	5.65	6.60	6.70
Puri & Sen	4.25	4.55	4.80	5.65	5.75	5.25	5.05	6.25	6.40	5.85
v.d.Waerden	4.05	3.95	3.85	4.30	4.45	4.00	3.70	3.95	4.55	4.10
ATS	4.80	5.15	5.50	6.55	6.90	6.85	6.60	7.85	8.10	7.80
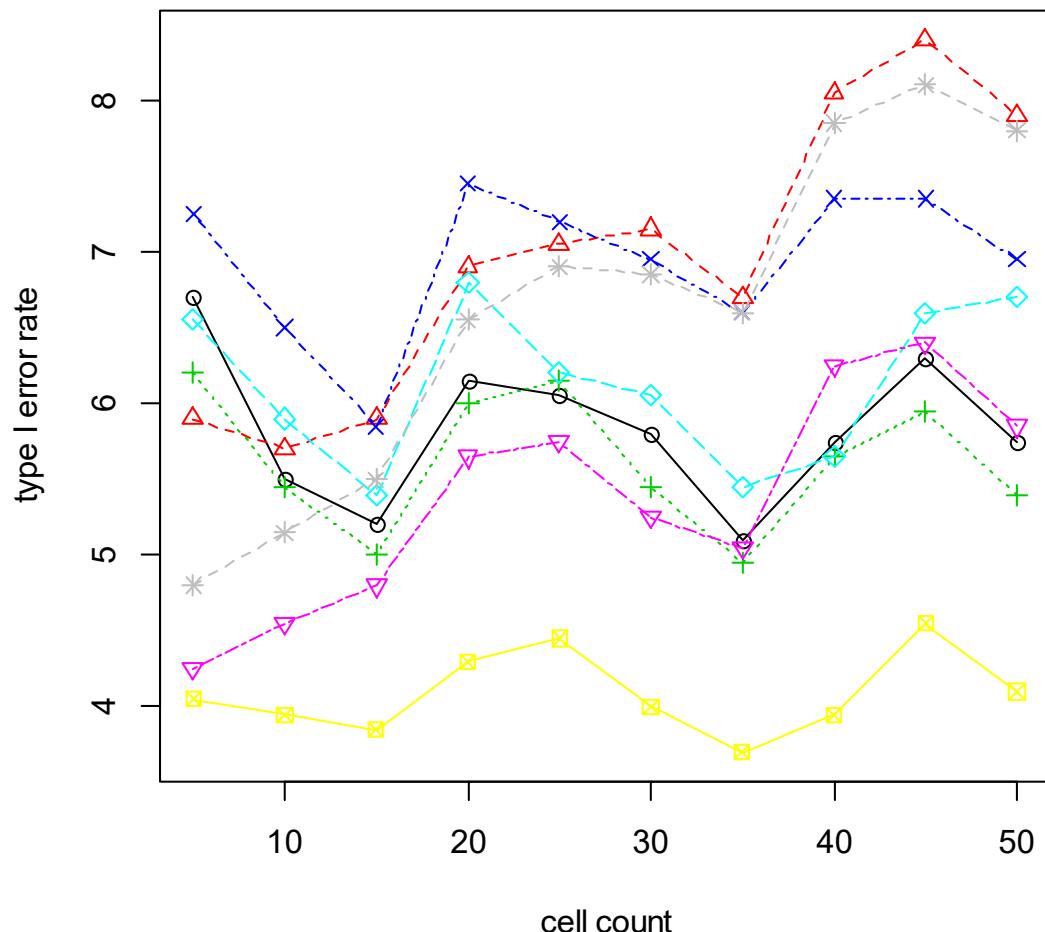
2. 12. Interaction AB - A significant
   (effects a$_i$ = 0.6*s / unequal n$_i$ / # levels = 4*5)

2. 12. 1   normal distribution - equal variances

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.75	5.30	5.05	4.45	4.15	3.90	4.30	4.55	5.15	4.35
RT	5.15	5.05	5.05	4.15	4.15	4.40	4.45	4.15	5.00	4.15
INT	5.55	5.25	4.80	4.35	4.00	3.95	4.40	4.75	4.85	4.00
ART	4.90	5.20	4.90	4.05	4.55	4.65	4.75	4.75	5.35	4.40
ART+INT	5.80	5.25	5.30	4.30	4.10	3.95	4.50	4.60	5.10	4.15
Puri & Sen	2.35	2.25	2.60	2.25	2.05	2.55	2.10	2.70	2.65	2.70
v.d.Waerden	2.45	2.35	2.40	1.90	2.45	2.45	2.30	2.55	2.80	2.10
ATS	4.00	4.60	4.25	3.95	4.75	4.85	4.50	4.80	4.65	4.10
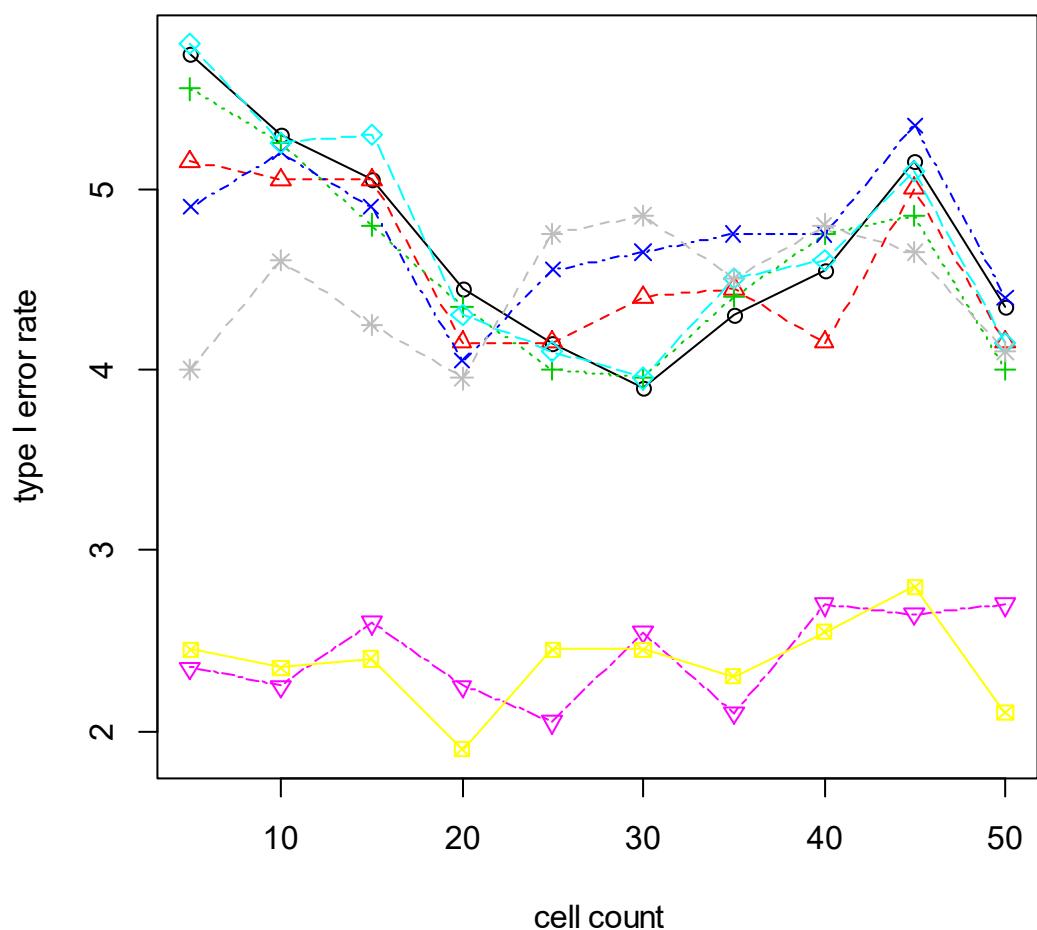
2. 12. 2   normal distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.00	6.10	5.35	4.90	4.70	5.00	4.95	5.75	5.90	5.45
RT	5.65	5.60	6.15	6.25	6.65	7.20	7.60	9.35	10.10	10.25
INT	5.70	5.25	5.10	4.55	4.65	4.95	5.00	5.95	5.55	5.25
ART	6.40	5.55	5.70	5.00	5.35	5.60	5.80	6.25	5.80	5.25
ART+INT	6.20	5.75	5.25	4.75	4.70	5.05	5.05	6.15	6.15	5.30
Puri & Sen	2.25	2.90	3.45	2.85	3.65	4.35	5.20	5.05	5.95	6.15
v.d.Waerden	2.20	3.15	3.15	2.25	2.55	3.15	2.75	3.50	3.50	3.20
ATS	3.95	4.20	5.25	5.35	5.70	6.90	7.40	8.30	9.25	9.40
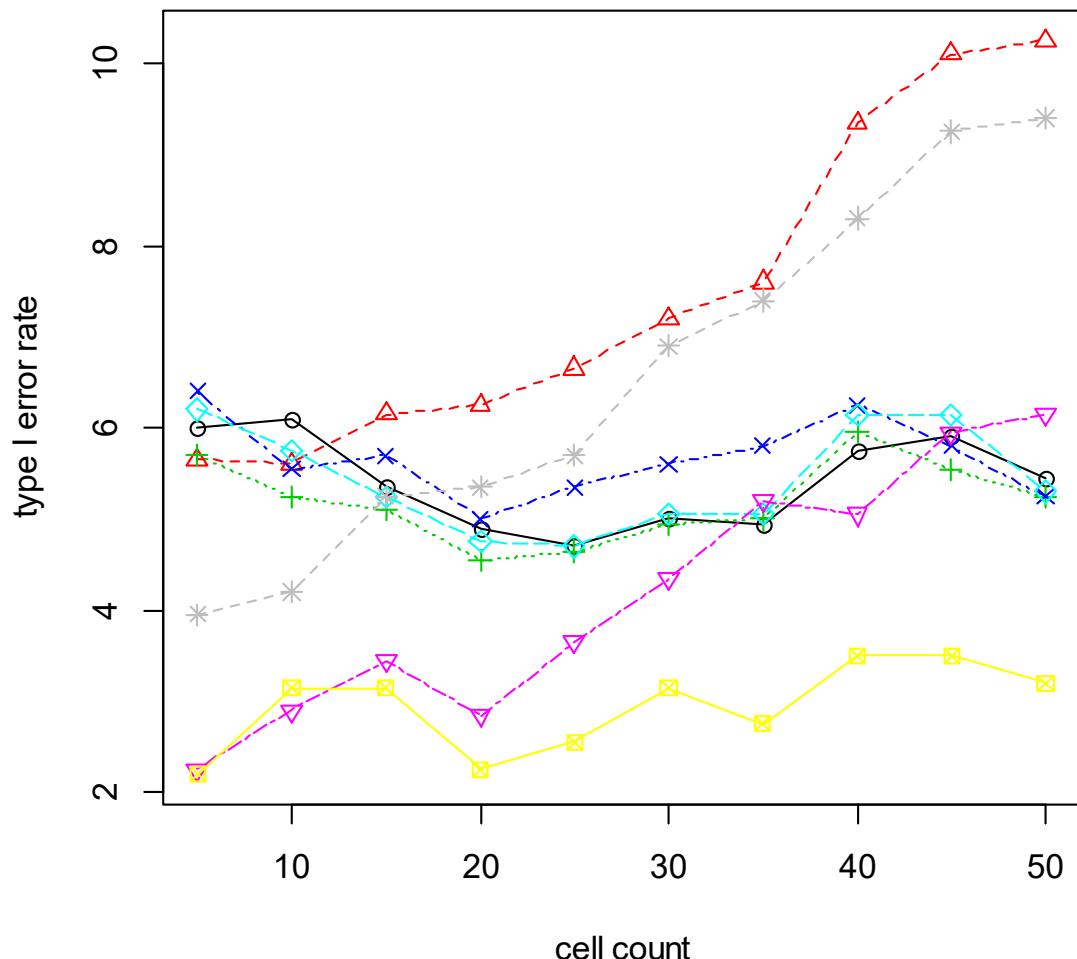
2. 12. 3   normal distribution - unequal variances (on A and B)

	cell count									
method	5	10	15	20	25	30	35	40	45	50
parametric	8.55	7.80	7.95	7.95	7.70	7.80	7.00	8.30	7.90	7.65
RT	5.65	5.50	6.65	5.40	4.80	5.55	5.60	6.40	6.30	5.95
INT	6.85	6.65	6.75	6.35	5.75	6.50	5.85	7.05	7.15	5.95
ART	6.75	6.20	6.70	5.70	6.40	5.90	5.50	6.80	6.30	5.90
ART+INT	7.75	7.00	7.30	6.70	6.25	6.70	5.85	7.15	6.95	6.55
Puri & Sen	2.50	2.90	3.05	2.70	2.50	3.20	3.10	3.50	3.80	3.20
v.d.Waerden	3.45	3.35	4.00	3.35	3.55	4.35	3.40	4.35	4.75	4.00
ATS	3.40	4.15	4.40	4.25	4.75	5.00	4.80	5.50	5.90	5.05
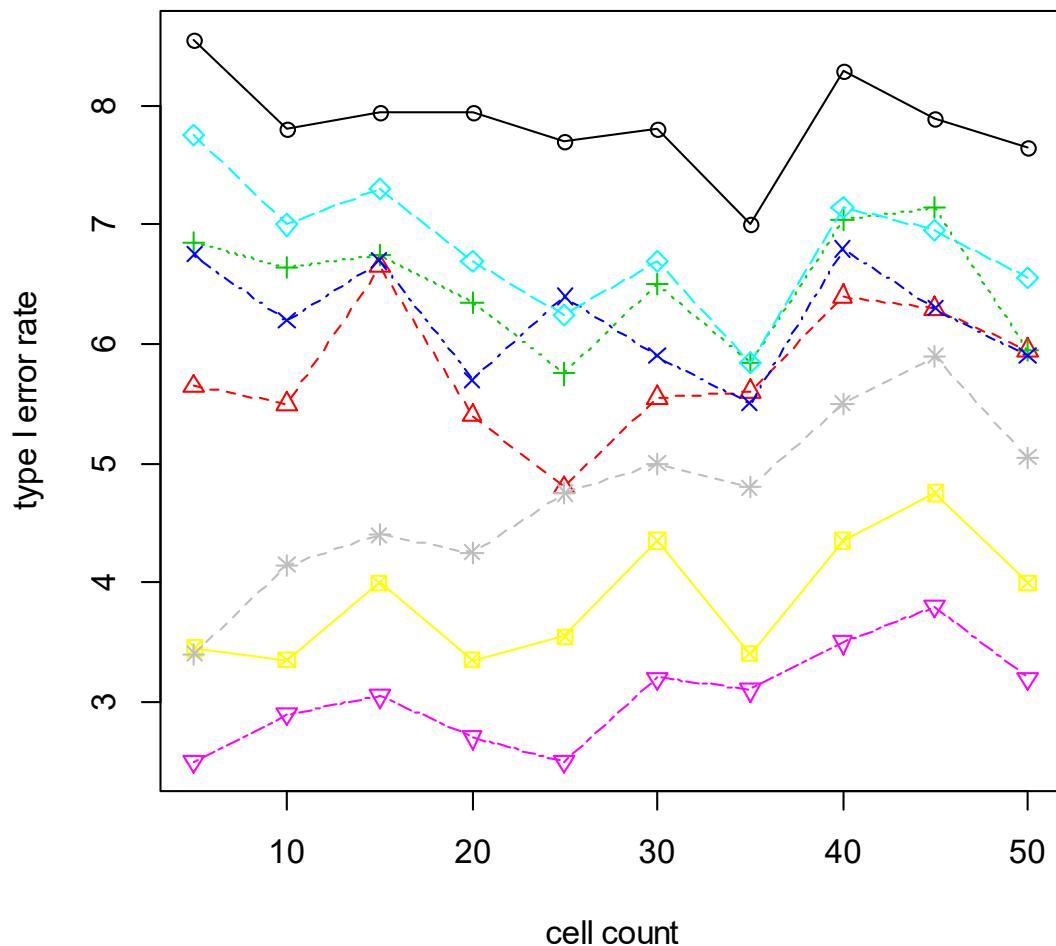
2. 12. 4   right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.65	5.75	5.35	5.70	4.80	4.15	4.50	4.10	4.60	4.5
RT	6.55	7.05	7.25	7.05	6.05	5.65	5.95	5.90	5.60	5.9
INT	7.10	7.05	7.60	7.05	5.70	5.95	5.80	6.50	5.80	5.8
ART	5.55	5.95	5.75	6.20	4.50	5.00	5.20	4.80	4.95	5.0
ART+INT	6.10	5.90	6.00	6.50	5.30	4.85	5.25	5.35	5.40	5.4
Puri & Sen	3.00	3.55	3.60	3.85	3.10	3.10	2.70	2.80	3.25	3.0
v.d.Waerden	2.75	2.90	2.95	3.65	2.70	2.70	2.55	2.70	3.10	2.5
ATS	4.85	5.70	5.95	5.20	5.35	4.25	4.70	4.55	4.05	4.0
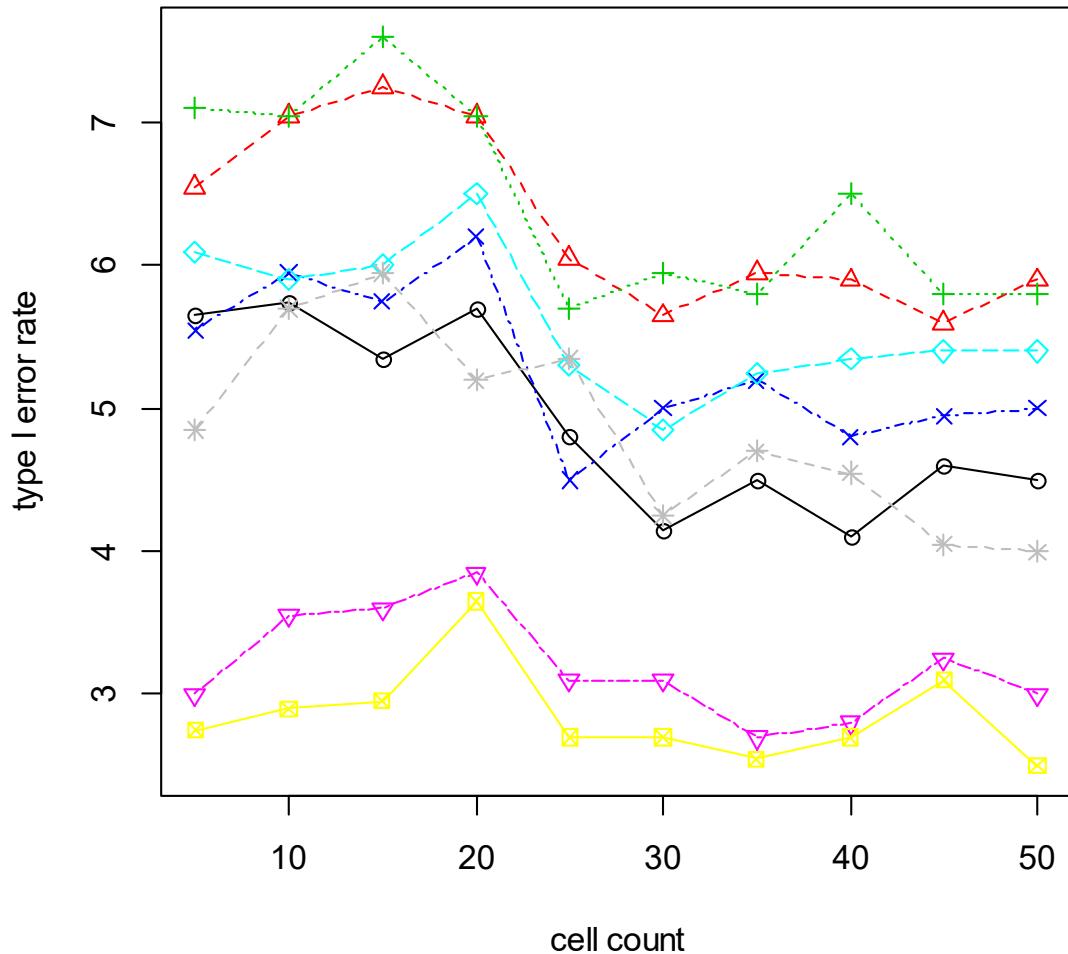
2. 12. 5   exponential distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.80	4.55	4.50	3.75	4.25	3.95	4.45	3.80	5.00	3.75
RT	4.60	4.85	5.15	4.80	4.20	4.10	5.00	3.95	5.30	4.25
INT	4.40	5.10	4.90	4.20	4.30	4.50	4.50	3.80	4.95	4.00
ART	5.10	6.40	5.65	5.90	4.60	5.30	5.90	4.95	6.00	5.20
ART+INT	3.85	4.50	4.35	3.40	3.40	3.40	3.75	3.35	3.75	2.90
Puri & Sen	2.55	3.15	3.65	3.40	3.05	3.45	3.75	3.25	3.85	2.95
v.d.Waerden	2.50	3.15	3.40	2.95	3.20	3.40	3.15	2.70	4.05	2.80
ATS	4.05	4.30	4.60	5.20	4.35	4.55	4.60	4.95	5.65	4.95
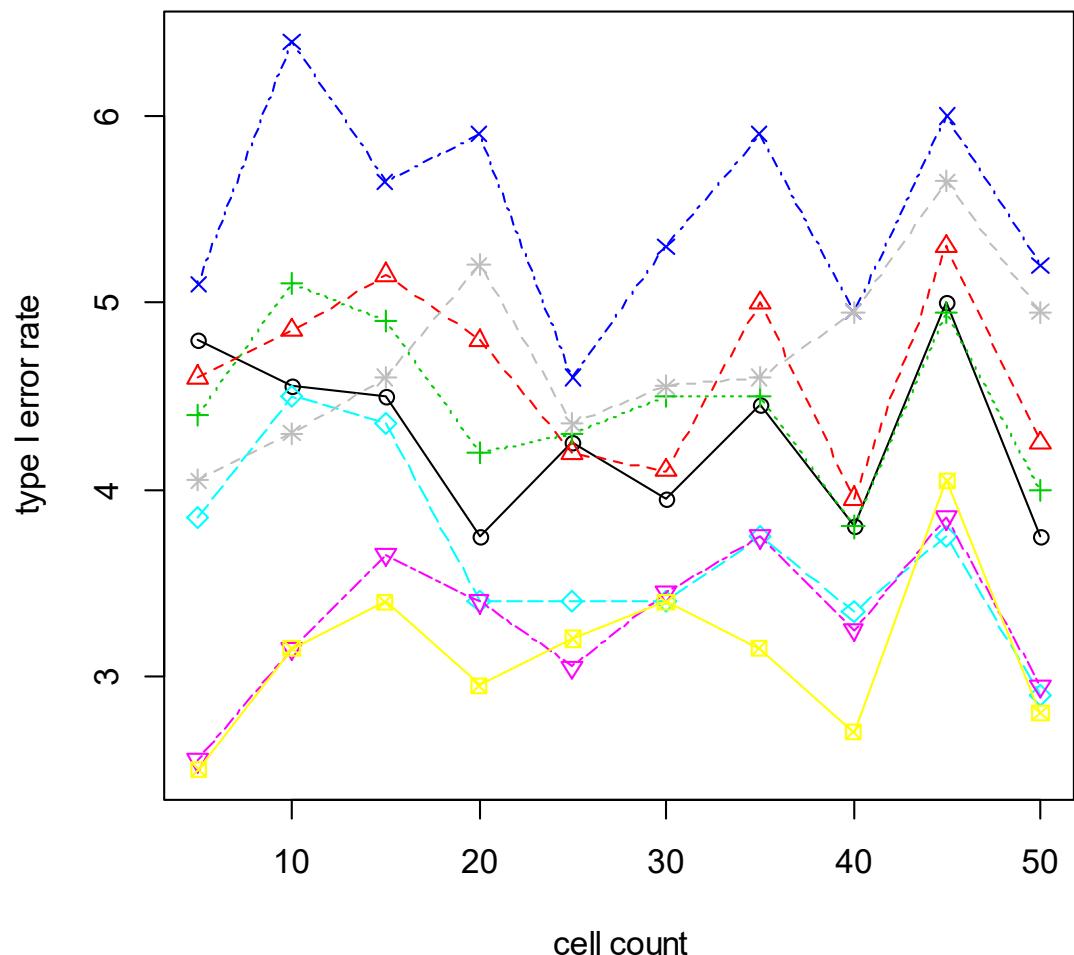
2. 12. 6   exponential distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.90	4.25	4.70	3.55	4.25	4.15	4.90	3.95	4.80	3.95
