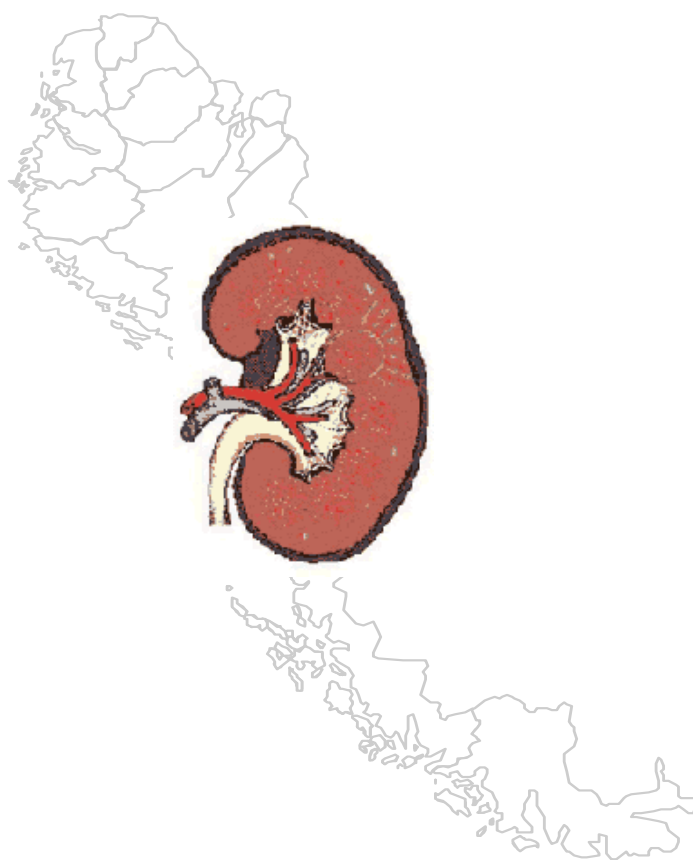


**The Norwegian Kidney Register/National Center in Nephropathology
Department of Medicine/Department of Pathology
Haukeland University Hospital**

ANNUAL REPORT

2008



Head of the board: Bjarne M. Iversen, professor MD PhD
Head of pathology: Leif Bostad, associate professor, MD

Annual report 2008

The Norwegian Kidney registry/National centre of Nephropatology has continued the registration and research as in previous year. The reports from the hospitals have arrived fairly regularly, but still 88 clinical forms and 135 histopathological forms are lacking. From the start of the registry in 1988, a total of 918 clinical forms are not in the registry. The figure on page 3 in the present report shows an overview of the missing reports from the different hospitals. It is still possible to include clinical and morphological data from patients taking biopsies from earlier years making the total registry more complete.

At the end of 2008, a total of 9945 biopsies are now recorded in the registry. Our registry is the oldest active database in Europe and it is bigger than the Italian registry where they have no more money to continue their work. It is therefore necessary to keep our registry up and going and make it suitable for clinical control and renal research.

The numbers of renal biopsies are still increasing and for the first time since we started Ullevål University Hospital and Rikshospitalet have the greatest numbers of biopsies and has passed Haukeland University Hospital. This observation indicates that the need for a renal biopsy in the daily diagnostic work is increasing.

An increasing annual number of aged patients had a renal biopsy the last year. Renal biopsies in patients above 70 years are increasing, and we have now information from more than 1600 patients above 70 years of age. The biopsy procedure is safe in these patients, but the risk is slightly higher than in young patients. The overall frequency of complications is low (Page 38), in 2008, 3 patients needed blood transfusion and there was none that needed surgical intervention. The cases with macroscopical hematuria may be underreported. Hematoma is now deleted as a complication due to different practice in detection of this complication. Systematic use of ultrasound technique will detect a large number of hematoma, but this examination is not possible in all hospitals.

Generally, the radiologists are more and more taking over the renal biopsy procedure. This seems to be in line with the continuous decline in renal procedures made by nephrologists. This development needs to be seriously discussed in the Norwegian Society of Nephrology.

Research

Knut Åsarød together with several others nephrologists and in collaboration with Leif Bostad are studying renal SLE in a large cohort in Norway. Rune Bjørneklett is working on IgA nephropathy and Bjørn Egil Vikse is continuing his work on renal disease and preeclampsia. Proteomics will be introduced on biopsies next year and Bjørn Egil Vikse has got funding for this procedure. Einar Svarstad, Camilla Tøndel and Leif Bostad are working on Fabry disease. Camilla Tøndel will also make an in depth study of all complications after doing a renal biopsy.

The present report has been performed mainly by Else Reimers, the secretary of the Norwegian Kidney Registry. We are grateful for her skilled collaboration

Guest: Gunnar Fjermeros from Sørlandet Sykehus Kristiansand was guest observer both in the Department of nephrology and Pathology from 1409-2409 2009.