RT	4.45	5.15	5.15	4.65	4.30	4.20	5.10	4.20	5.40	4.70
INT	3.80	4.80	4.70	4.15	4.15	4.20	5.50	4.20	4.85	4.45
ART	5.80	6.65	6.25	6.20	5.85	5.95	6.60	5.90	6.95	7.05
ART+INT	4.25	4.80	4.45	3.45	3.75	3.85	4.85	4.10	4.30	3.75
Puri & Sen	2.35	3.75	3.45	3.35	3.20	2.95	4.10	3.20	3.85	3.30
v.d.Waerden	2.20	3.45	3.60	2.55	3.00	3.00	4.00	2.95	3.20	3.05
ATS	4.40	4.65	4.50	4.65	4.45	4.75	5.60	5.20	5.45	4.85
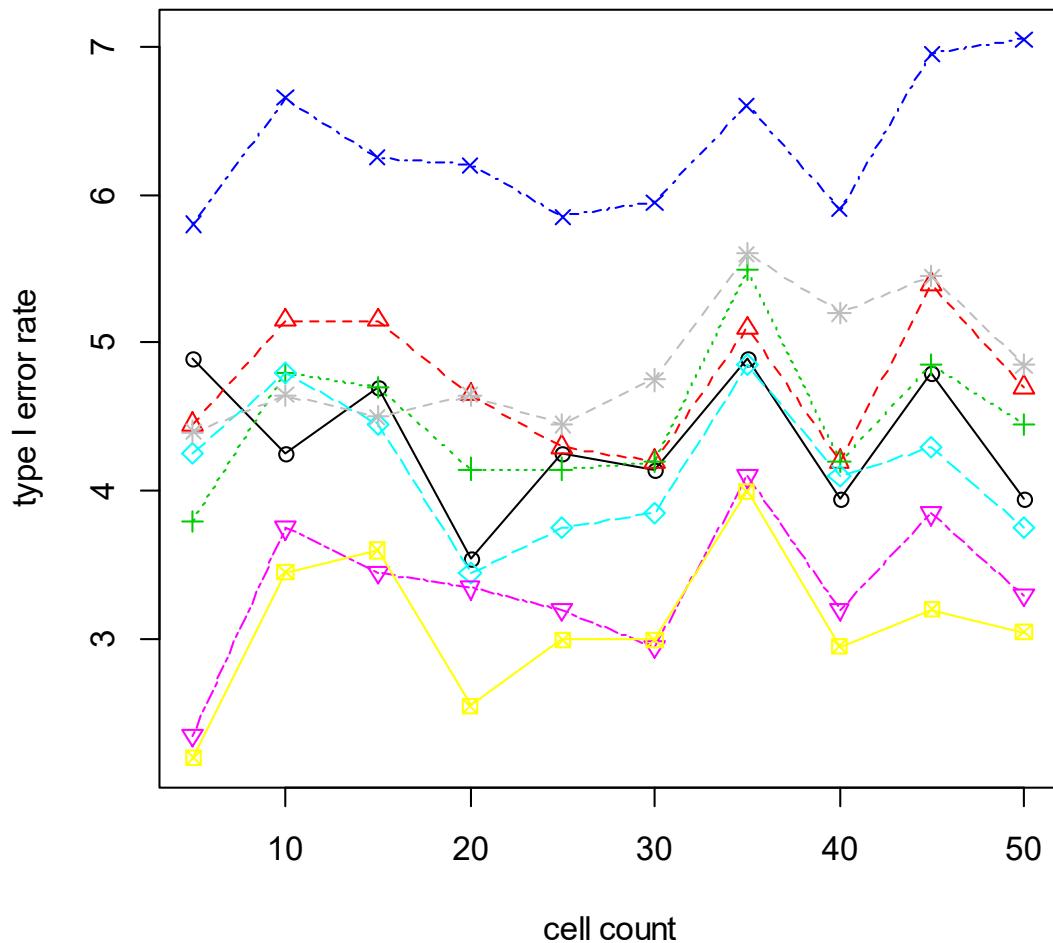
2. 12. 7   lognormal distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.80	4.80	5.60	4.70	5.40	5.70	4.45	5.00	4.80	4.75
RT	4.75	5.00	4.60	4.50	5.45	5.90	4.85	5.55	5.35	5.20
INT	5.55	5.30	6.20	5.20	5.85	6.05	5.35	5.60	5.40	5.30
ART	4.85	4.65	4.35	4.35	5.15	5.65	4.60	4.75	4.70	4.85
ART+INT	5.40	4.75	5.10	4.50	5.30	5.80	4.35	4.90	4.80	4.70
Puri & Sen	2.20	2.70	2.30	2.50	2.45	2.85	2.55	2.80	2.60	2.95
v.d.Waerden	2.90	2.80	2.80	2.75	3.15	3.20	2.70	2.75	3.30	3.25
ATS	4.20	5.00	4.95	4.65	5.30	5.10	4.30	4.90	5.05	4.10
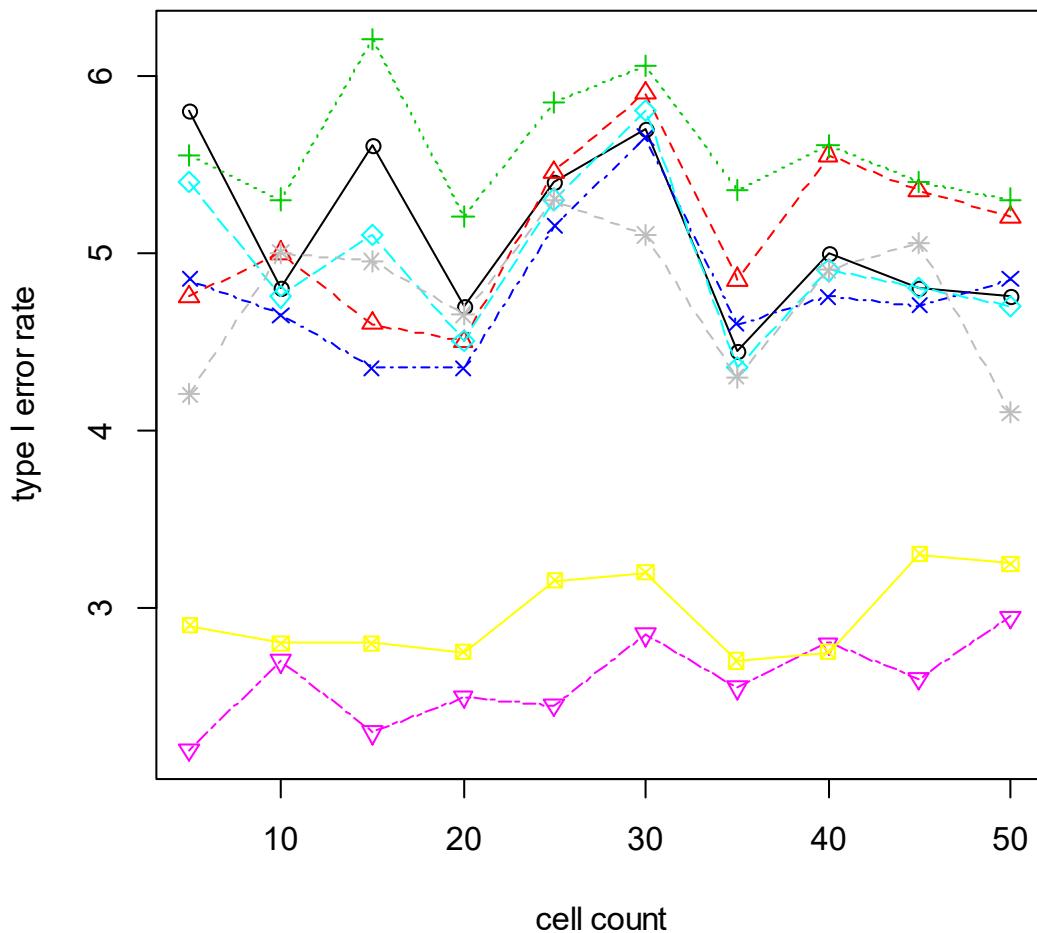
2. 12. 8   uniform distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.55	5.45	5.30	5.75	4.45	4.50	4.40	4.20	4.65	4.55
RT	5.35	5.05	5.15	5.65	4.45	4.50	4.45	4.10	4.60	4.70
INT	6.60	5.60	5.30	5.85	4.65	4.10	4.70	4.65	5.35	4.80
ART	5.50	5.65	5.05	5.80	4.35	4.50	4.50	4.30	4.60	4.60
ART+INT	5.90	5.70	5.05	5.80	4.80	4.50	4.45	4.90	4.75	4.60
Puri & Sen	2.80	2.90	2.90	3.45	2.60	2.65	2.65	2.45	2.60	2.85
v.d.Waerden	2.60	2.55	2.60	3.00	2.40	2.20	2.50	2.40	2.50	2.25
ATS	3.95	5.05	6.05	5.45	4.75	4.30	4.60	4.40	4.45	4.25
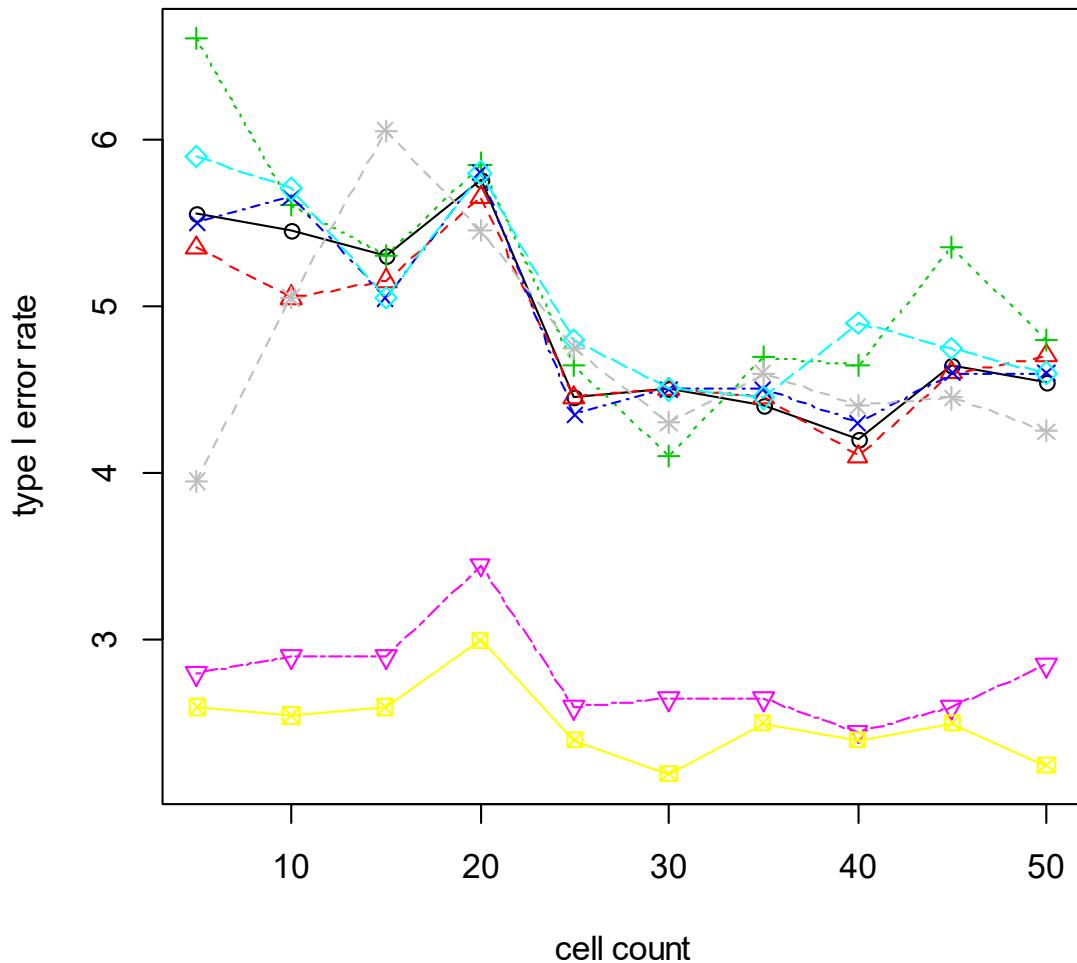
2. 12. 9   uniform distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.65	5.75	5.50	5.80	5.05	4.40	4.00	4.10	4.45	4.50
RT	5.20	5.35	5.45	5.60	5.05	4.50	4.30	4.00	4.50	4.50
INT	5.50	5.80	5.50	6.15	4.85	4.25	4.30	4.65	4.40	4.50
ART	5.55	6.00	6.40	7.45	6.30	6.10	6.85	6.55	7.00	7.20
ART+INT	5.80	6.00	5.85	7.40	6.75	6.40	6.85	6.85	8.35	7.95
Puri & Sen	2.40	3.05	3.30	3.55	2.80	2.40	2.15	2.45	2.35	2.55
v.d.Waerden	2.20	2.80	2.80	3.50	2.35	2.15	1.70	2.00	2.10	1.95
ATS	4.15	5.25	6.00	5.75	5.30	4.20	4.75	4.10	4.10	4.35
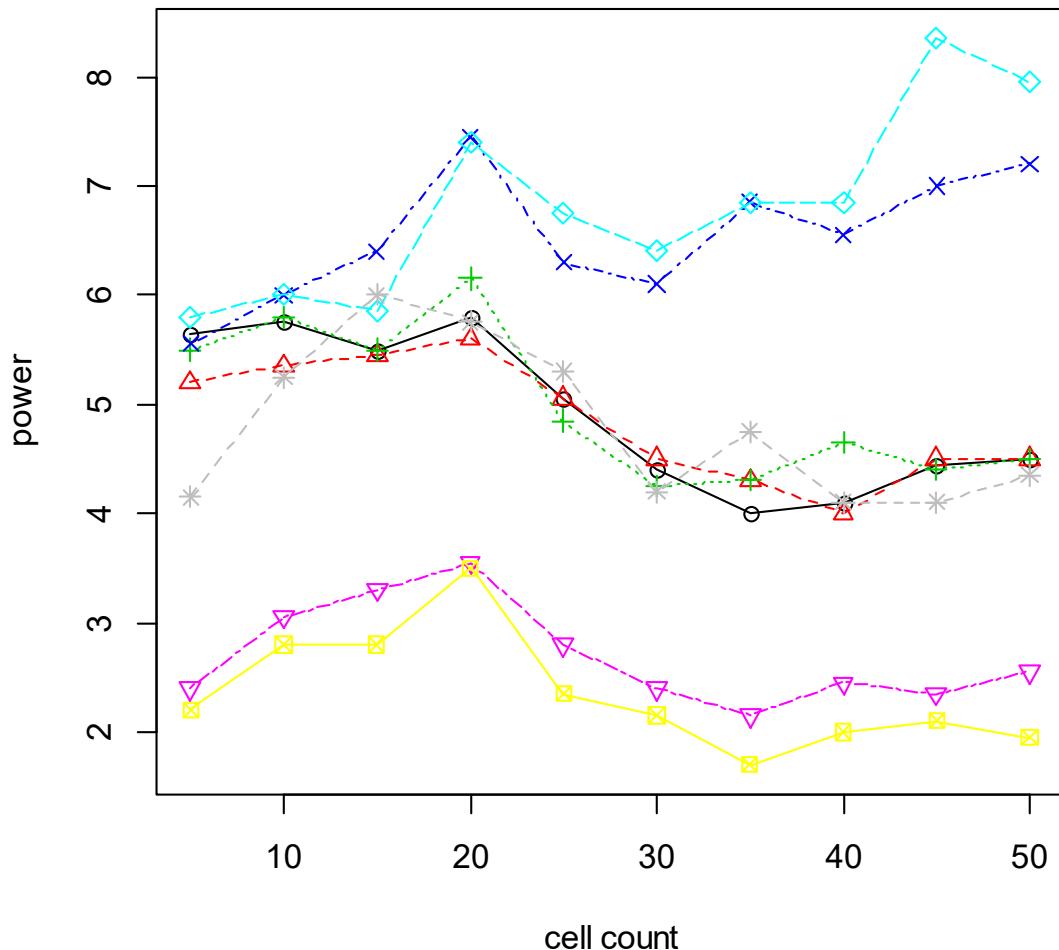
2. 12. 10 left/right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.10	5.20	5.20	5.20	5.35	4.90	5.15	4.50	4.65	4.90
RT	5.70	4.90	4.45	5.00	4.90	4.95	5.20	4.00	4.85	4.50
INT	6.00	5.50	5.10	5.60	4.30	5.15	4.95	4.75	4.65	4.65
ART	5.75	4.95	5.05	5.10	4.90	5.45	5.50	4.25	5.15	5.10
ART+INT	6.10	5.35	4.85	5.30	5.10	4.95	4.95	5.40	4.65	4.45
Puri & Sen	2.30	2.85	2.65	3.10	2.75	2.45	3.05	2.35	2.70	2.15
v.d.Waerden	2.45	2.85	2.15	2.85	2.55	2.30	2.75	2.05	2.25	1.95
ATS	4.45	4.75	5.60	5.60	5.45	4.50	4.90	4.45	4.10	3.85
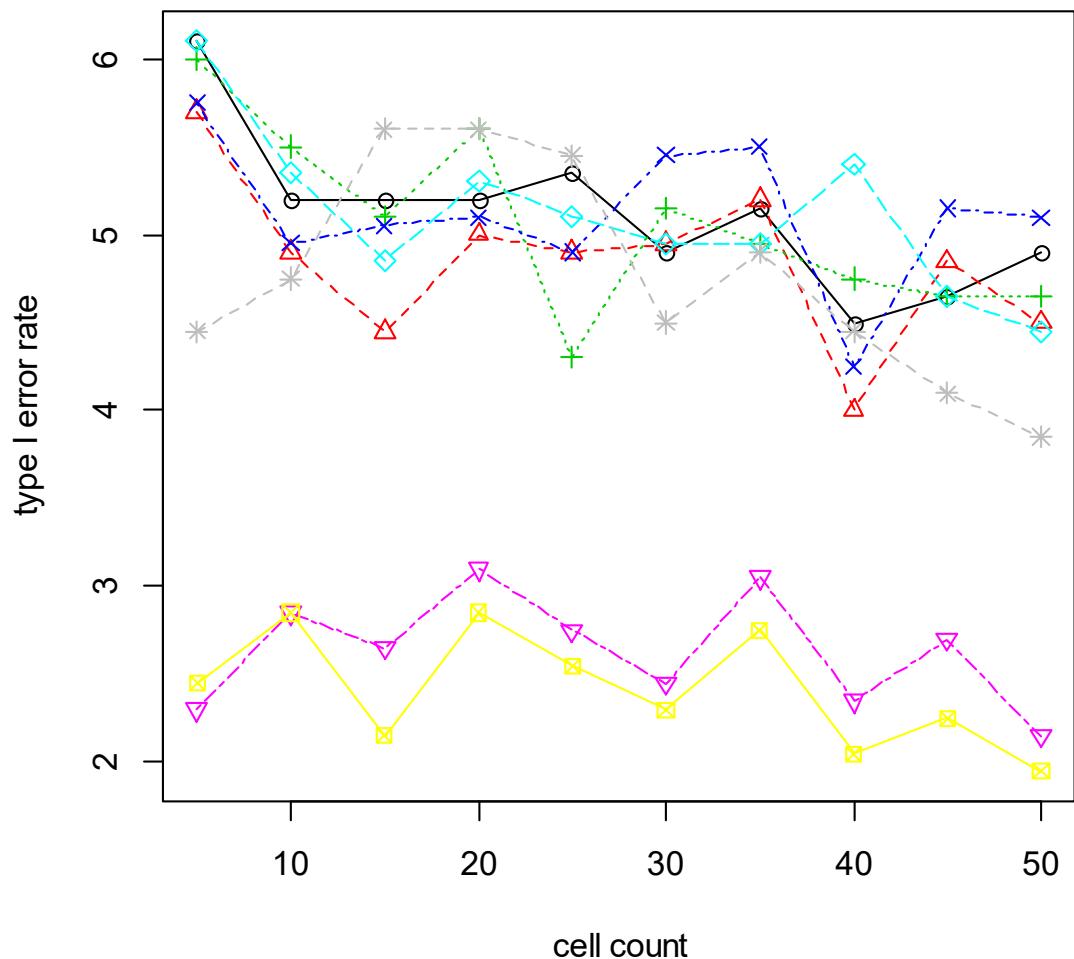
2. 12. 11 left skewed distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.45	6.60	6.75	7.10	6.30	5.50	5.50	5.70	6.35	6.55
RT	5.65	6.10	7.05	7.50	7.70	7.50	7.20	8.40	8.90	9.65
INT	6.35	6.30	6.15	6.60	6.30	5.70	5.40	5.75	6.25	6.15
ART	6.35	7.80	6.95	7.60	7.15	6.15	5.95	6.50	6.50	6.85
ART+INT	7.00	6.50	6.55	6.55	6.00	5.35	5.25	5.85	6.20	6.30
Puri & Sen	2.90	3.80	4.40	4.35	4.90	4.75	5.20	5.85	6.05	6.40
v.d.Waerden	3.40	4.05	3.65	3.70	4.25	3.55	3.40	3.40	3.70	4.15
ATS	3.70	5.70	7.05	6.85	6.75	6.65	7.55	7.65	7.60	8.40
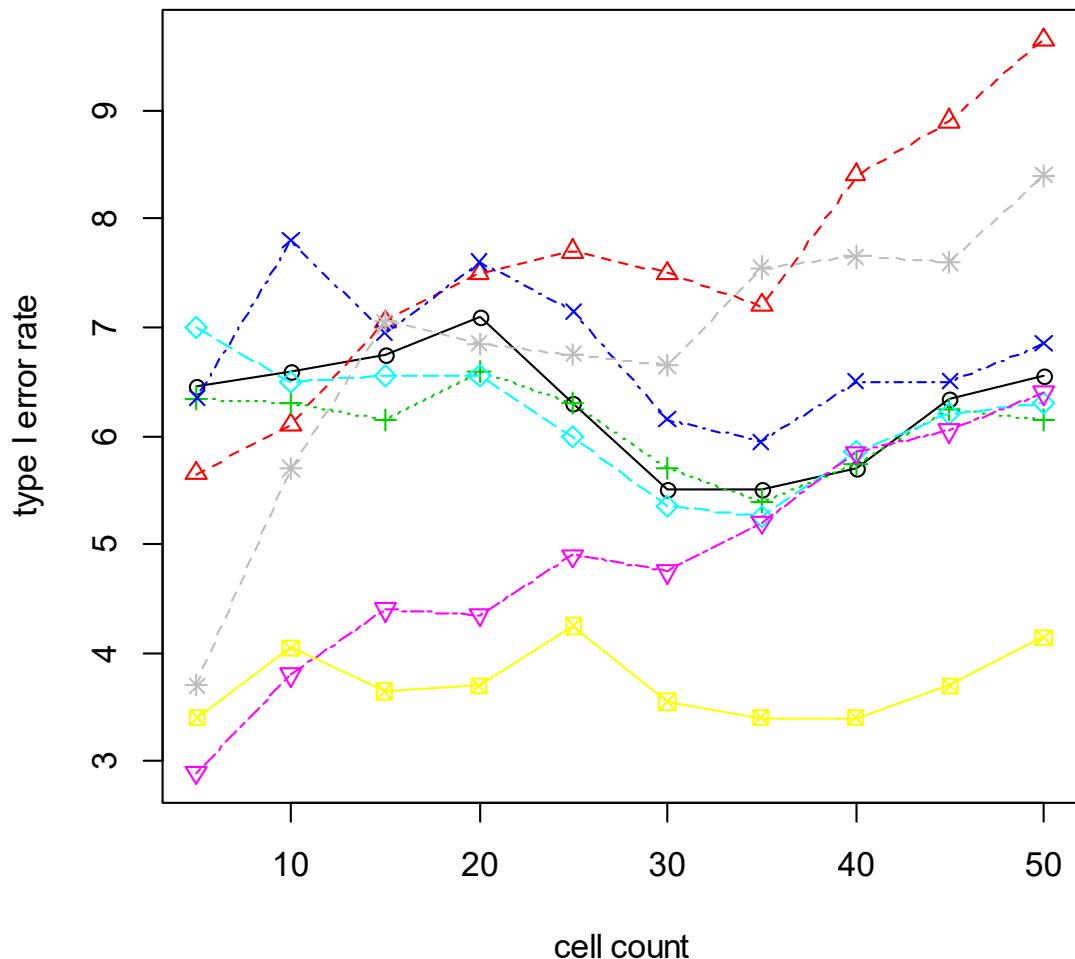
2. 12. 12 left skewed distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	10.40	10.40	9.35	9.05	9.05	8.55	8.10	7.90	7.85	7.70
RT	6.65	6.65	6.35	6.75	6.45	5.60	5.30	5.60	5.45	6.15
INT	10.00	9.95	9.40	8.85	8.45	8.60	7.80	7.40	7.95	8.05
ART	8.40	8.75	8.40	9.00	8.50	7.75	7.40	7.45	8.05	8.50
ART+INT	11.00	10.45	10.40	9.75	10.15	9.60	9.00	9.15	9.30	9.60
Puri & Sen	3.20	3.80	3.85	4.05	3.55	3.15	2.90	3.50	3.20	3.30
v.d.Waerden	5.20	5.90	5.65	6.05	5.45	4.70	4.90	4.85	5.00	5.30
ATS	4.15	5.50	5.95	5.60	4.95	4.20	4.35	4.20	4.00	4.60
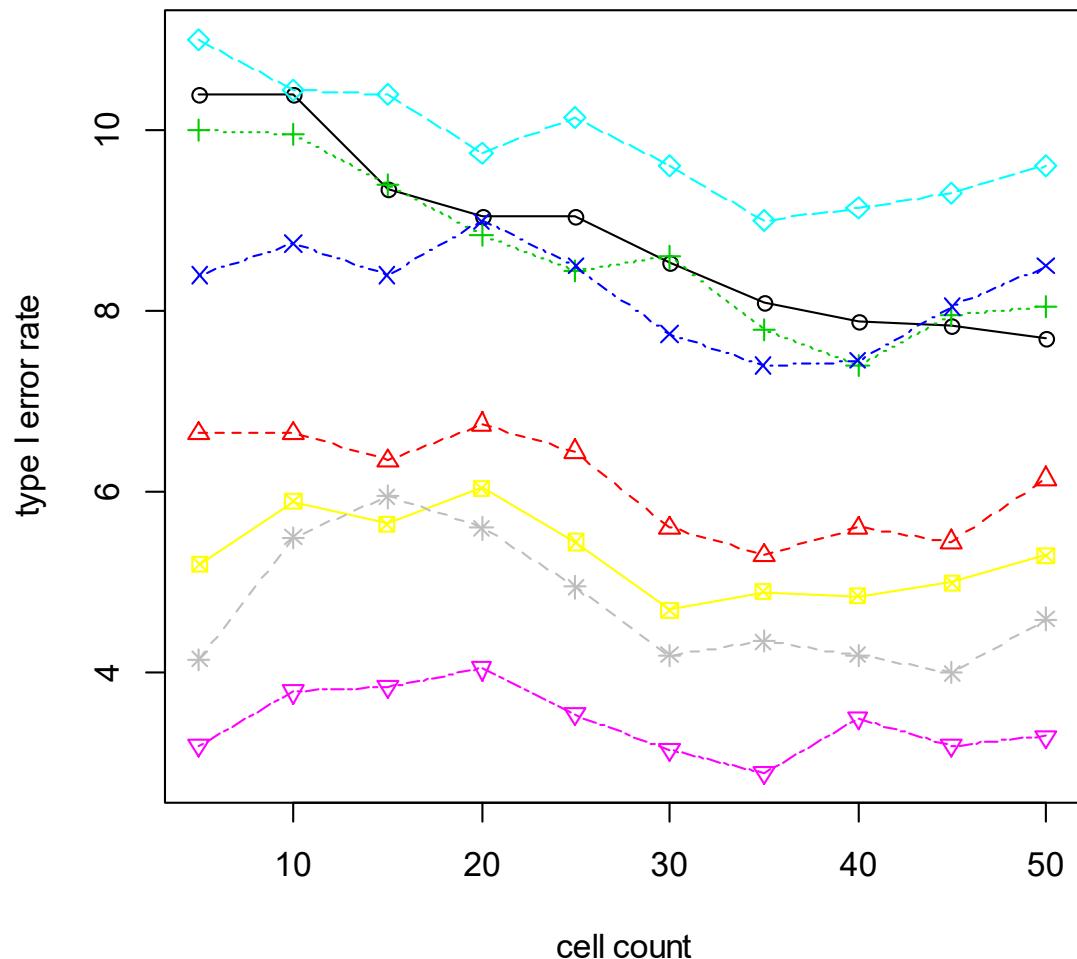
2. 12. 13 normal distribution - unequal variances (small n_i ~ small s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	1.20	0.55	1.15	1.10	1.00	1.45	1.15	1.05	1.15	0.75
RT	2.10	1.90	1.95	2.00	1.90	1.95	2.30	2.50	3.00	2.85
INT	1.45	0.65	1.15	1.15	1.15	1.35	1.00	1.25	1.10	0.95
ART	2.35	2.15	2.60	2.40	2.30	2.25	2.45	2.35	2.45	2.10
ART+INT	1.55	0.85	1.35	1.30	1.05	1.50	1.15	1.15	1.30	0.95
Puri & Sen	0.70	0.45	0.75	0.90	0.80	1.10	1.00	1.25	1.35	1.15
v.d.Waerden	0.55	0.15	0.25	0.40	0.35	0.75	0.55	0.45	0.70	0.40
ATS	3.40	4.60	5.60	4.65	5.05	5.10	5.65	6.70	6.80	6.50
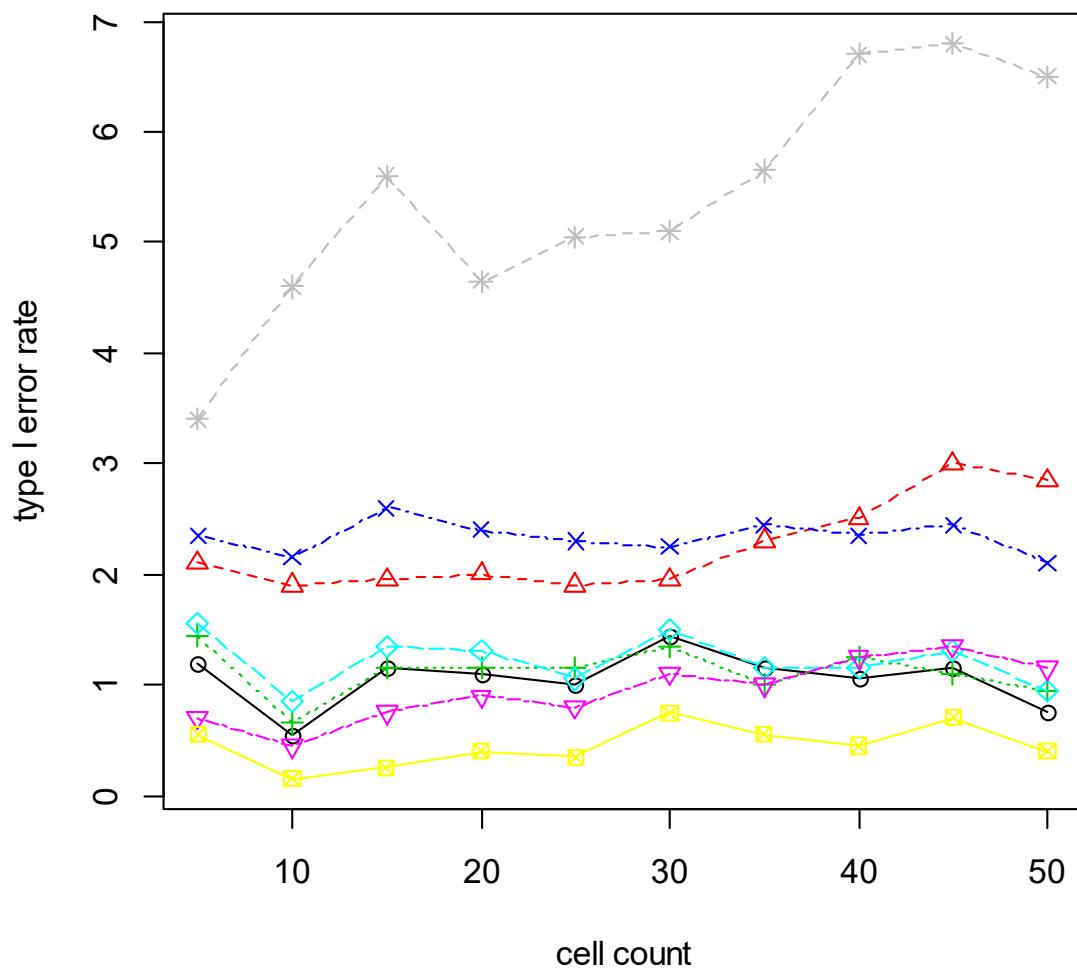
2. 12. 14 normal distribution - unequal variances (small n$_i$ ~ large s$_i$)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	23.85	21.95	21.35	20.25	21.55	21.55	21.05	21.65	21.10	21.35
RT	12.30	13.20	12.50	12.10	12.35	12.50	13.35	12.90	13.25	14.20
INT	17.45	18.50	18.25	16.20	17.55	16.85	16.90	17.85	17.85	18.05
ART	13.95	14.30	13.55	12.20	12.40	12.60	12.55	12.85	12.35	12.15
ART+INT	19.50	19.45	18.70	16.85	18.20	17.55	17.35	18.70	18.05	18.05
Puri & Sen	6.60	7.40	8.20	7.35	7.25	8.40	8.45	8.35	8.40	8.85
v.d.Waerden	9.55	11.70	11.85	10.45	11.75	11.65	11.40	11.85	12.45	12.00
ATS	5.15	5.05	4.75	4.50	5.45	6.25	5.55	5.85	5.65	5.45
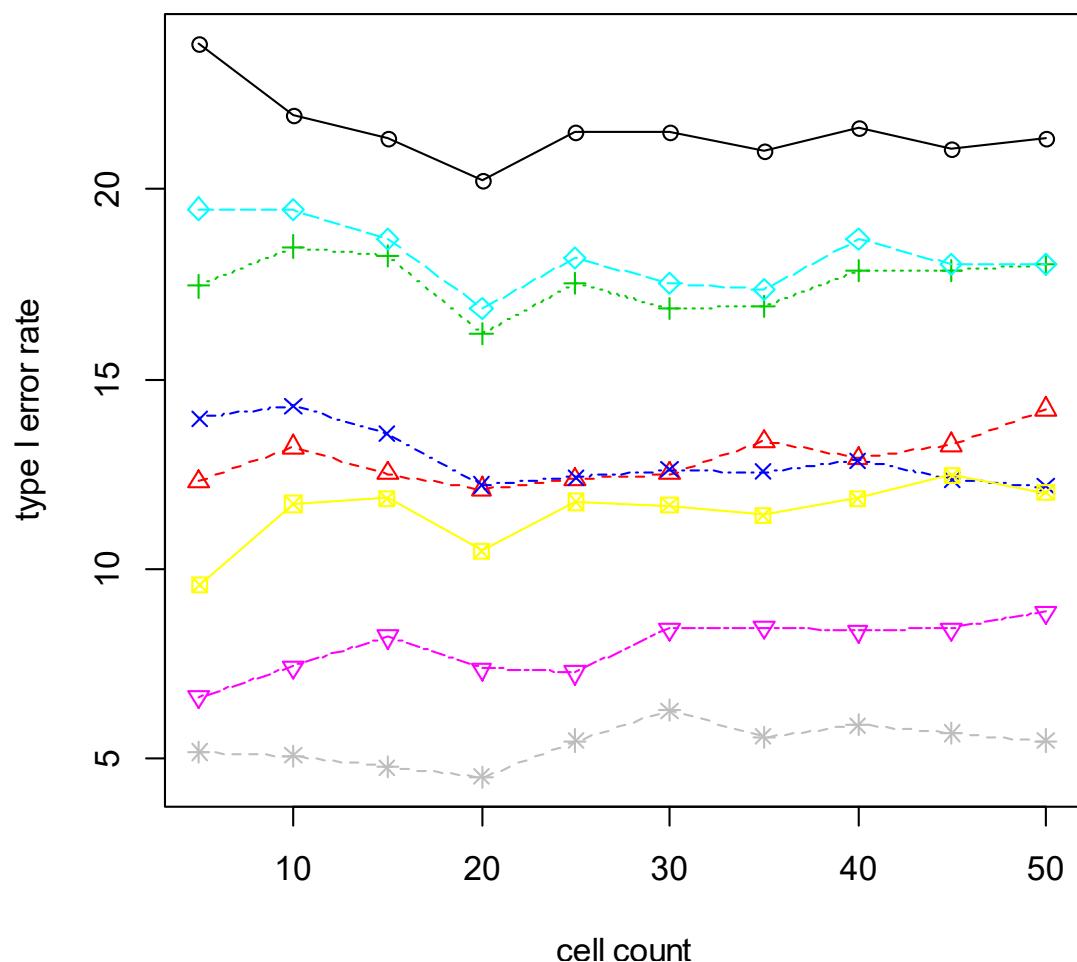
2. 12. 15 left skewed distribution - unequal variances (small n_i ~ small s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	1.55	1.75	1.10	1.40	1.55	1.45	1.45	1.25	1.40	1.10
RT	2.00	1.85	1.55	1.85	2.05	1.75	1.70	1.60	1.85	1.90
INT	1.35	1.60	1.15	1.35	1.35	1.00	1.30	1.35	1.45	1.05
ART	2.40	2.40	2.05	2.65	2.50	2.70	2.40	2.80	2.75	2.80
ART+INT	1.25	1.30	0.85	1.10	1.10	0.70	1.10	1.20	1.30	1.25
Puri & Sen	0.65	0.75	0.90	1.05	1.10	0.85	0.85	1.00	1.00	1.10
v.d.Waerden	0.35	0.55	0.50	0.70	0.45	0.35	0.70	0.60	0.70	0.55
ATS	3.70	5.00	5.30	6.35	5.60	5.00	5.50	5.35	5.55	6.05
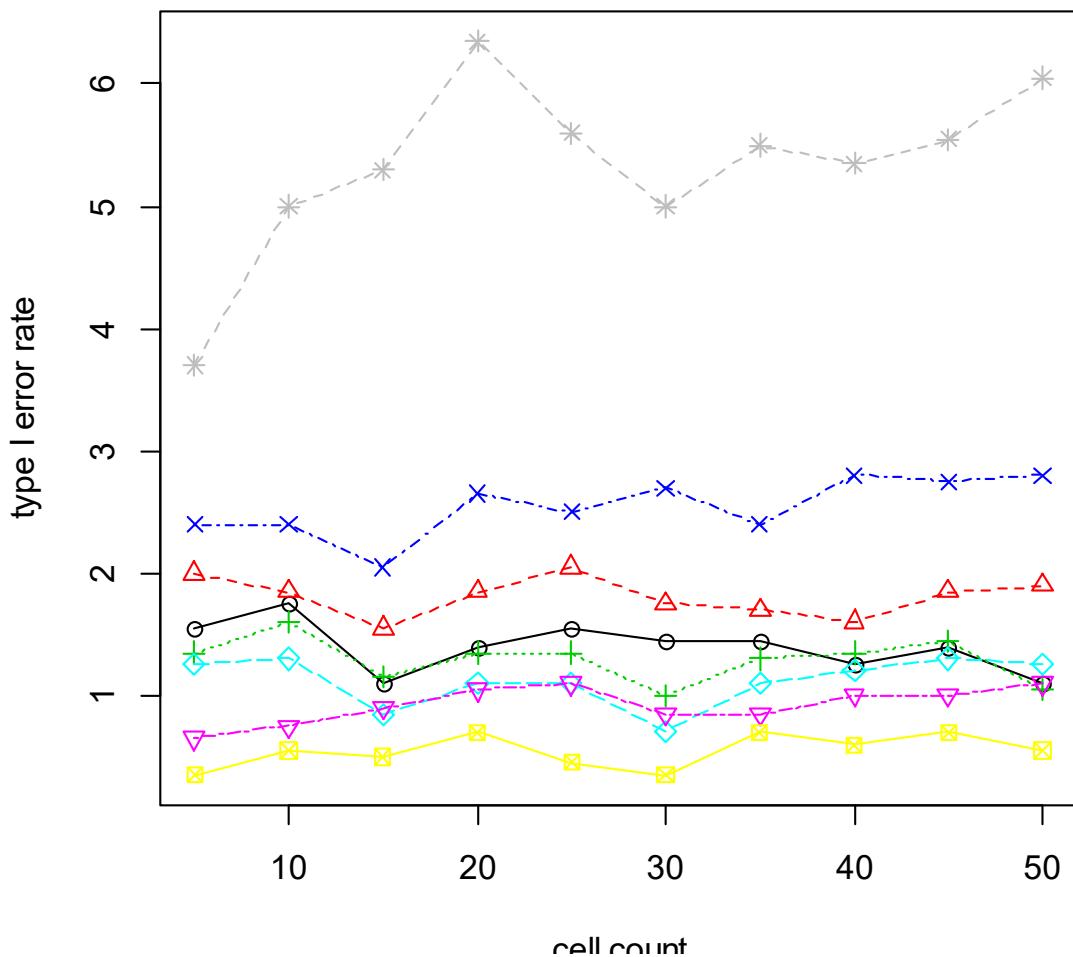
2. 12. 16 left skewed distribution - unequal variances (small n_i ~ large s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	24.10	23.85	23.30	21.95	20.90	20.60	20.70	20.80	21.30	20.85
RT	15.90	16.05	16.10	16.85	16.35	16.50	18.30	17.45	18.50	20.05
INT	26.40	25.80	26.60	27.00	27.40	28.30	29.55	29.60	30.00	32.05
ART	17.60	18.25	18.25	18.25	17.25	17.25	18.05	17.25	17.10	18.55
ART+INT	26.10	26.55	25.85	26.35	26.65	25.75	28.30	28.20	28.10	28.95
Puri & Sen	8.70	10.40	11.70	11.50	11.75	11.80	12.75	12.50	12.55	14.40
v.d.Waerden	14.85	17.70	19.55	19.95	19.20	20.20	21.55	21.50	22.05	23.65
ATS	5.30	5.50	7.40	6.50	5.90	6.15	6.35	6.60	6.40	6.95
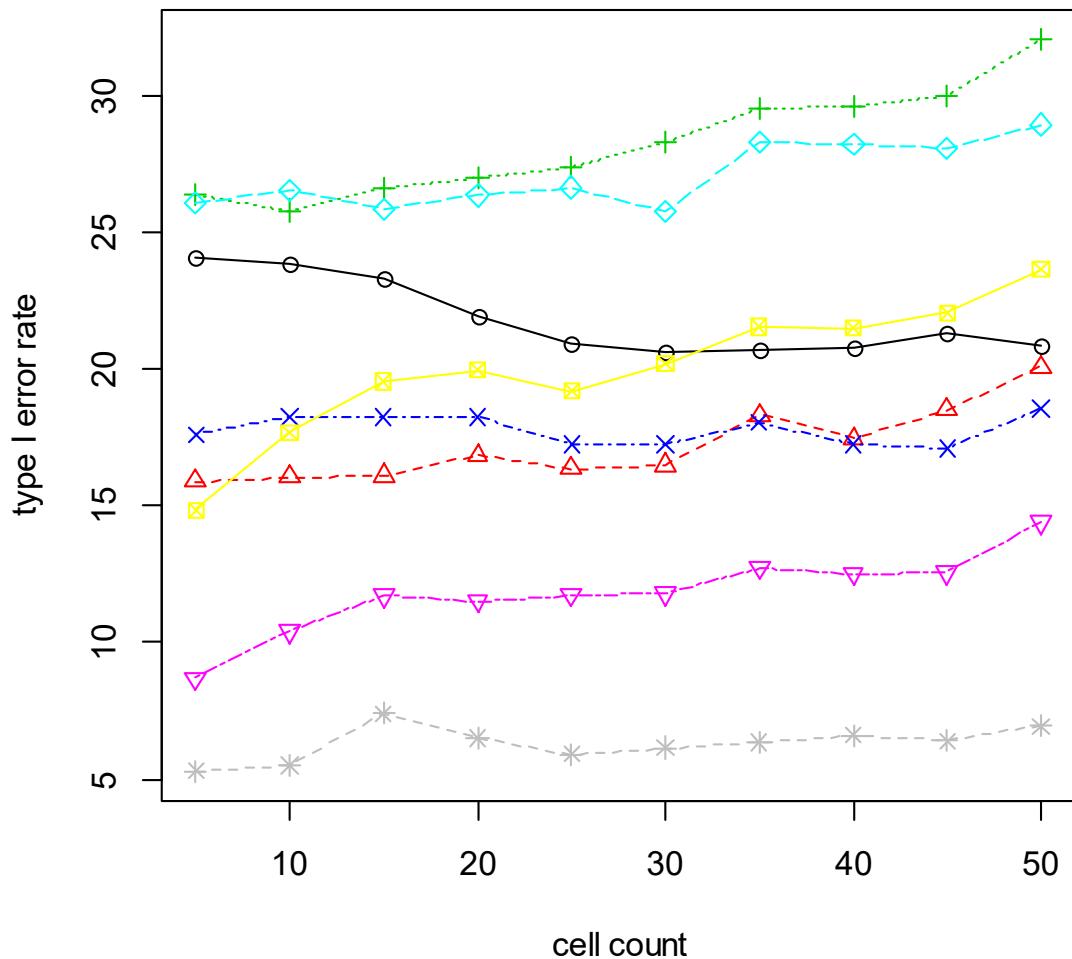
2. 13. Interaction AB - A and B significant (effects $a_i = 0.8*s$ $b_j = 0.8*s$ / equal n_i / # levels = 2*4)