Leif Bostad
Associate professor, MD

Bjarne M. Iversen
Professor MD, PhD

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I Clinical

		Number
	Total number of renal biopsies	626
	Biopsies lacking clinical form	88
Diagnosis	Hematuria	211
	Hematuria with protenuria <3g/24h	13
	Nefrotic syndrom with proteinuria >3g/24h	24
	Chronical renal failure	181
	Hypertension BP >140/90	107
	SLE	24
	Creatinine > 200	184
	Creatinine < 200	342
Complications	Non complications	434
	Macroscopical hematuria	6
	Haematoma	47
	Blood transfusion	8
	Surgical intervention	0

II Morphology

	Total number of renal biopsies	626
	Biopsies lacking histopathological form	135
Quality of biopsies	Register pathologist: sufficient material	261
	Register pathologist: insufficient material	44
	Local pathologist: sufficient material	435
	Local pathologist: insufficient material	24
Diagnosis	Minimal change	16
	Membranoproliferative GN	12
	Focal segmental sclerosis	32
	Benign nephrosclerosis	180
	Malign nephrosclerosis	3
	Membranous GN	36
	Mesangioproliferative GN	110
	Mesangioproliferative GN with IgA	61
	Mesangioproliferativ GN without IgA	48
	Mesangioproliferative GN with SLE	1
	Endocap proliferative GN	9
	Cresentic GN	31
	Diabetic nephropathy	25
	Amyloidosis	15
	Diffus prol.Lupusnephritis(IV)	15
	Congenital nephropathy	10
	Monoclonal Ig deposition disease	10
	Cryoglobulinemia with GN	0