2. 13. 1   normal distribution - equal variances

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.75	4.65	4.90	4.25	4.90	4.85	4.85	5.35	4.95	4.75
RT	4.80	5.10	4.85	3.80	4.80	4.50	4.50	5.80	4.70	4.70
INT	4.70	4.80	4.60	4.10	4.60	4.65	4.70	5.25	4.75	4.65
ART	4.70	5.50	5.35	4.25	4.75	4.90	5.25	5.70	4.90	4.90
ART+INT	4.80	5.25	4.95	4.25	4.80	5.05	4.80	5.45	4.80	4.50
Puri & Sen	1.45	1.10	1.30	1.40	1.40	1.55	1.70	1.85	1.25	1.45
v.d.Waerden	1.35	1.20	0.95	1.10	1.40	1.55	1.40	1.80	1.25	1.30
ATS	3.55	4.80	4.65	3.75	4.65	4.45	4.45	5.80	4.70	4.70
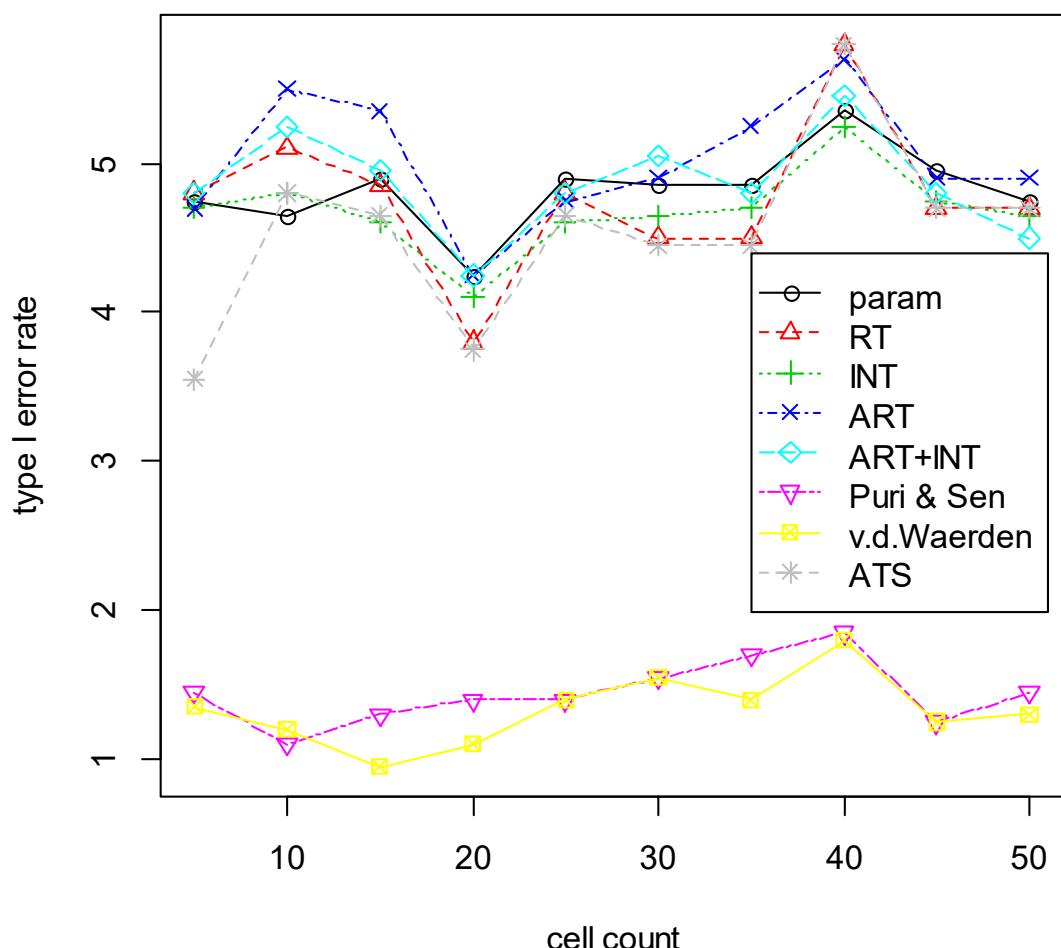
2. 13. 2   normal distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.00	5.85	5.95	6.70	6.10	6.05	6.75	7.05	5.85	6.30
RT	6.00	7.10	8.80	8.80	10.35	10.55	11.40	13.10	13.75	14.75
INT	5.75	6.20	6.45	6.60	6.55	7.20	7.40	7.50	6.55	7.55
ART	6.00	6.15	5.95	6.85	6.20	6.00	6.45	6.55	6.20	6.55
ART+INT	6.45	5.70	6.05	6.80	6.30	6.40	6.75	7.00	5.50	6.00
Puri & Sen	2.15	2.15	3.25	3.50	3.80	4.35	4.85	5.85	5.70	6.55
v.d.Waerden	2.10	1.85	2.45	2.55	2.35	2.60	2.75	3.25	2.65	3.35
ATS	4.85	6.35	8.30	8.50	9.90	10.15	11.15	12.95	13.45	14.35
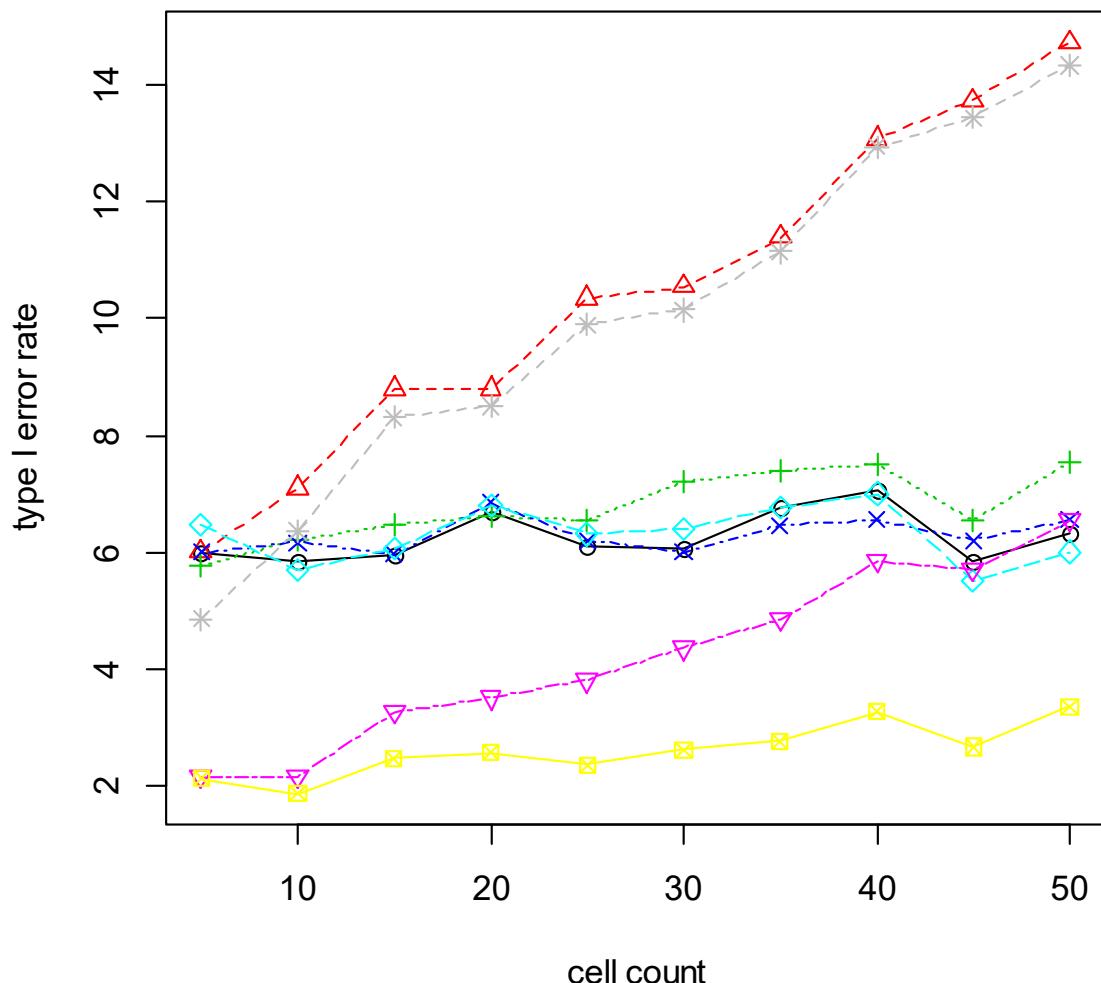
2. 13. 3   normal distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.75	5.60	5.70	6.20	5.50	5.85	6.80	6.40	5.85	6.10
RT	5.85	8.05	10.15	10.80	13.55	13.95	16.75	19.35	20.85	22.00
INT	5.30	6.25	7.15	6.55	8.25	7.60	8.85	10.15	8.55	11.05
ART	6.35	6.75	6.45	6.60	6.40	6.55	6.95	6.65	6.00	6.85
ART+INT	6.10	5.90	6.00	6.20	5.85	5.95	6.45	6.40	6.00	6.40
Puri & Sen	2.30	3.25	4.55	4.45	6.25	7.10	8.25	9.55	10.05	11.85
v.d.Waerden	1.75	2.15	2.80	2.65	2.85	3.75	3.30	4.05	3.90	4.10
ATS	4.80	7.55	9.75	10.40	13.25	13.65	16.45	19.00	20.50	21.80
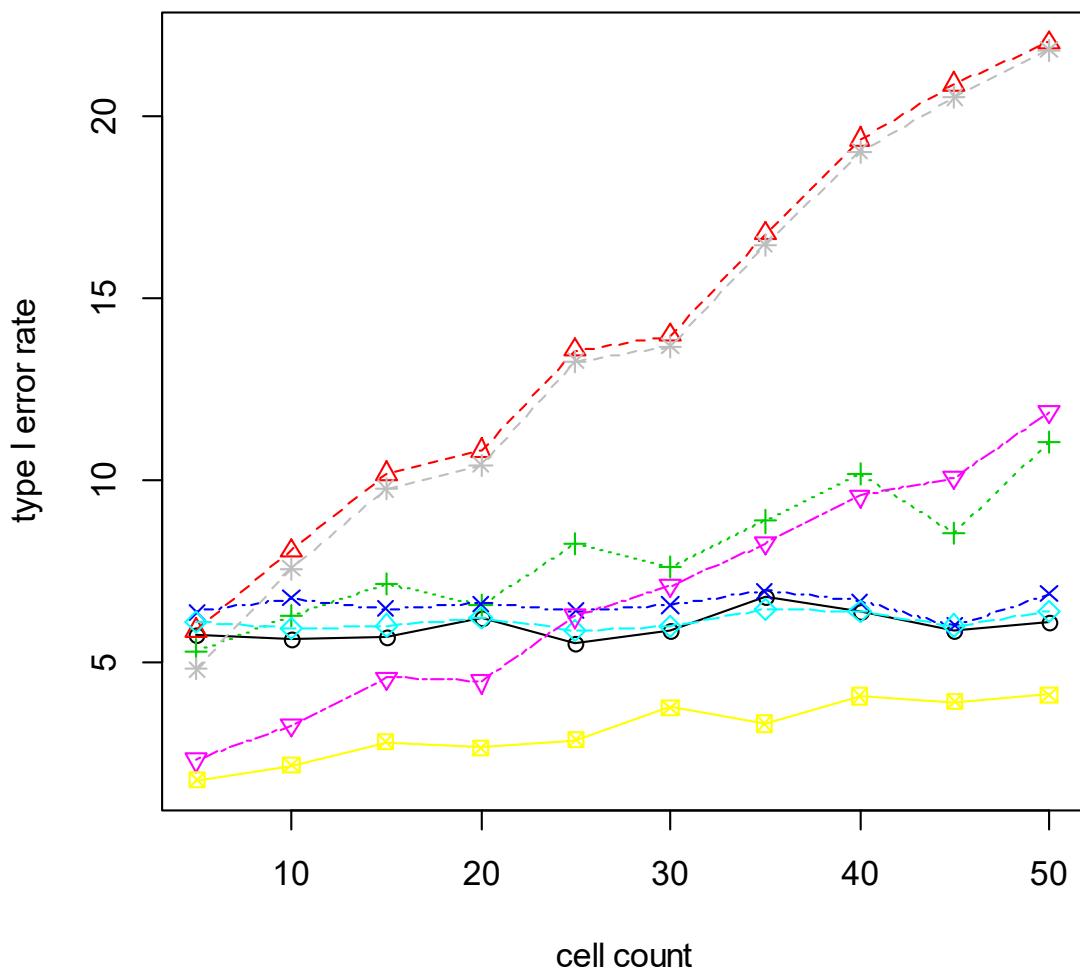
2. 13. 4   right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.30	5.00	3.90	5.20	4.80	4.65	4.70	4.40	5.95	4.5
RT	5.25	5.15	4.40	4.00	5.05	4.75	5.10	4.65	5.15	4.8
INT	5.15	5.15	4.90	5.70	5.90	6.50	7.40	6.40	8.30	6.9
ART	5.45	4.90	4.50	5.10	5.40	4.90	4.85	4.40	5.25	4.6
ART+INT	5.25	4.90	4.55	4.95	5.00	4.80	4.90	4.30	5.00	4.8
Puri & Sen	1.50	1.40	1.45	1.25	1.75	1.90	1.75	1.50	1.55	1.7
v.d.Waerden	1.10	1.35	1.20	1.45	1.65	2.15	2.35	1.75	2.35	2.5
ATS	4.10	4.90	4.15	3.95	5.00	4.45	4.85	4.60	4.95	4.6
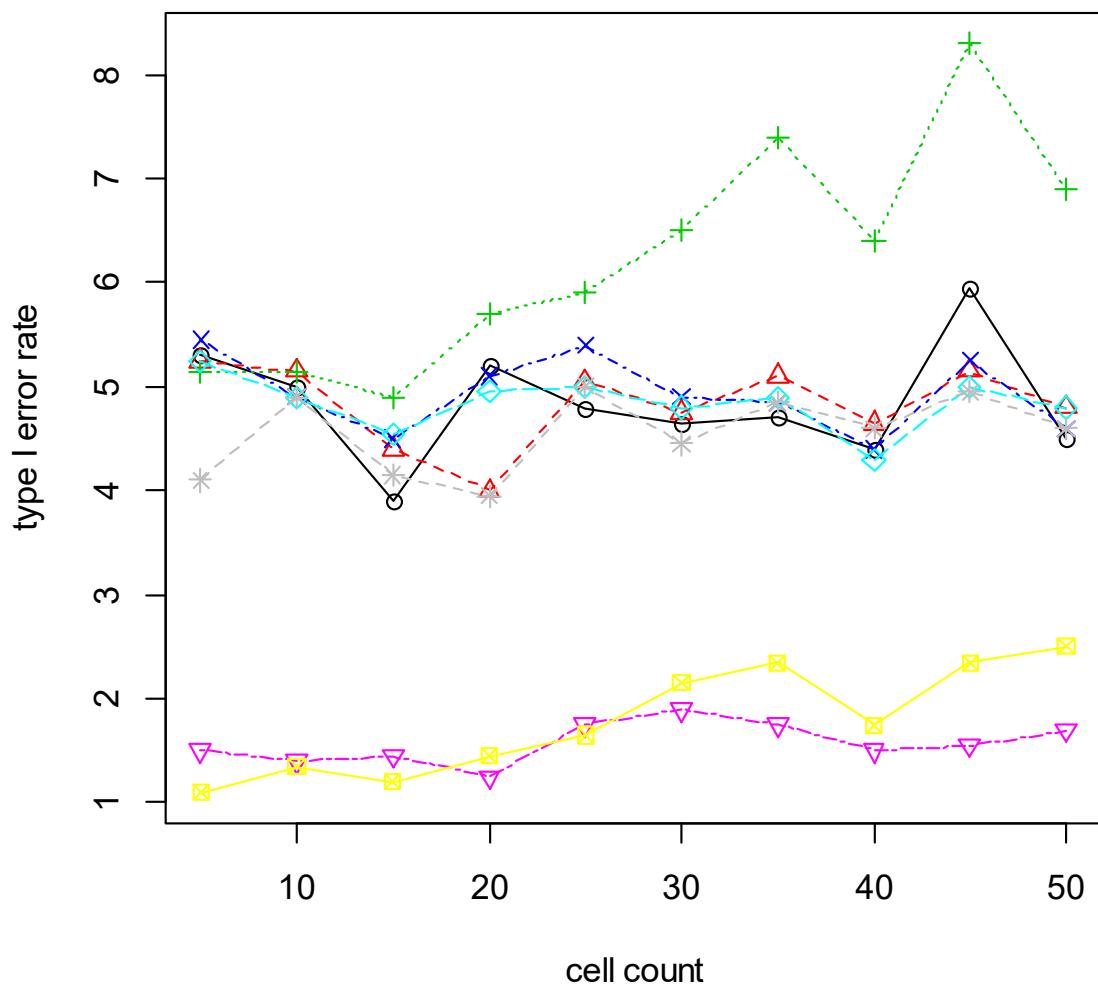
2. 13. 5   exponential distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.95	5.65	5.30	5.50	5.60	6.25	5.25	5.70	4.70	6.20
RT	5.40	5.90	6.75	7.45	7.80	8.90	8.20	9.05	10.25	11.20
INT	5.00	5.40	6.15	6.80	7.00	8.10	6.55	7.70	7.85	8.50
ART	7.10	8.15	8.05	7.85	7.65	8.90	7.65	9.25	8.55	9.15
ART+INT	5.95	5.65	5.25	5.55	4.95	5.70	4.00	5.50	4.95	4.75
Puri & Sen	3.20	4.45	5.15	5.70	5.90	6.50	6.25	7.40	7.75	9.00
v.d.Waerden	2.70	3.60	4.95	5.25	5.30	6.20	5.05	5.45	6.10	6.35
ATS	4.30	5.55	6.55	7.35	7.75	8.90	8.00	9.00	10.20	11.05
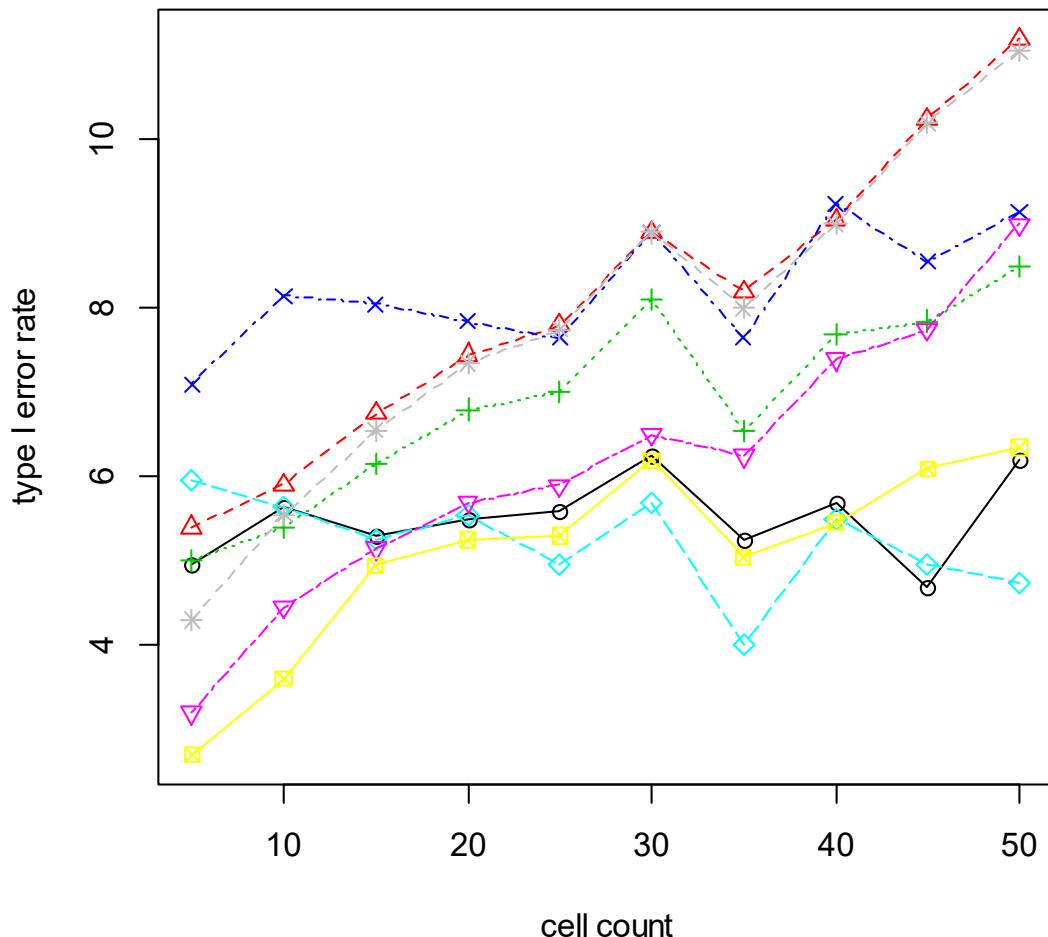
2. 13. 6   exponential distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.10	5.55	5.35	5.55	5.70	6.35	5.10	5.50	4.80	6.25
RT	5.15	5.70	6.50	7.45	7.90	8.85	7.85	9.05	9.60	10.85
INT	5.00	4.95	6.00	6.75	6.85	7.90	5.90	6.90	7.15	8.20
ART	7.55	8.05	8.45	8.30	8.10	9.60	8.10	9.25	9.05	9.10
ART+INT	5.60	5.55	5.15	5.50	5.20	5.50	4.10	5.25	5.15	5.30
Puri & Sen	3.30	4.25	5.35	5.55	6.05	6.80	5.85	6.75	7.20	8.50
v.d.Waerden	3.00	3.80	4.65	5.05	5.20	6.05	4.35	5.25	5.30	6.50
ATS	4.15	5.45	6.45	7.40	7.80	8.75	7.65	8.90	9.50	10.80
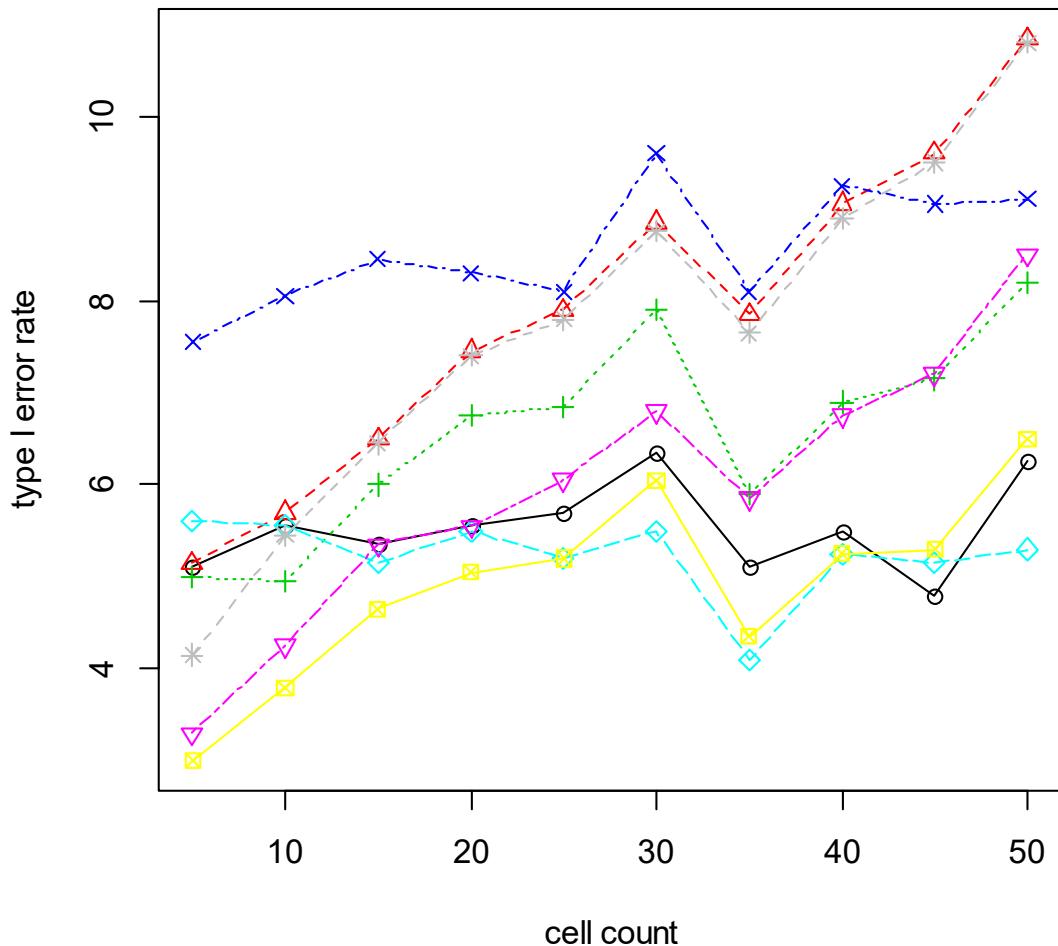
2. 13. 7   lognormal distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.75	4.00	5.15	5.10	5.35	5.30	5.65	4.75	5.50	4.90
RT	4.95	4.60	4.85	5.40	5.50	5.05	5.90	4.55	5.80	4.95
INT	4.70	4.65	4.95	5.35	5.20	5.20	5.65	4.95	5.45	4.85
ART	5.15	4.85	5.60	5.30	5.45	5.00	5.95	4.60	6.00	4.60
ART+INT	4.75	4.50	5.10	5.60	5.40	5.10	5.70	4.90	5.45	5.00
Puri & Sen	4.80	4.40	4.60	5.20	5.45	4.80	5.80	4.55	5.65	4.75
v.d.Waerden	4.30	4.10	4.85	5.35	5.15	4.95	5.55	5.00	5.35	4.85
ATS	4.55	4.40	4.70	5.20	5.50	5.05	5.80	4.55	5.80	4.85
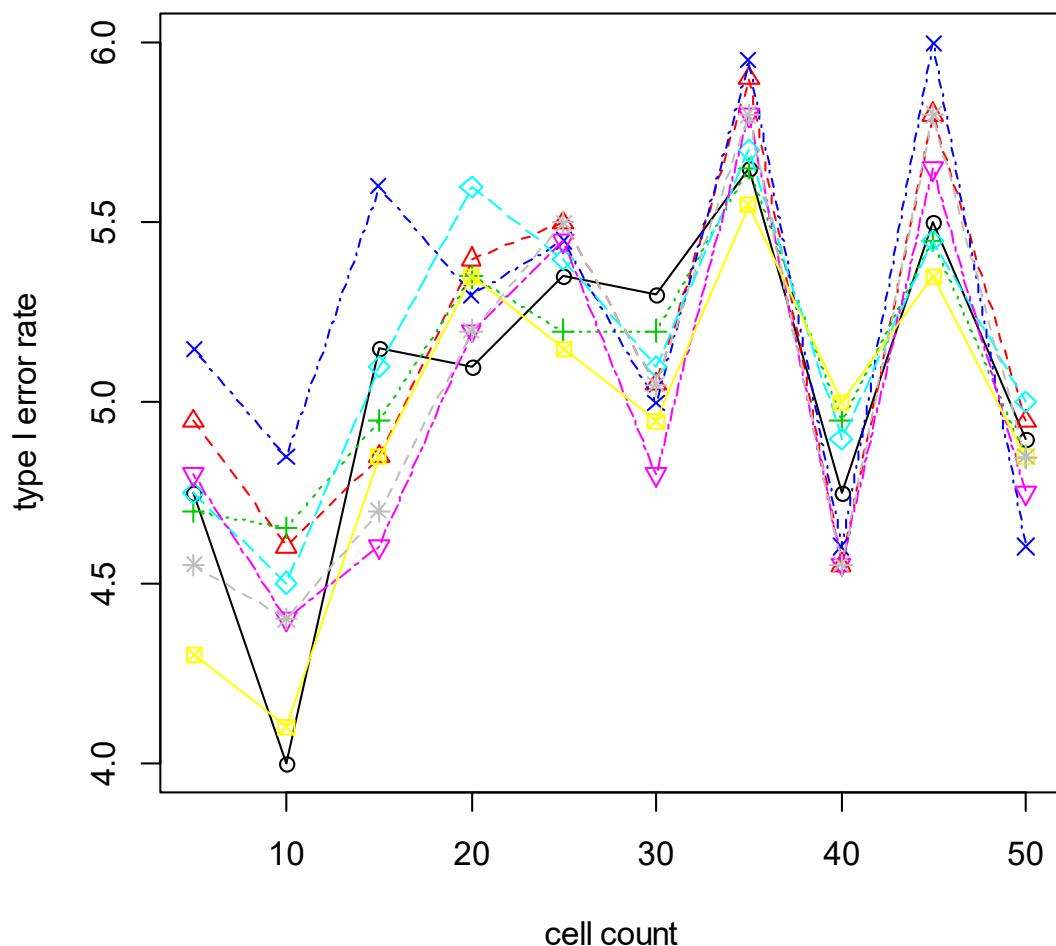
2. 13. 8   uniform distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.30	5.10	4.05	4.85	5.05	4.70	4.85	4.35	5.10	4.55
RT	4.90	4.85	4.10	5.05	5.00	4.80	4.45	4.30	5.00	4.35
INT	4.55	4.60	3.45	3.90	4.75	4.15	4.30	4.15	4.30	4.40
ART	5.25	5.30	4.10	5.00	5.05	4.60	4.70	4.25	5.20	4.55
ART+INT	4.90	5.25	3.75	4.70	4.80	5.05	4.55	4.70	4.75	4.95
Puri & Sen	1.75	1.55	1.40	1.95	1.85	1.65	1.80	1.50	1.50	1.65
v.d.Waerden	1.35	1.50	1.20	1.25	1.45	1.20	1.35	1.15	0.80	1.10
ATS	4.00	4.70	3.95	5.00	4.95	4.75	4.30	4.25	5.00	4.35
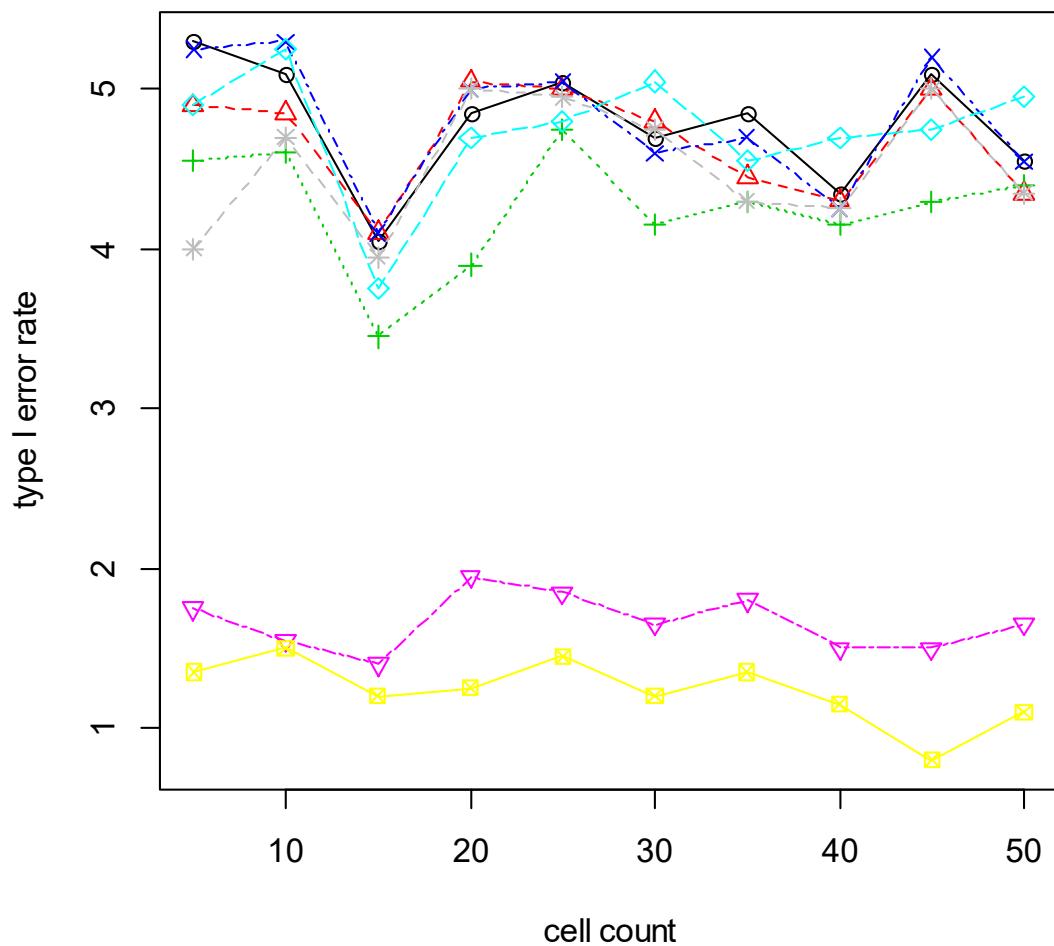
2. 13. 9   uniform distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.70	4.55	4.35	4.80	5.60	4.10	4.30	4.60	5.1	4.80
RT	5.45	3.85	3.95	4.50	4.75	4.00	3.95	4.00	4.6	4.05
INT	4.45	3.55	3.25	3.55	4.10	3.50	3.60	3.55	3.8	3.85
ART	5.75	4.50	4.85	5.00	5.95	5.15	4.85	5.40	6.3	6.15
ART+INT	5.55	4.55	5.15	5.20	5.00	4.95	4.95	4.65	6.0	6.20
Puri & Sen	1.30	0.95	0.75	0.80	1.10	0.95	1.05	0.75	0.5	1.00
v.d.Waerden	1.05	0.60	0.50	0.60	0.75	0.65	0.30	0.40	0.3	0.70
ATS	4.80	3.75	3.90	4.40	4.65	4.00	3.95	4.00	4.6	4.00
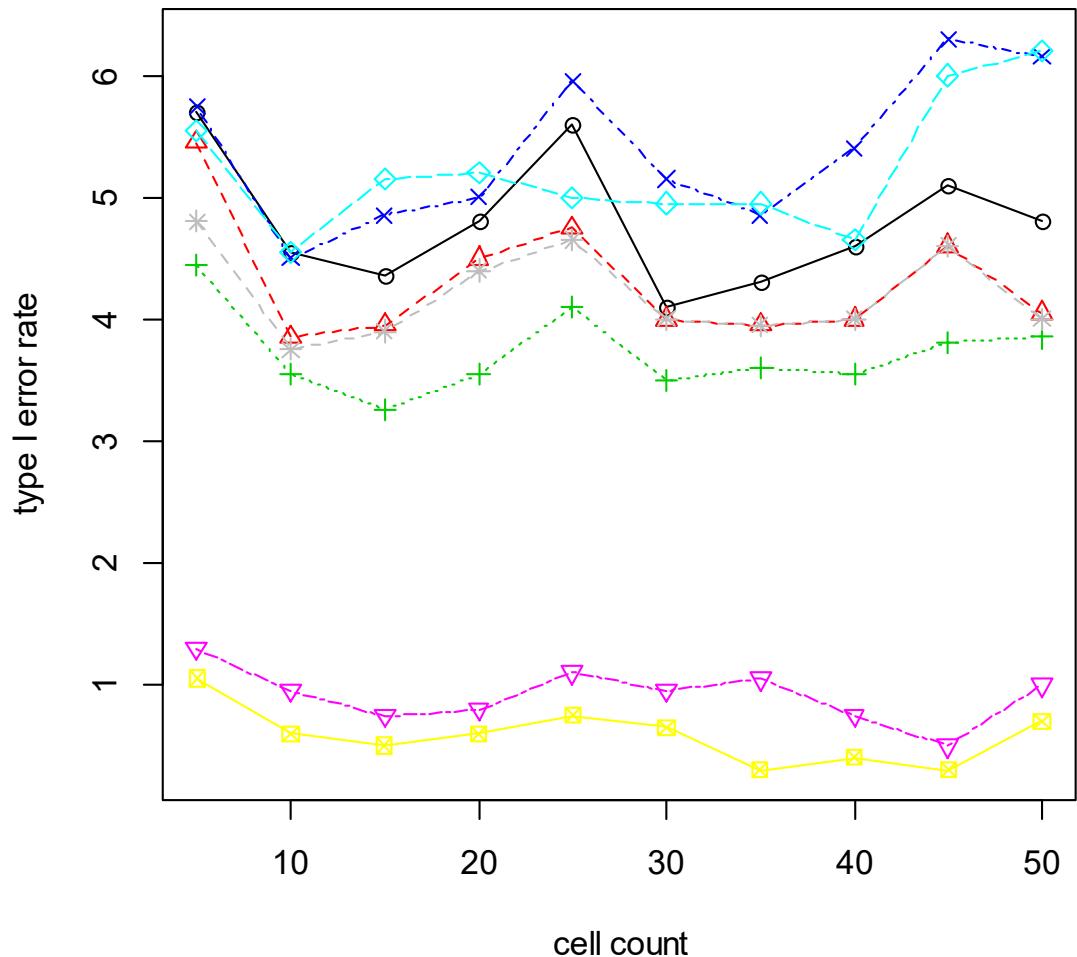
2. 13. 10 left/right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.65	4.75	4.60	5.25	5.15	4.40	4.60	4.70	5.65	5.10
RT	4.05	5.20	4.60	5.15	4.60	4.80	4.25	4.90	5.40	4.65
INT	4.20	4.50	4.25	4.50	4.45	3.95	4.05	4.50	4.75	4.35
ART	4.85	4.90	4.55	5.25	5.05	4.65	4.65	4.50	5.45	4.95
ART+INT	4.75	4.80	4.55	5.40	4.70	5.10	4.65	4.80	6.15	4.65
Puri & Sen	1.40	2.05	1.40	1.80	1.95	1.65	2.00	2.20	2.00	1.85
v.d.Waerden	1.30	1.60	1.25	1.15	1.55	1.45	1.55	1.65	1.45	1.35
ATS	3.35	4.90	4.55	5.00	4.60	4.75	4.20	4.85	5.40	4.65
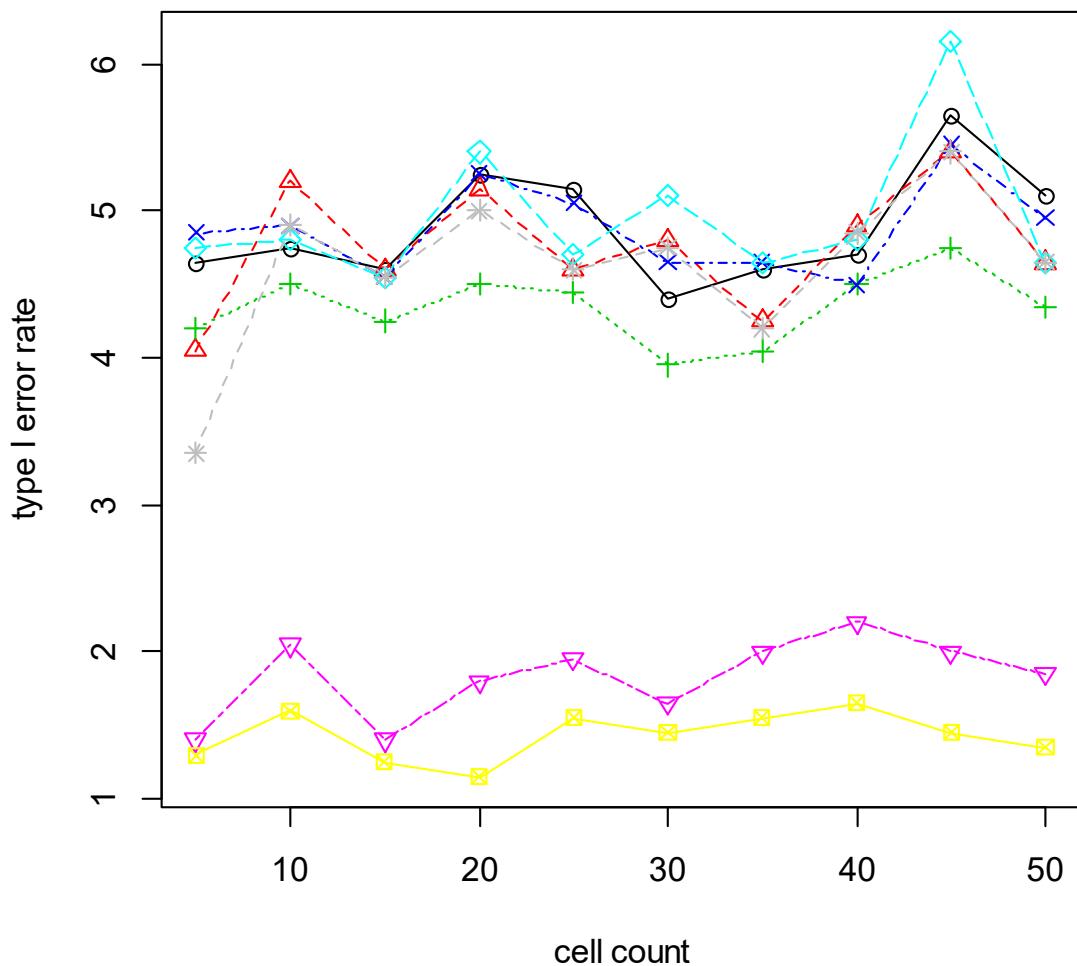
2. 13. 11 left skewed distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	7.40	6.25	5.80	6.75	6.65	5.90	5.70	6.15	6.45	5.95
RT	6.35	6.25	7.75	8.10	8.50	9.55	9.75	12.10	13.80	12.80
INT	6.30	5.50	5.60	5.95	6.05	5.50	5.35	5.55	6.00	5.80
ART	7.50	6.40	6.65	6.80	6.75	6.00	6.00	6.60	6.85	6.40
ART+INT	7.00	6.05	5.85	6.35	6.60	5.55	5.40	5.90	6.25	6.10
Puri & Sen	3.00	2.60	2.90	4.45	4.55	4.20	4.85	6.20	6.75	6.10
v.d.Waerden	2.50	2.35	1.80	2.20	2.45	2.30	1.95	2.15	2.35	2.35
ATS	5.50	5.70	7.25	7.90	8.25	9.25	9.60	11.75	13.70	12.75
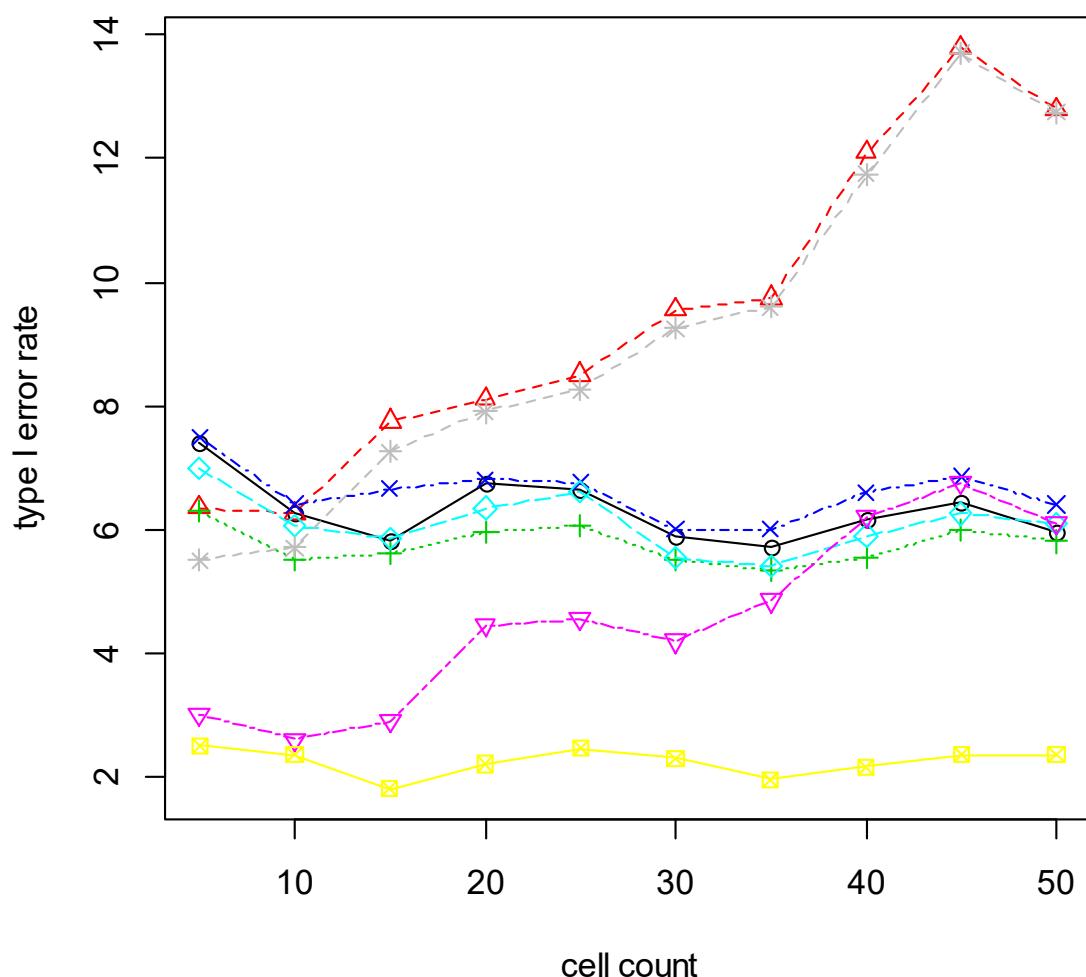
2. 13. 12 left skewed distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.70	5.50	5.20	6.15	6.05	5.80	5.10	5.75	6.30	5.75
RT	6.65	7.15	8.80	10.85	12.05	12.90	13.20	16.65	18.35	19.15
INT	5.80	5.60	5.30	6.55	6.45	6.20	5.95	7.05	8.40	7.30
ART	7.25	6.50	5.85	7.45	7.20	6.95	6.60	7.35	7.35	6.95
ART+INT	6.55	5.90	5.40	6.80	6.20	6.05	5.45	5.65	6.60	6.70
Puri & Sen	3.25	4.25	4.15	6.05	6.15	6.15	6.85	9.10	10.75	11.25
v.d.Waerden	2.50	2.55	2.10	2.60	3.05	2.35	2.45	2.95	3.25	2.80
ATS	5.40	6.60	8.45	10.40	11.60	12.50	12.80	16.40	18.10	19.05
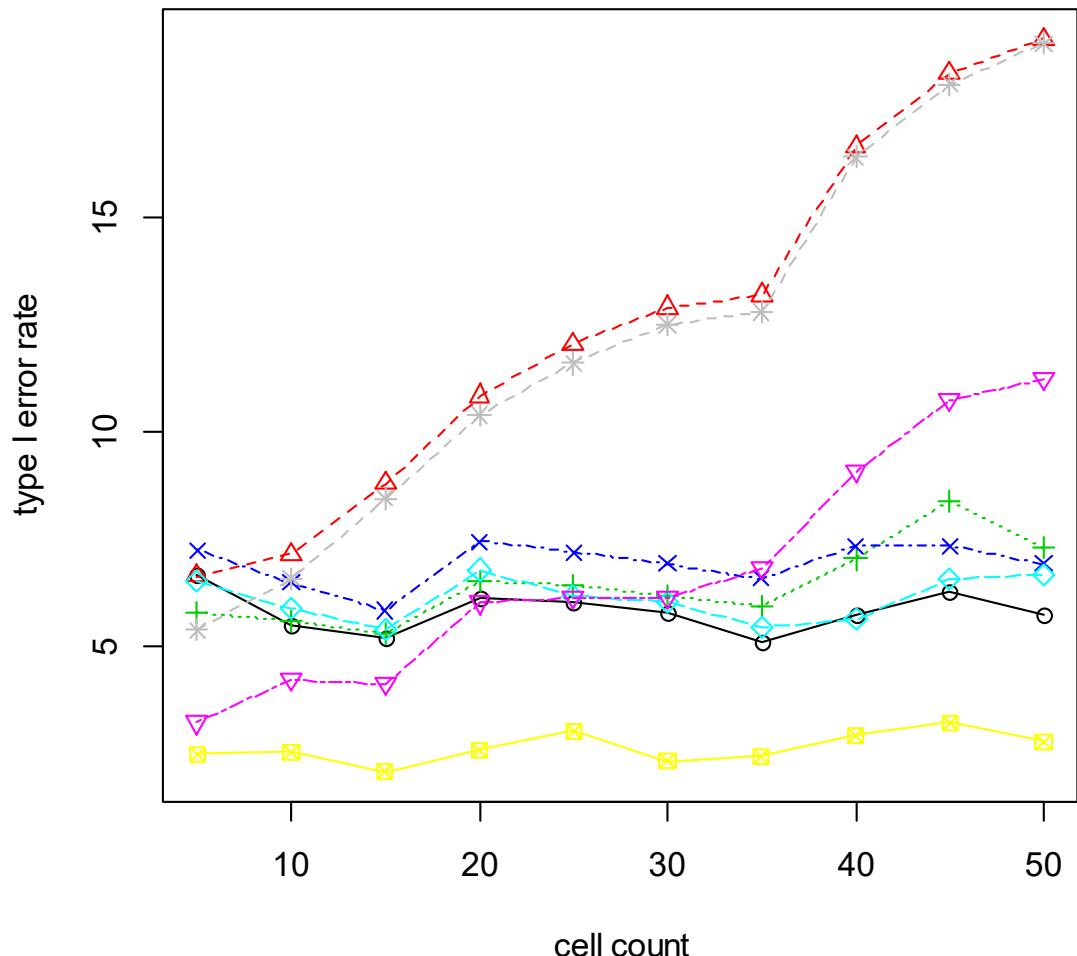
2. 14. Interaction AB - A and B significant
(effects $a_i = 0.8*s$ $b_j = 0.8*s$ / unequal n_i / # levels = 4*5)

2. 14. 1   normal distribution - equal variances

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.75	5.30	5.05	4.45	4.15	3.90	4.30	4.55	5.15	4.35
RT	5.05	4.60	4.20	3.35	3.60	4.00	3.80	3.85	4.25	4.00
INT	5.45	5.50	4.90	4.00	3.75	3.80	4.05	4.65	4.95	4.15
ART	5.10	4.95	4.70	4.15	4.65	4.60	4.70	4.70	5.05	4.50
ART+INT	5.55	5.35	5.10	4.35	4.25	4.05	4.50	4.50	4.90	4.25
Puri & Sen	0.45	0.45	0.15	0.65	0.30	0.55	0.50	0.65	0.90	0.55
v.d.Waerden	0.50	0.40	0.30	0.70	0.40	0.95	0.50	0.70	0.80	0.70
ATS	3.85	3.95	3.85	3.90	4.45	4.55	3.90	4.60	4.70	3.60
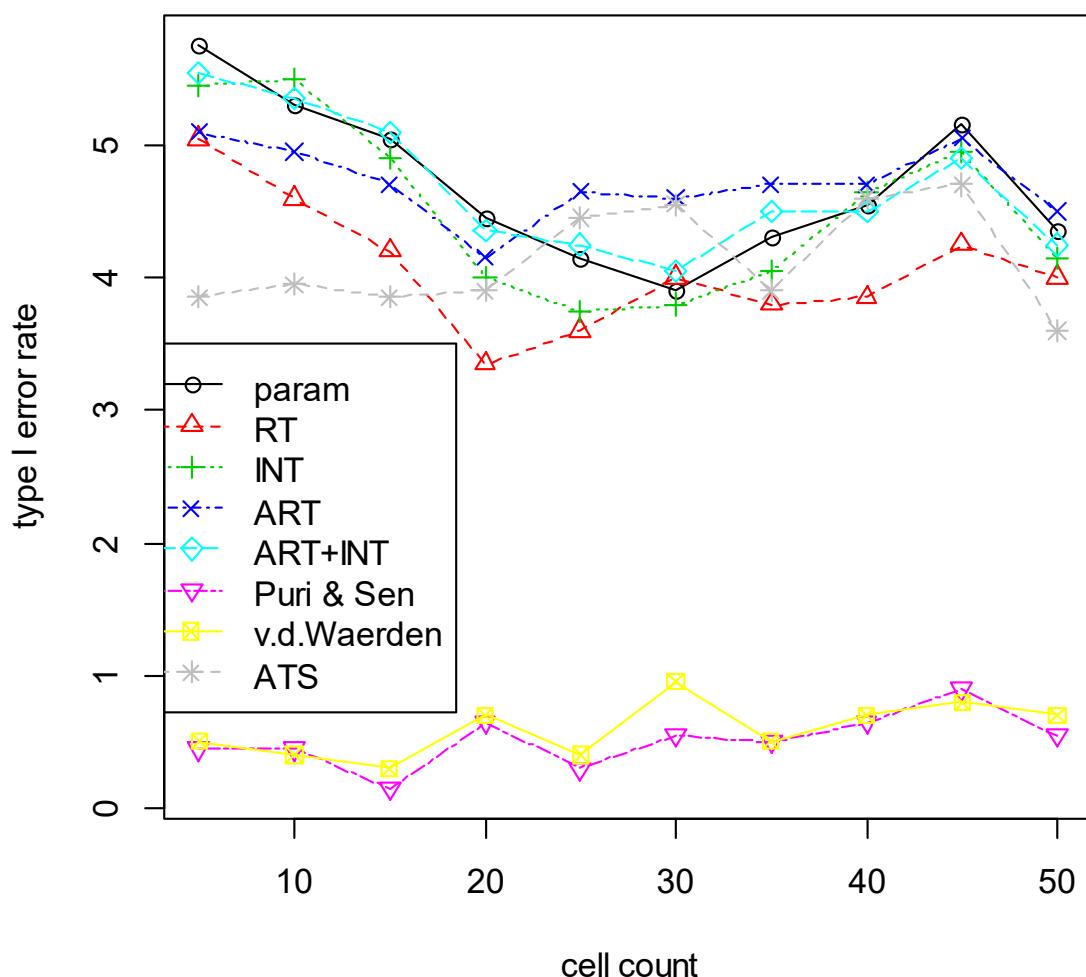
2. 14. 2   normal distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.00	6.10	5.35	4.90	4.70	5.00	4.95	5.75	5.90	5.45
RT	6.05	6.35	6.55	7.35	8.15	9.50	11.25	12.80	13.35	15.05
INT	5.90	6.00	5.25	5.00	5.15	5.40	5.90	7.25	6.40	6.20
ART	6.75	5.75	6.05	5.10	5.70	5.70	6.40	6.60	6.25	6.25
ART+INT	6.60	5.85	5.50	4.90	4.80	5.05	5.15	6.00	6.15	5.55
Puri & Sen	0.70	0.95	1.20	1.55	1.35	2.00	2.35	2.75	3.65	3.90
v.d.Waerden	0.75	0.85	0.90	0.85	0.90	1.40	1.25	0.90	1.70	1.55
ATS	3.70	4.65	6.25	6.15	7.40	9.25	9.80	11.60	12.50	13.40
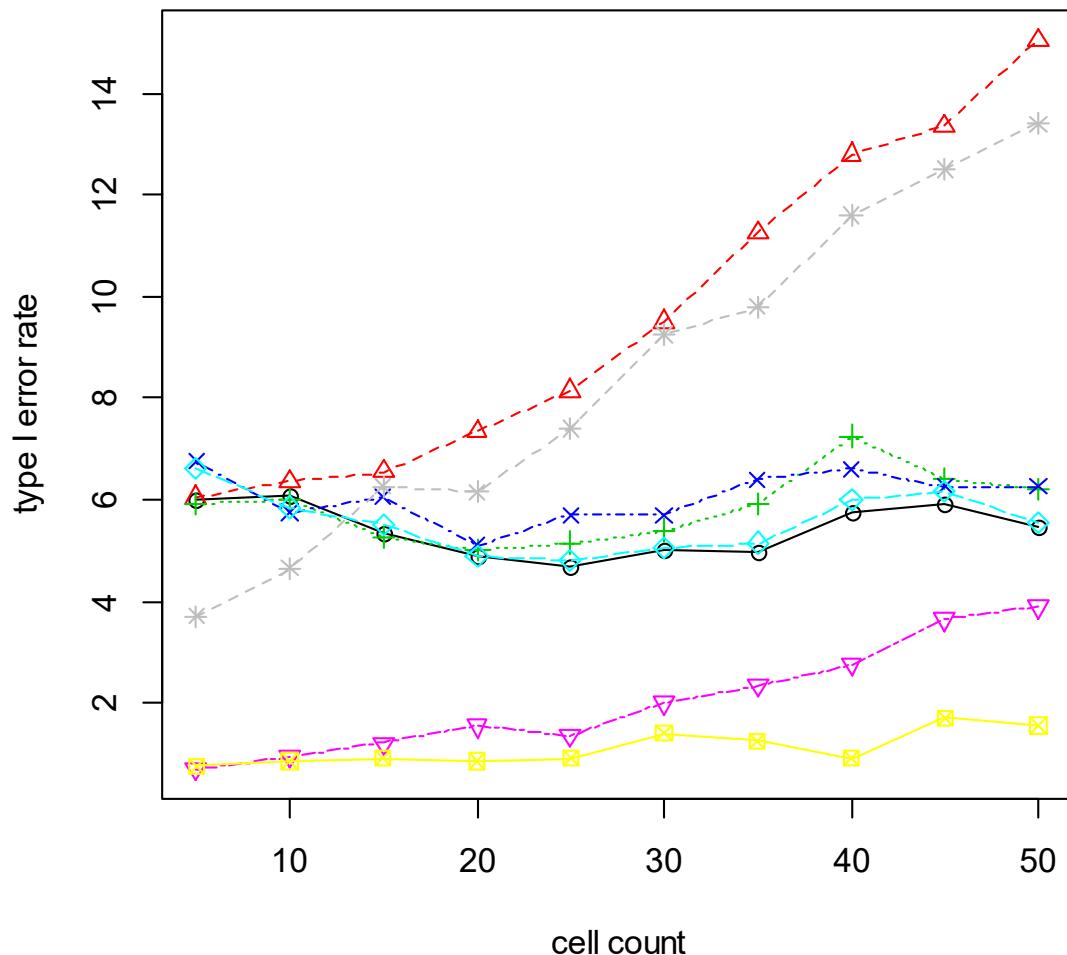
2. 14. 3   normal distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	8.55	7.80	7.95	7.95	7.70	7.80	7.00	8.30	7.90	7.65
RT	6.45	7.50	8.75	9.45	10.65	12.40	13.95	16.20	17.40	20.00
INT	7.60	7.40	7.85	8.40	8.30	8.90	9.70	10.35	11.20	11.50
ART	6.70	6.60	7.20	6.35	6.05	6.05	6.20	6.80	6.90	6.35
ART+INT	7.40	6.90	7.45	6.85	6.15	6.40	5.85	7.10	7.40	6.25
Puri & Sen	1.25	1.85	2.00	2.10	2.80	3.15	4.05	4.70	5.55	6.75
v.d.Waerden	1.30	1.45	1.65	1.60	2.20	2.45	2.20	2.55	2.95	2.85
ATS	4.00	4.90	6.00	7.20	8.40	9.70	11.45	13.10	14.45	16.30
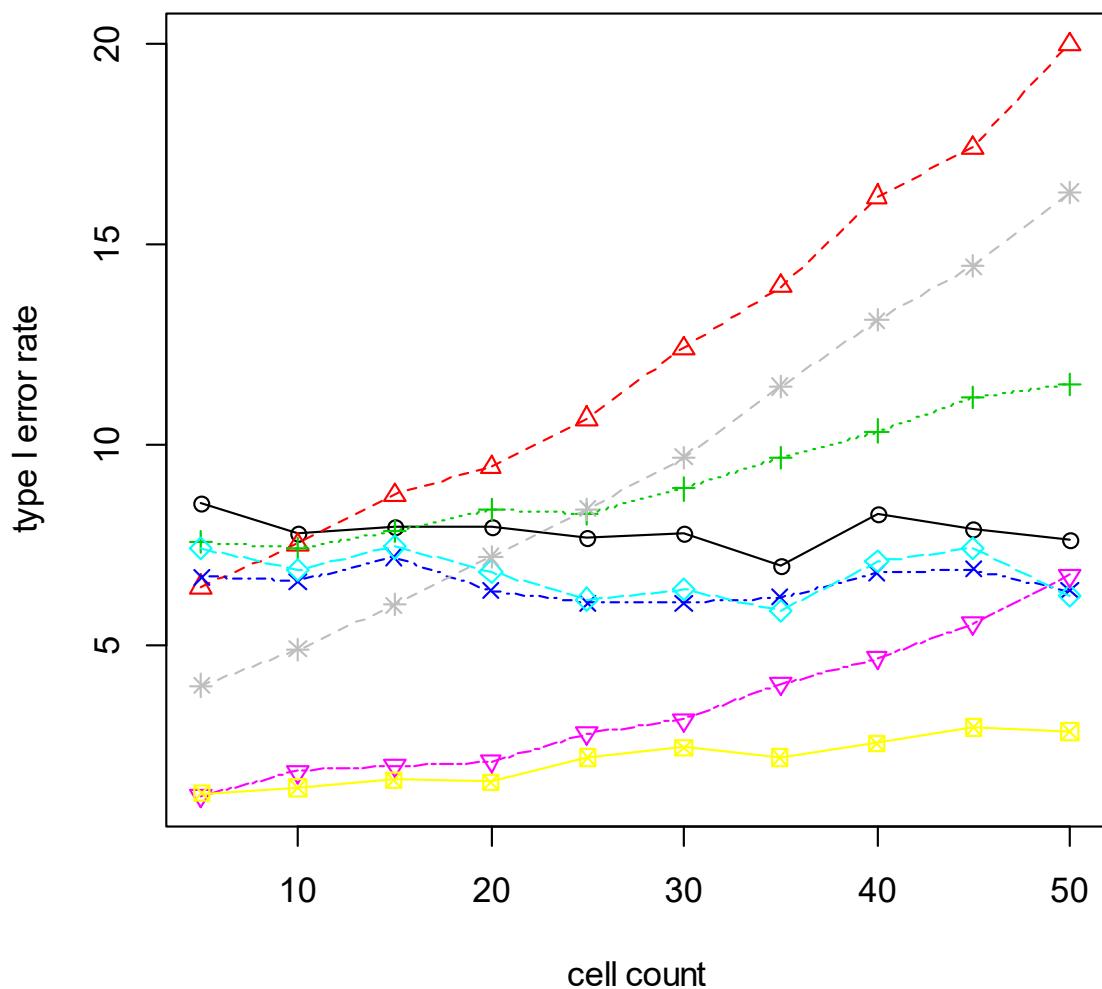
2. 14. 4   right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.65	5.75	5.35	5.70	4.80	4.15	4.50	4.10	4.60	4.50
RT	6.35	6.80	6.25	7.55	6.20	5.75	5.90	5.75	5.35	5.75
INT	7.40	8.45	9.20	9.70	9.00	9.30	9.90	10.55	11.55	12.45
ART	5.85	5.85	5.85	6.30	5.05	4.95	5.40	4.80	4.95	4.90
ART+INT	6.15	6.00	6.20	6.35	5.50	5.30	5.90	5.90	5.90	5.80
Puri & Sen	1.15	1.10	1.00	1.35	1.15	0.90	0.90	0.70	0.75	0.60
v.d.Waerden	0.85	1.00	1.10	1.45	1.35	1.10	1.15	1.25	1.45	1.35
ATS	4.60	5.15	5.65	4.85	4.70	4.15	4.70	4.55	4.10	3.70
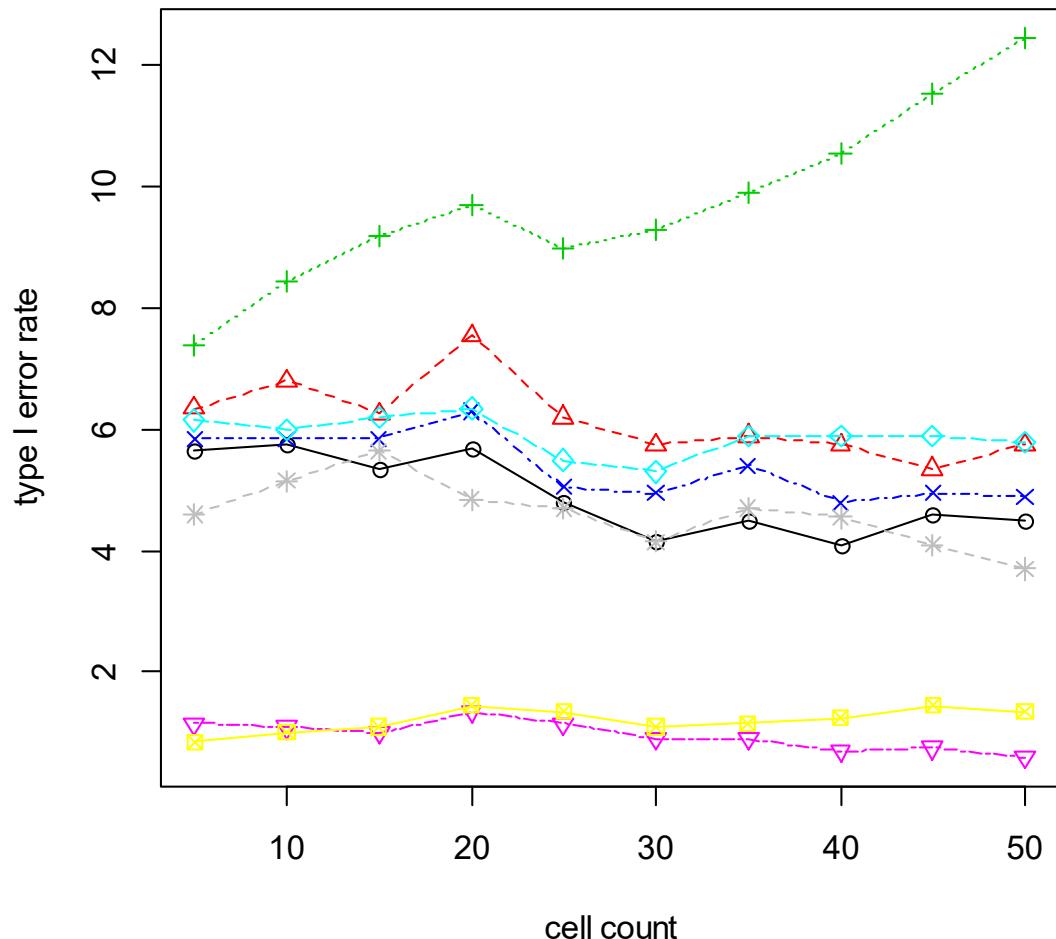
2. 14. 5   exponential distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.80	3.65	4.25	4.75	4.50	5.25	4.95	5.20	4.75	4.25
RT	4.45	5.10	4.60	5.80	7.70	8.60	8.50	8.60	10.25	10.35
INT	3.95	5.20	4.70	5.50	6.65	7.45	6.90	7.05	7.75	7.25
ART	5.30	5.65	7.10	6.10	6.90	7.15	6.80	7.60	7.55	6.70
ART+INT	4.75	4.00	4.70	4.45	4.95	5.10	4.75	4.85	4.45	4.50
Puri & Sen	1.70	3.05	3.10	3.60	4.90	5.45	5.35	6.20	6.80	6.65
v.d.Waerden	1.60	2.75	2.95	3.30	3.85	4.95	4.40	4.80	5.10	4.70
ATS	3.80	5.15	5.00	6.75	8.05	8.75	8.10	8.80	10.20	9.45
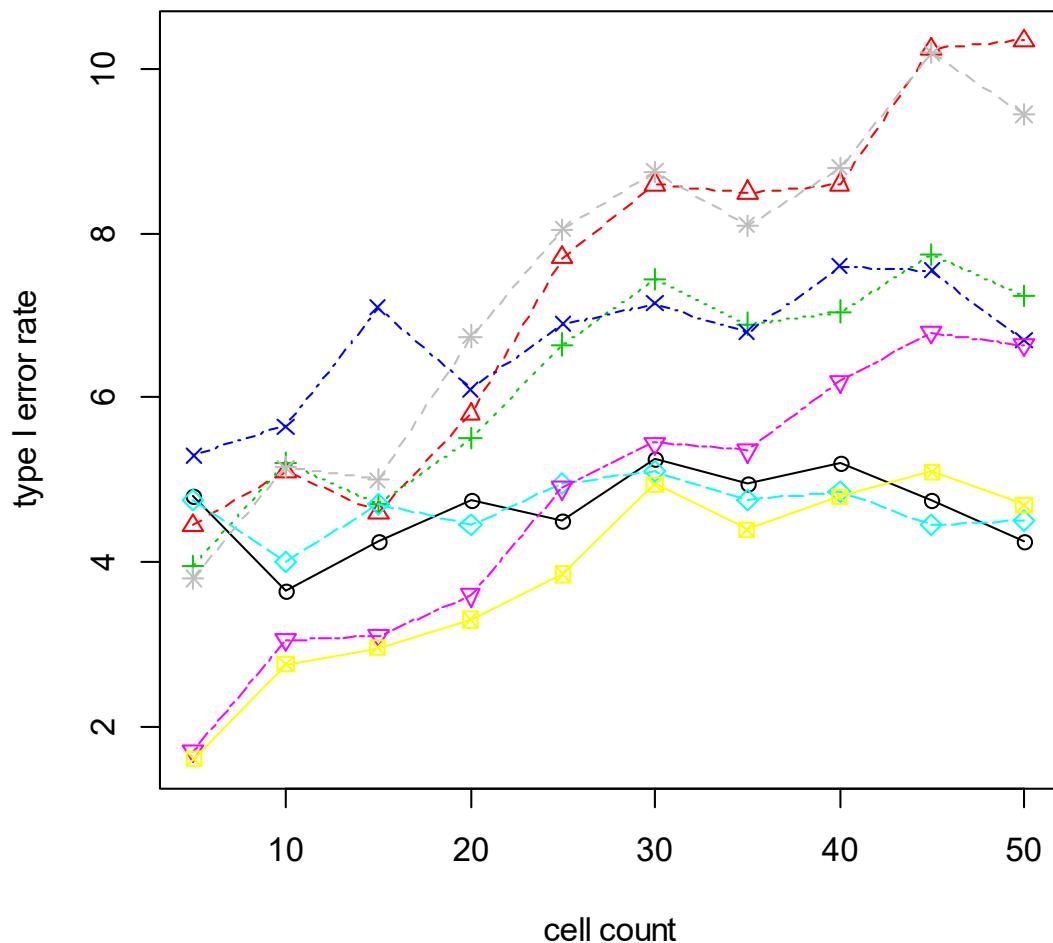
2. 14. 6   exponential distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	4.90	3.75	4.35	4.90	4.55	5.05	4.90	5.30	4.50	4.40
RT	4.25	5.20	4.95	5.55	7.70	8.65	8.40	8.40	9.70	10.05
INT	4.15	4.30	4.65	4.70	6.40	7.10	6.85	6.50	7.40	6.85
ART	5.25	6.05	6.50	6.05	6.75	7.90	7.75	7.95	8.35	7.75
ART+INT	4.80	3.85	4.60	4.45	4.80	5.55	5.35	4.65	4.75	4.90
Puri & Sen	1.85	2.65	3.15	3.55	4.70	5.55	5.55	5.75	6.25	6.75
v.d.Waerden	1.60	2.05	2.85	2.95	3.75	4.40	4.40	4.00	4.35	4.65
ATS	4.20	4.95	5.30	6.40	8.05	8.15	8.35	8.40	9.70	9.50
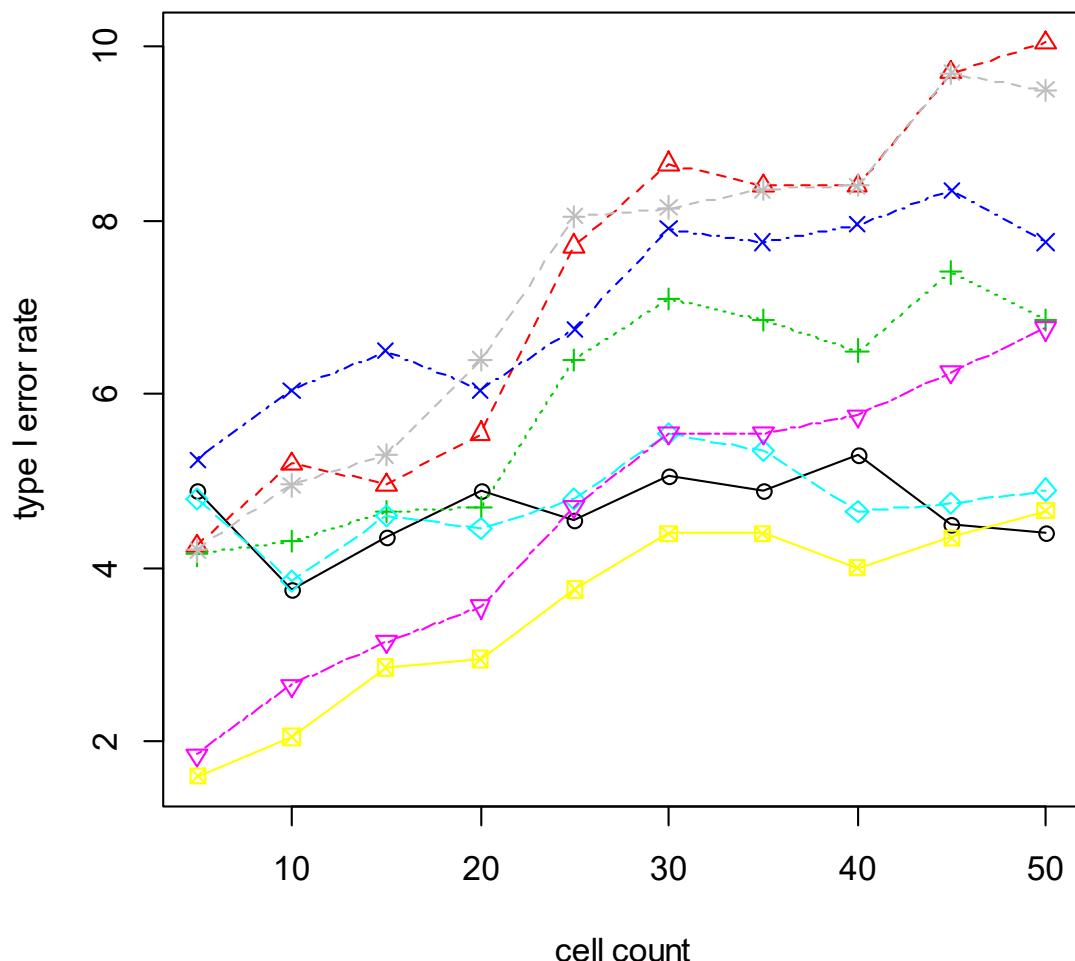
2. 14. 7   lognormal distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.80	4.80	5.60	4.70	5.40	5.70	4.45	5.00	4.80	4.75
RT	5.10	4.40	4.60	4.90	5.40	5.90	4.45	5.20	5.05	4.70
INT	5.55	5.45	6.40	5.40	6.20	6.95	5.90	6.50	6.50	6.20
ART	4.90	4.85	4.20	4.20	5.25	5.65	4.60	4.90	4.70	5.00
ART+INT	5.45	4.75	5.15	4.60	5.50	5.60	4.40	4.90	4.95	4.95
Puri & Sen	1.35	1.30	1.20	1.35	1.40	1.55	1.40	1.90	1.70	1.90
v.d.Waerden	1.45	1.55	1.70	1.75	1.90	2.20	1.95	2.15	1.75	2.55
ATS	4.30	4.20	4.40	4.65	5.10	4.80	4.35	4.35	4.75	4.15
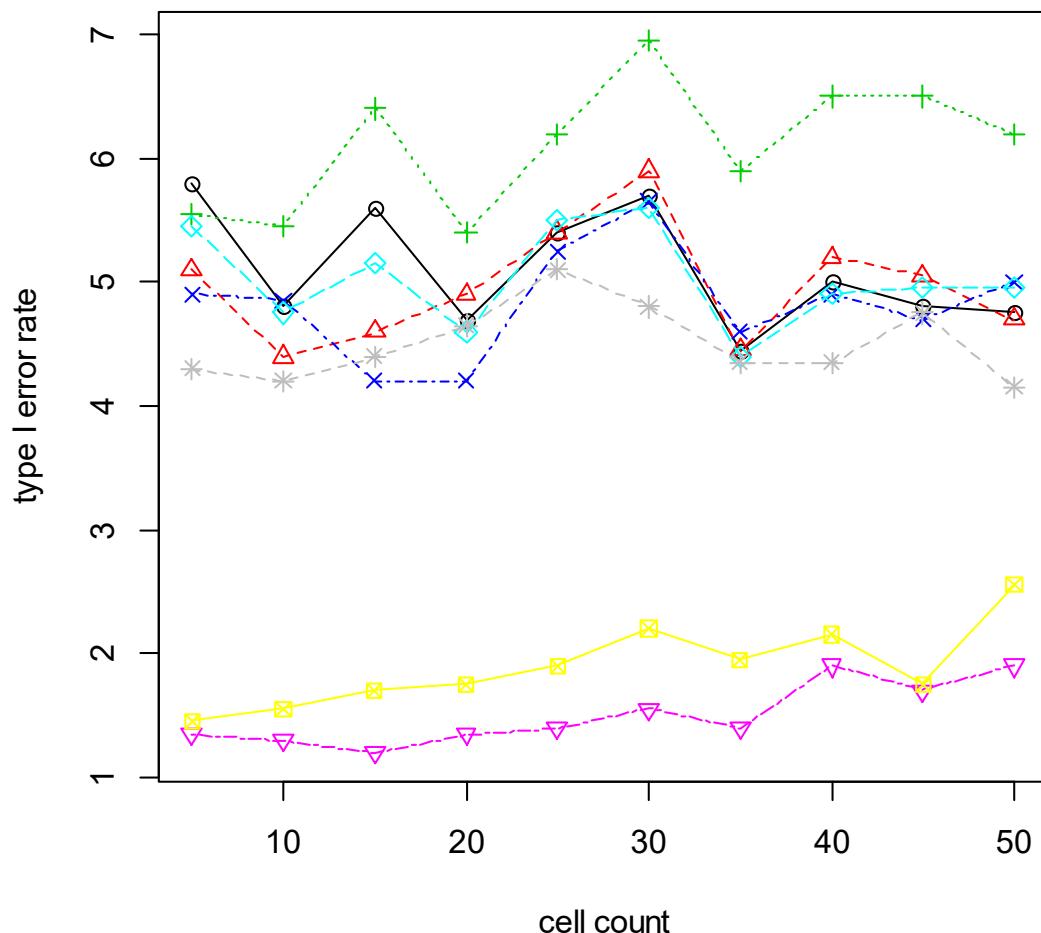
2. 14. 8   uniform distribution - continuous

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.55	5.45	5.30	5.75	4.45	4.50	4.40	4.20	4.65	4.55
RT	4.60	4.80	4.65	5.50	4.10	4.10	3.95	3.55	4.35	4.05
INT	5.50	5.95	5.80	6.15	4.95	4.65	4.85	4.90	4.95	4.70
ART	5.10	5.60	4.95	5.90	4.40	4.40	4.60	4.25	4.60	4.45
ART+INT	5.65	5.80	5.15	5.95	5.10	4.60	4.75	4.65	5.15	4.35
Puri & Sen	0.70	0.80	1.00	0.95	0.80	0.65	0.55	0.85	0.85	0.75
v.d.Waerden	0.85	0.55	0.75	1.05	0.55	0.75	0.25	0.50	0.60	0.40
ATS	4.10	4.90	5.65	5.60	4.65	4.20	4.80	4.50	4.15	3.75
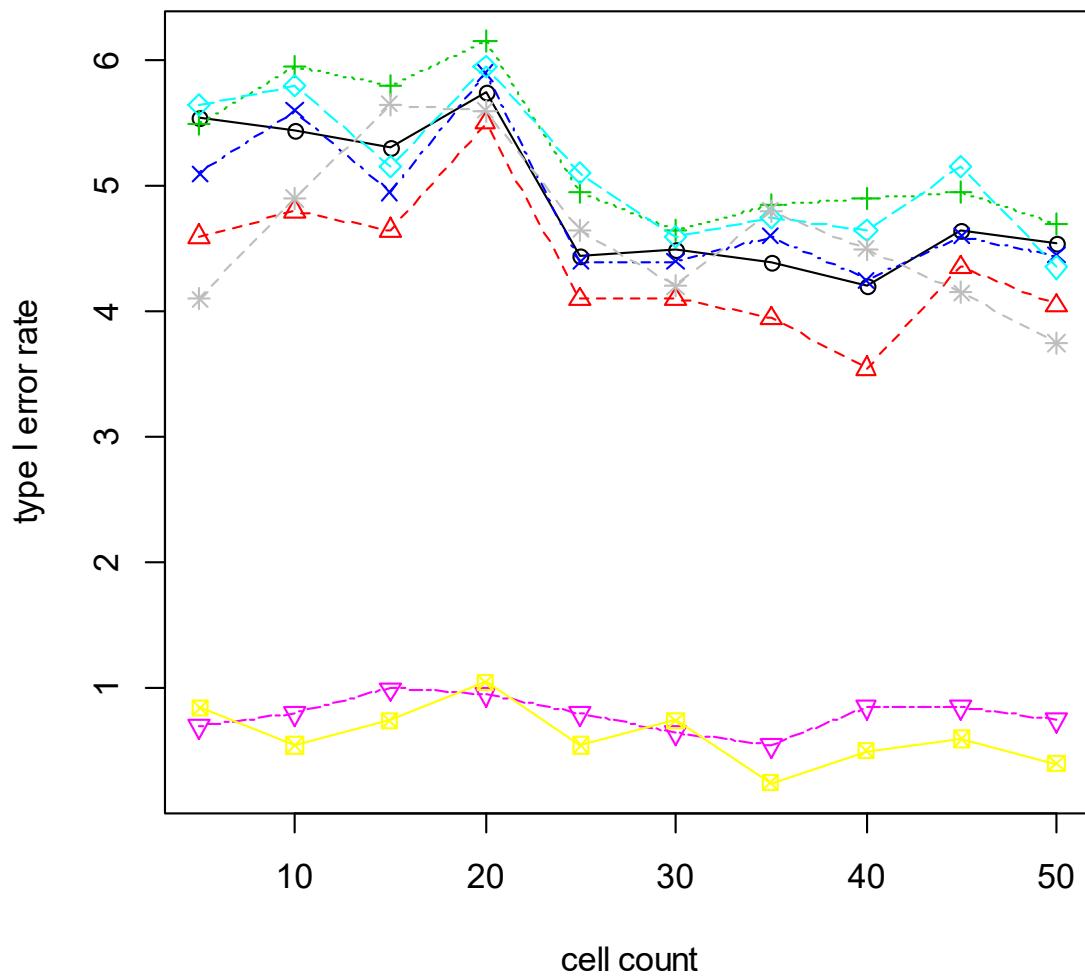
2. 14. 9 uniform distribution - discrete

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	5.65	5.50	4.85	6.15	5.10	4.35	4.65	4.60	4.70	4.55
RT	4.95	4.45	4.50	5.25	4.15	3.95	4.25	3.75	3.90	4.00
INT	5.70	5.80	5.50	6.10	5.35	4.25	5.10	4.70	5.10	4.85
ART	5.65	6.10	5.60	7.00	6.65	6.05	7.25	7.65	7.45	8.05
ART+INT	5.95	6.50	5.95	7.35	7.20	7.10	7.00	7.45	7.95	8.40
Puri & Sen	0.10	0.15	0.20	0.25	0.20	0.20	0.05	0.25	0.35	0.30
v.d.Waerden	0.10	0.15	0.10	0.20	0.05	0.20	0.05	0.20	0.30	0.10
ATS	4.20	4.55	5.60	5.80	4.60	4.15	4.90	4.30	4.15	3.90
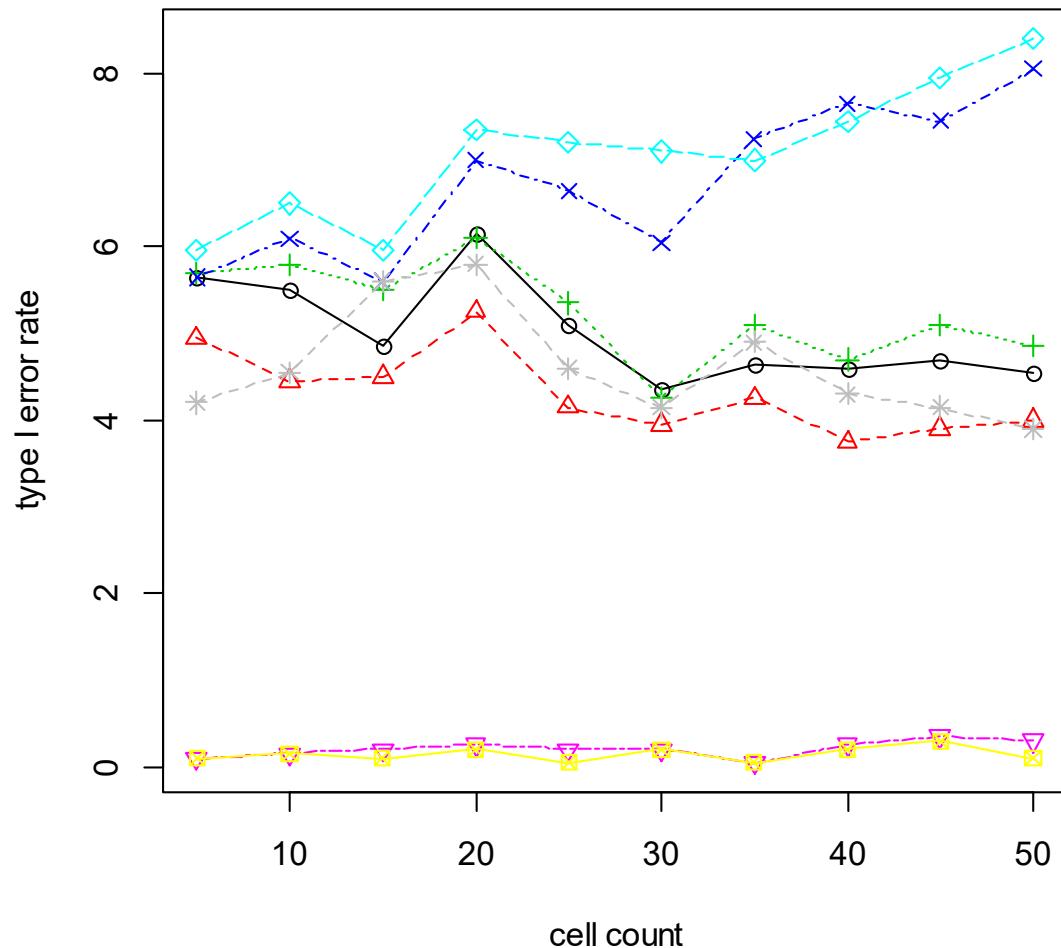
2. 14. 10 left/right skewed distribution

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.10	5.20	5.20	5.20	5.35	4.90	5.15	4.50	4.65	4.90
RT	4.95	4.65	4.20	4.85	4.70	4.15	4.75	3.80	4.40	3.90
INT	5.85	4.90	4.95	4.85	4.75	4.60	5.00	4.30	4.45	4.10
ART	5.85	5.00	4.95	4.80	4.80	5.15	5.55	4.15	4.85	4.90
ART+INT	5.80	5.40	4.95	5.30	5.00	5.15	5.05	5.20	4.65	4.60
Puri & Sen	0.80	0.55	0.90	0.90	0.95	0.60	0.70	0.50	1.05	0.55
v.d.Waerden	0.70	0.60	0.75	0.55	0.85	0.45	0.40	0.50	0.65	0.50
ATS	4.15	4.50	5.15	5.80	5.10	4.85	4.90	3.75	4.20	4.00
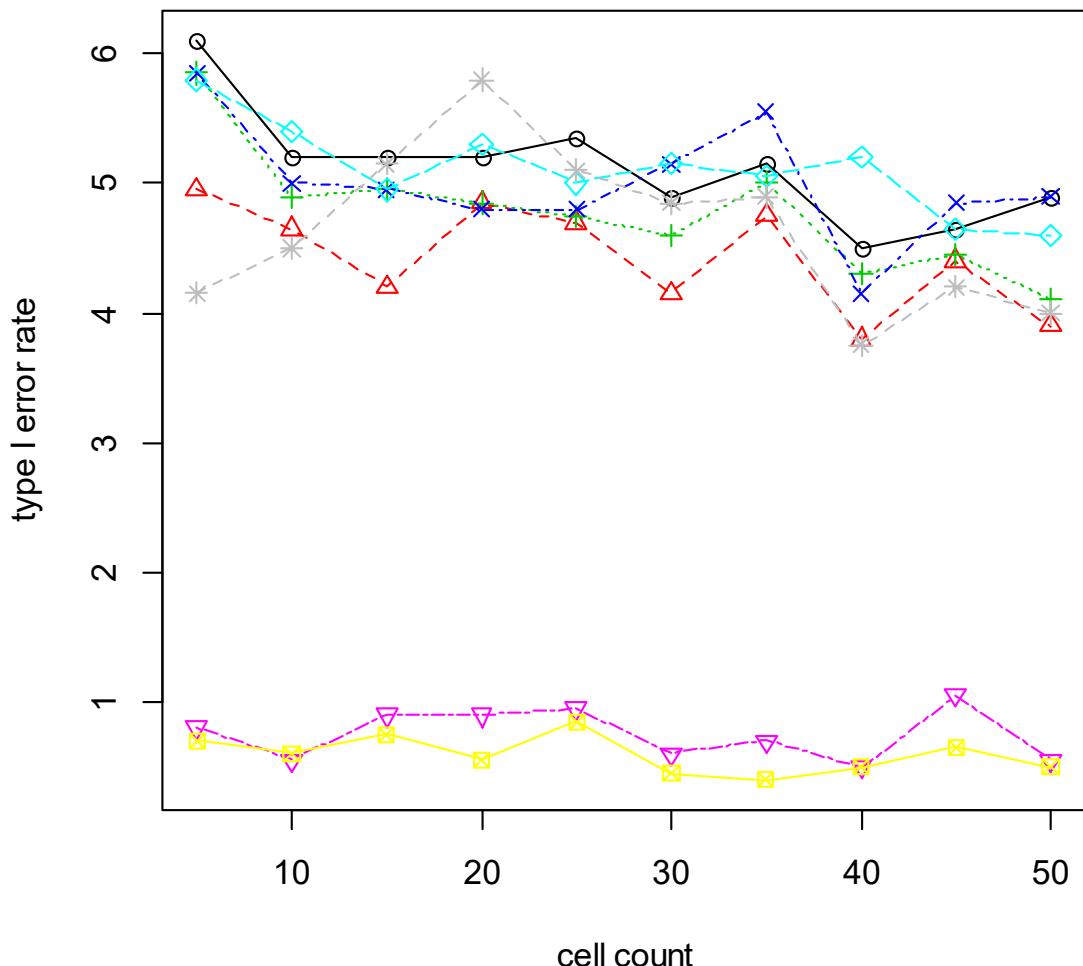
2. 14. 11 left skewed distribution - unequal variances (on B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	6.45	6.60	6.75	7.10	6.30	5.50	5.50	5.70	6.35	6.55
RT	5.40	6.25	8.00	8.40	9.25	9.35	10.00	11.50	13.25	13.95
INT	6.60	6.60	6.95	6.65	6.25	6.10	6.35	6.25	6.60	6.65
ART	6.40	7.65	7.45	7.90	7.35	6.35	6.50	7.00	6.95	7.25
ART+INT	6.75	6.75	6.50	6.80	6.35	5.55	5.25	5.75	6.20	6.40
Puri & Sen	1.35	1.55	2.00	2.60	2.60	3.15	2.85	3.15	4.40	4.60
v.d.Waerden	1.55	1.50	1.55	1.75	1.60	1.75	1.30	1.70	1.80	1.80
ATS	4.20	5.75	7.35	8.20	8.20	8.85	9.75	10.85	11.15	12.70
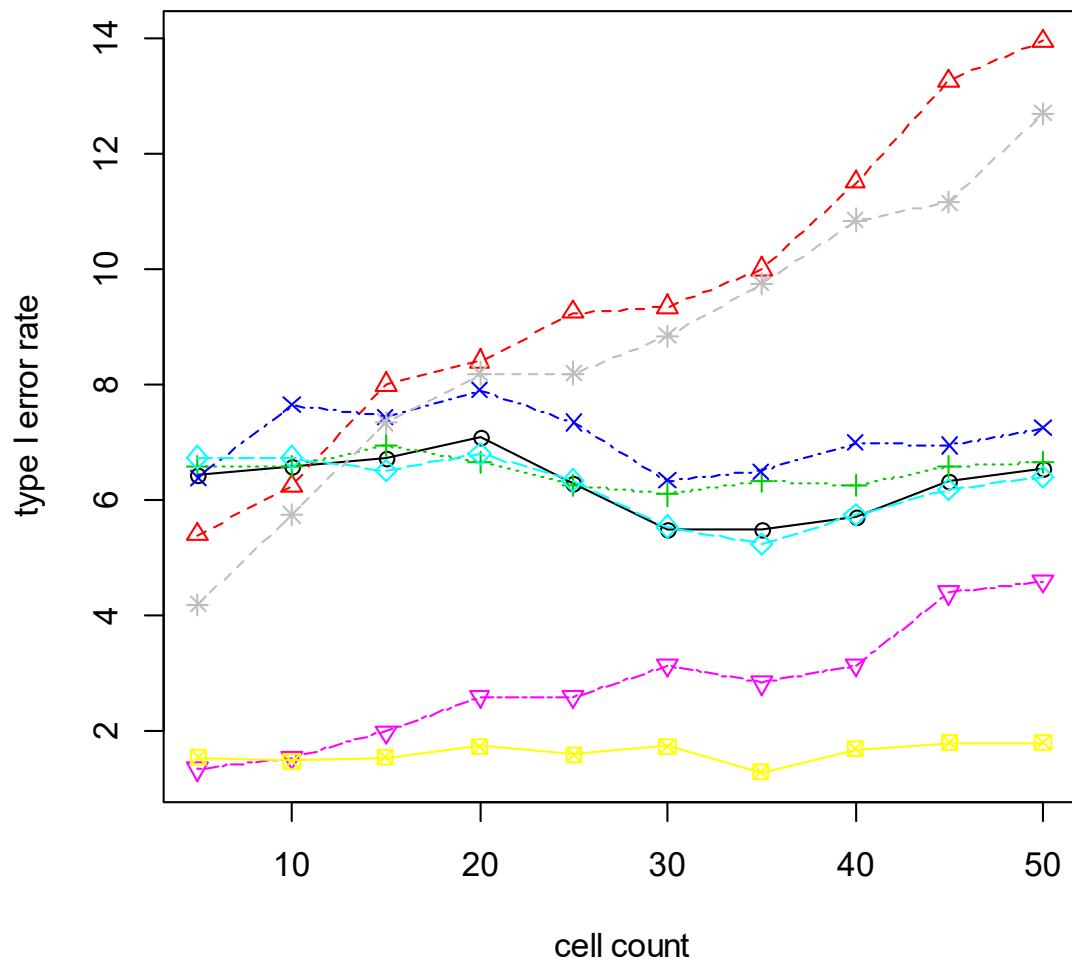
2. 14. 12 left skewed distribution - unequal variances (on A and B)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	10.40	10.40	9.35	9.05	9.05	8.55	8.10	7.90	7.85	7.70
RT	6.70	7.70	8.80	10.00	11.00	11.55	13.60	13.80	16.65	18.15
INT	9.45	10.00	9.70	9.90	10.75	10.15	10.10	9.65	10.65	10.45
ART	8.60	8.80	7.95	9.25	8.70	7.80	7.00	7.90	7.75	8.30
ART+INT	10.80	10.25	10.35	9.60	9.55	9.05	8.65	8.10	8.95	9.05
Puri & Sen	1.95	2.05	2.55	3.95	4.20	4.60	4.90	5.55	6.35	7.70
v.d.Waerden	2.05	2.55	3.25	3.30	2.75	3.05	2.45	3.00	3.10	3.70
ATS	4.35	6.75	7.35	7.95	8.70	9.45	10.65	11.30	12.95	14.25
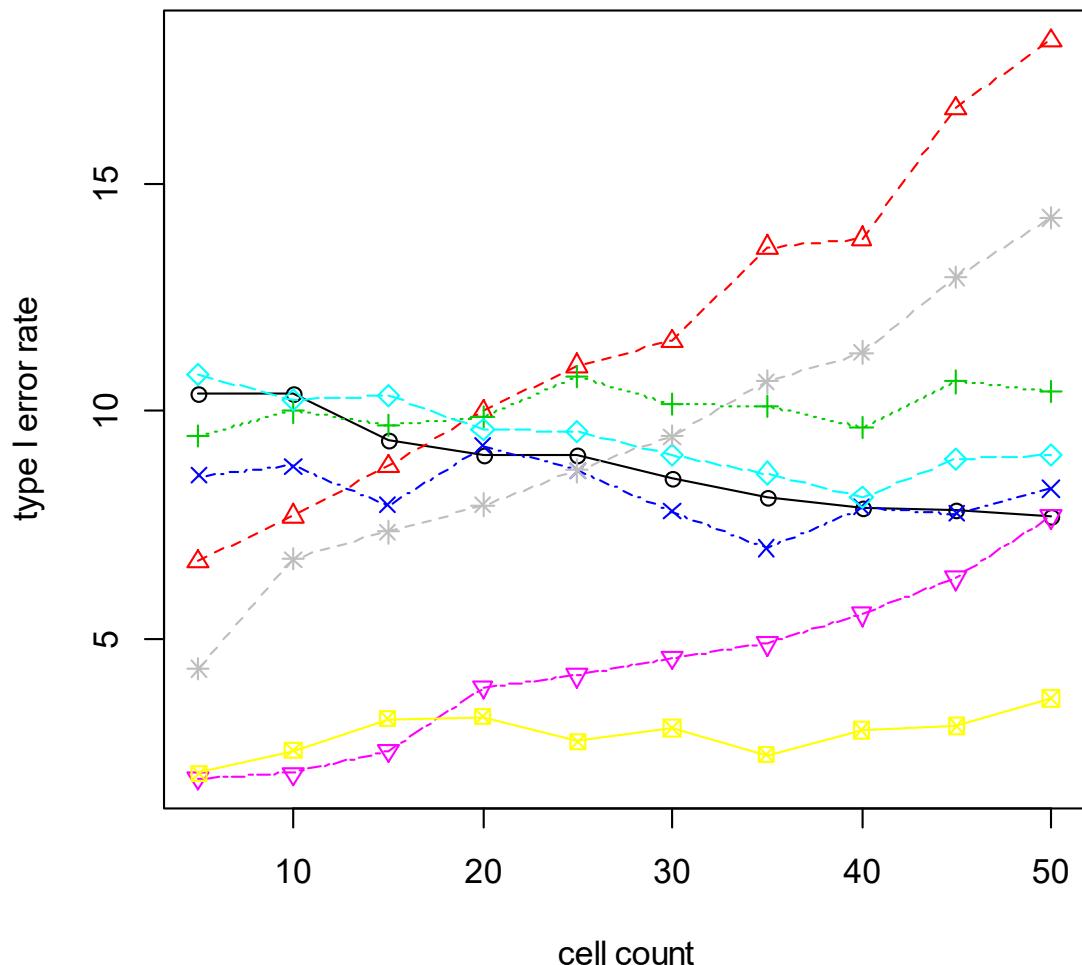
2. 14. 13 normal distribution - unequal variances (small n_i ~ small s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	1.20	0.55	1.15	1.10	1.00	1.45	1.15	1.05	1.15	0.75
RT	1.90	2.00	1.85	1.65	2.20	2.10	2.60	3.25	3.80	4.05
INT	1.35	0.95	1.35	1.00	1.05	1.30	1.10	1.15	1.25	1.00
ART	2.45	2.30	2.60	2.40	2.30	2.00	2.20	2.35	2.70	2.00
ART+INT	1.40	0.85	1.25	1.30	1.05	1.45	1.10	1.20	1.25	0.95
Puri & Sen	0.15	0.10	0.10	0.15	0.10	0.25	0.25	0.35	0.45	0.45
v.d.Waerden	0.05	0.05	0.05	0.00	0.05	0.15	0.05	0.00	0.10	0.20
ATS	3.75	5.10	5.90	5.00	6.15	6.75	7.45	9.10	10.10	10.85
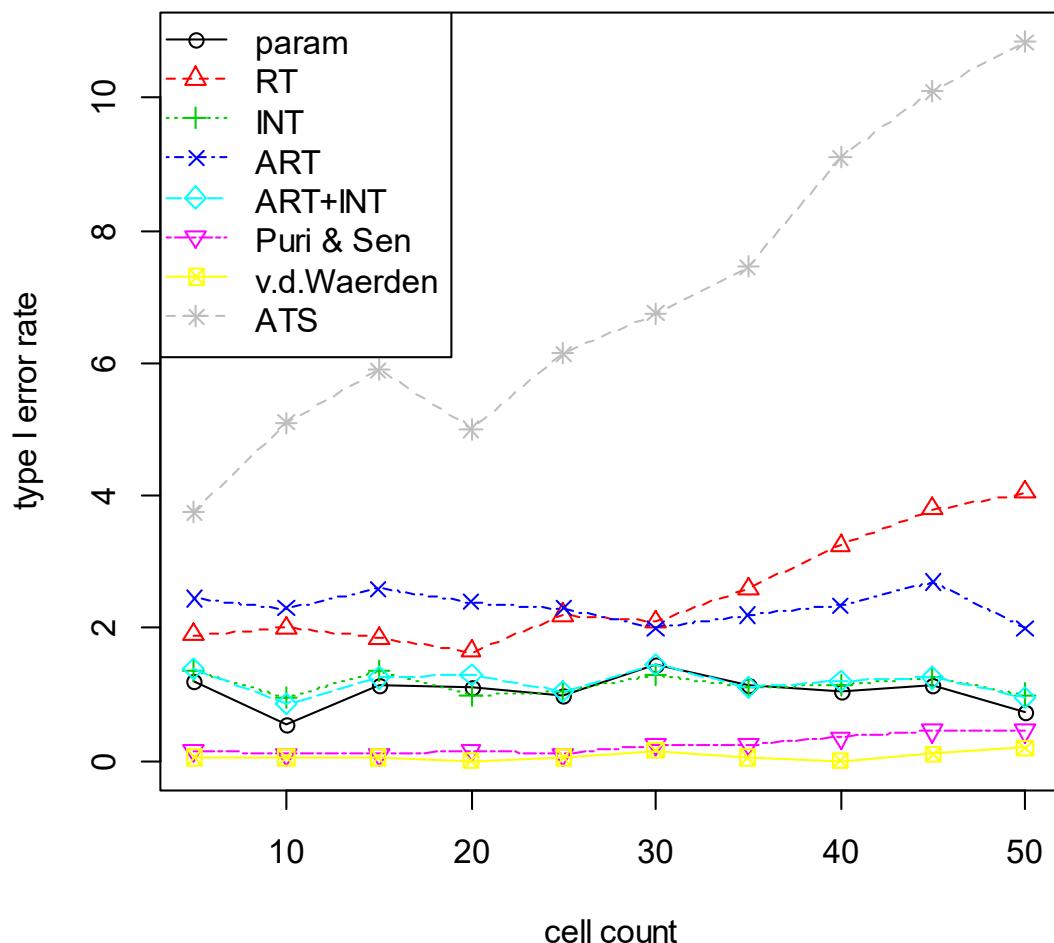
2. 14. 14 normal distribution - unequal variances (small n_i ~ large s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	23.85	21.95	21.35	20.25	21.55	21.55	21.05	21.65	21.10	21.35
RT	13.65	14.75	14.45	13.75	15.50	15.90	16.85	16.60	18.15	19.60
INT	18.30	18.50	18.40	16.55	17.55	17.95	17.85	18.60	18.80	18.30
ART	13.95	14.15	13.70	11.90	12.70	13.45	13.65	12.65	12.75	12.95
ART+INT	19.65	19.45	18.70	16.95	18.00	17.50	17.10	18.30	18.45	17.95
Puri & Sen	2.85	3.10	3.35	3.15	3.55	4.25	4.90	4.60	4.95	5.75
v.d.Waerden	4.10	4.85	5.10	4.40	5.40	5.45	5.10	5.30	5.30	5.50
ATS	4.80	4.60	5.15	4.80	6.05	6.10	6.60	6.75	7.25	7.20
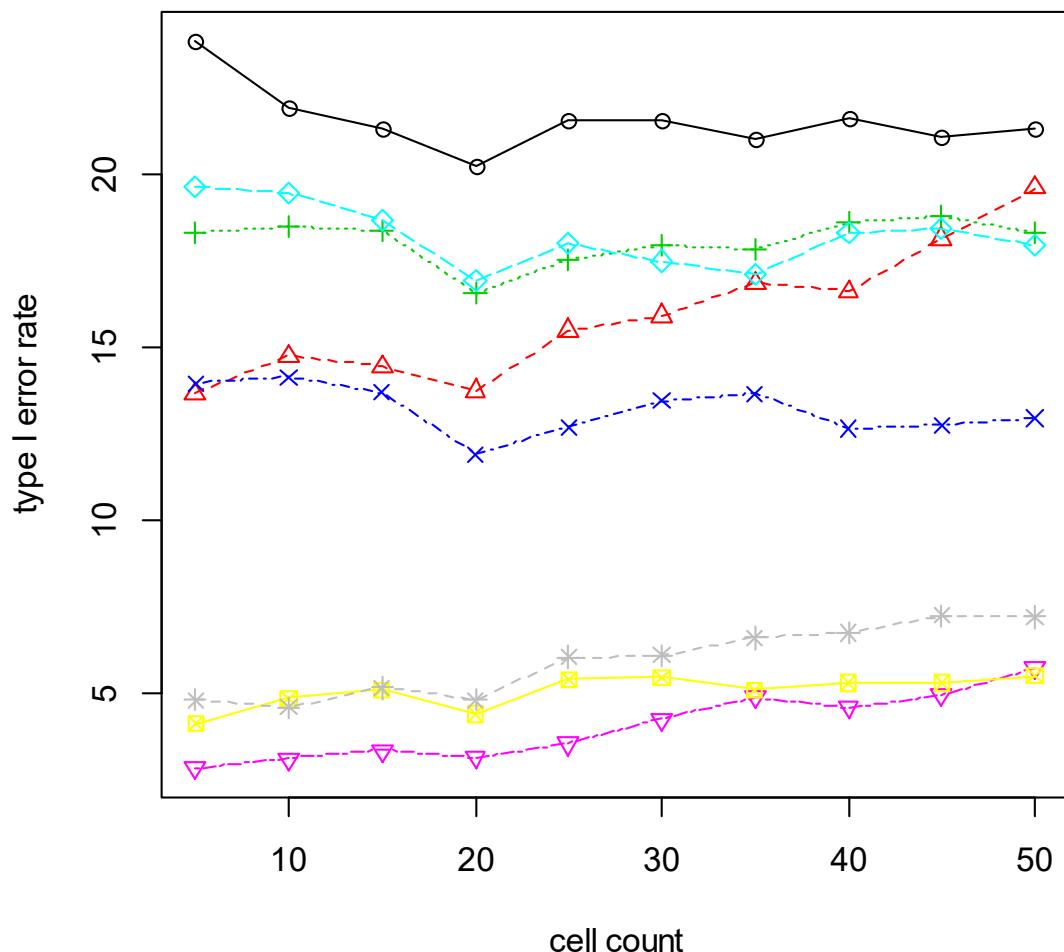
2. 14. 15 left skewed distribution - unequal variances (small n_i ~ small s_i)

method	5	10	15	20	25	30	35	40	45	50
					cell count					
parametric	1.55	1.75	1.10	1.40	1.55	1.45	1.45	1.25	1.40	1.10
RT	1.75	1.75	1.60	2.15	1.95	1.95	1.90	2.10	2.65	2.80
INT	1.30	1.65	1.20	1.30	1.45	1.20	1.45	1.55	1.50	1.35
ART	2.35	2.30	1.95	2.50	2.60	2.65	2.15	2.65	2.50	2.65
ART+INT	1.25	1.35	0.80	1.00	1.05	0.85	1.05	1.15	1.35	1.20
Puri & Sen	0.15	0.15	0.25	0.25	0.15	0.30	0.20	0.35	0.30	0.55
v.d.Waerden	0.05	0.00	0.10	0.20	0.00	0.10	0.05	0.05	0.10	0.15
ATS	4.15	4.85	5.60	6.50	6.15	5.90	7.00	6.40	6.55	7.05
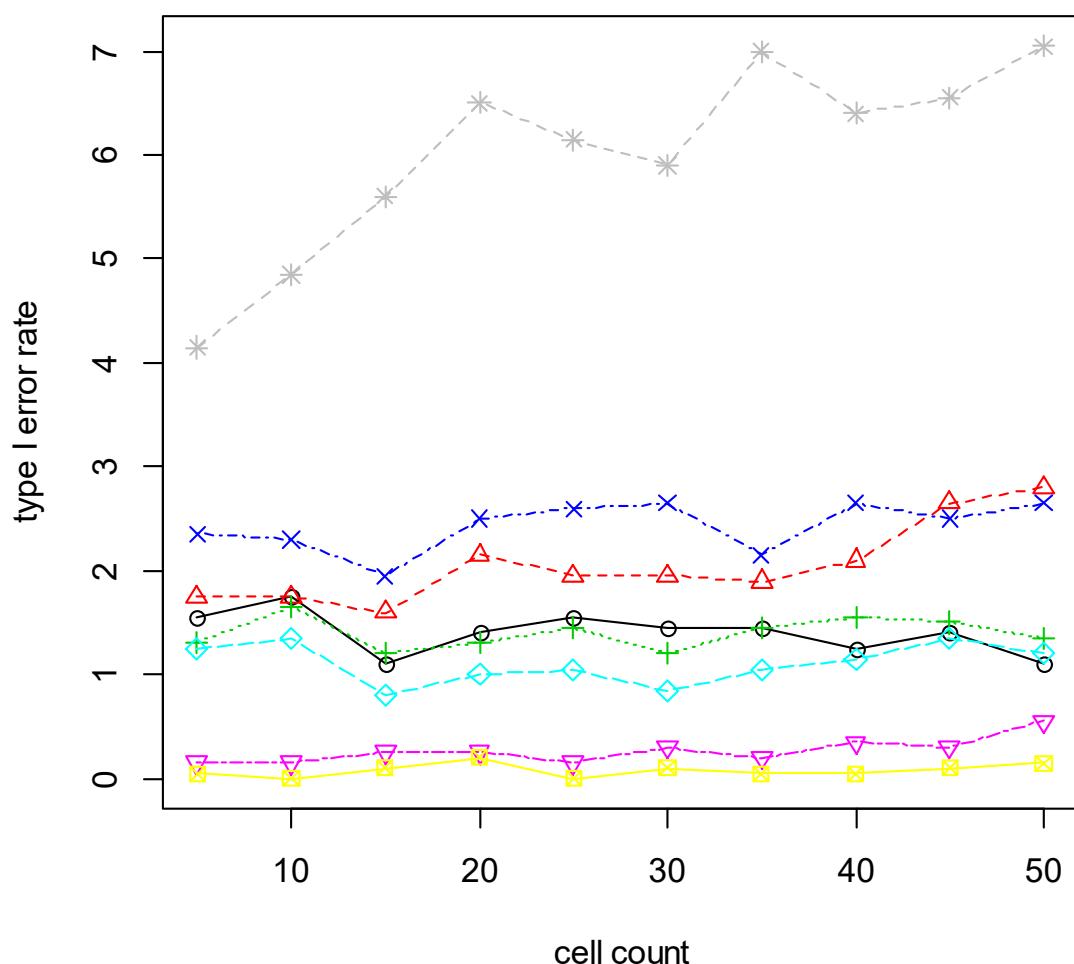
2. 14. 16 left skewed distribution - unequal variances (small n_i ~ large s_i)

method	cell count									
	5	10	15	20	25	30	35	40	45	50
parametric	24.10	23.85	23.30	21.95	20.90	20.60	20.70	20.80	21.30	20.85
RT	16.00	15.80	16.80	17.85	17.75	19.15	20.65	20.35	22.00	24.00
INT	21.60	22.45	23.25	23.05	23.35	23.35	24.25	23.85	24.75	27.05
ART	17.85	18.55	17.85	18.05	17.05	17.45	18.20	18.00	17.75	18.70
ART+INT	25.45	26.30	26.10	26.45	26.70	25.80	27.70	27.90	27.75	28.90
Puri & Sen	3.55	4.35	5.50	6.15	6.05	5.95	7.00	7.25	8.00	8.70
v.d.Waerden	5.00	6.75	7.85	7.20	7.55	6.85	8.45	7.75	8.20	7.80
ATS	5.20	5.65	6.95	6.65	6.30	7.05	7.40	7.65	7.80	8.25