Number in %

14,1

39,2

2,4

4,5

33,6

19,9

4,5

34,2

63,6

87,7

1,2

9,5

1,6

0,0

21,6

85,6

14,4

94,8

5,2

3,3

2,4

6,5

36,7

0,6

7,3

22,4

12,4

9,8

0,2

1,8

6,3

5,1

3,1

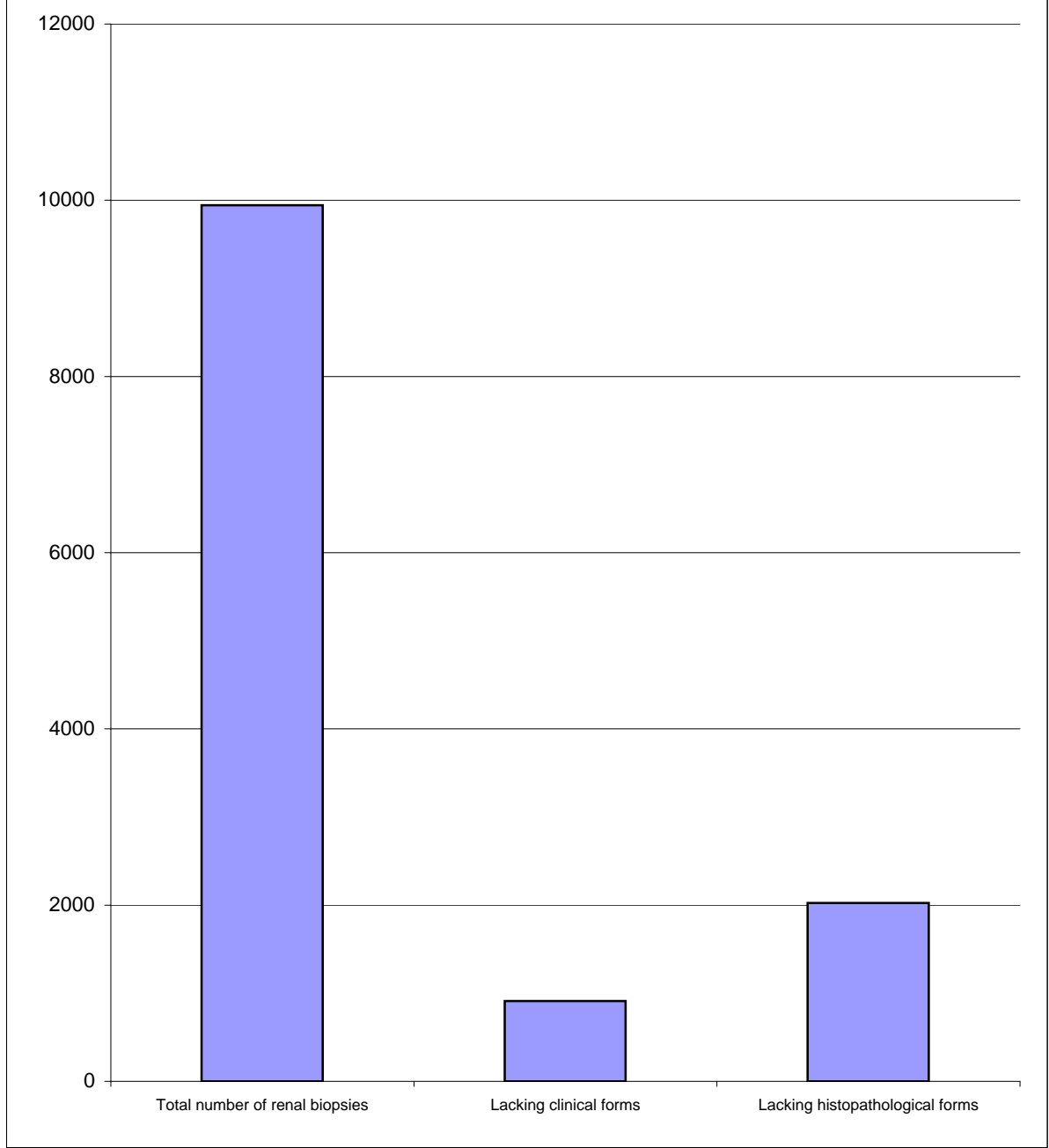
3,1

2,0

2,0

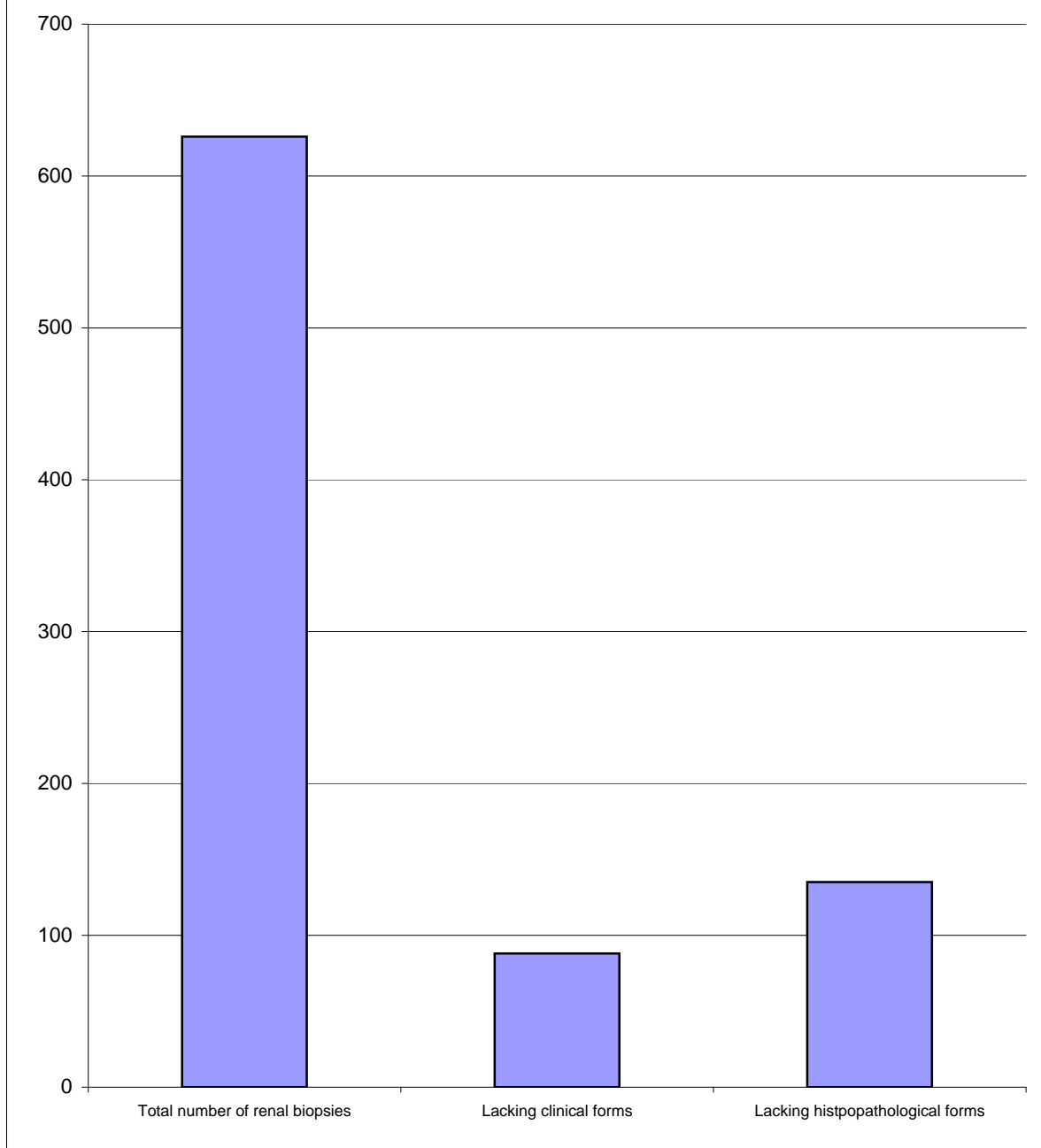
0,0

Total number of biopsies in The Norwegian Kidney Register



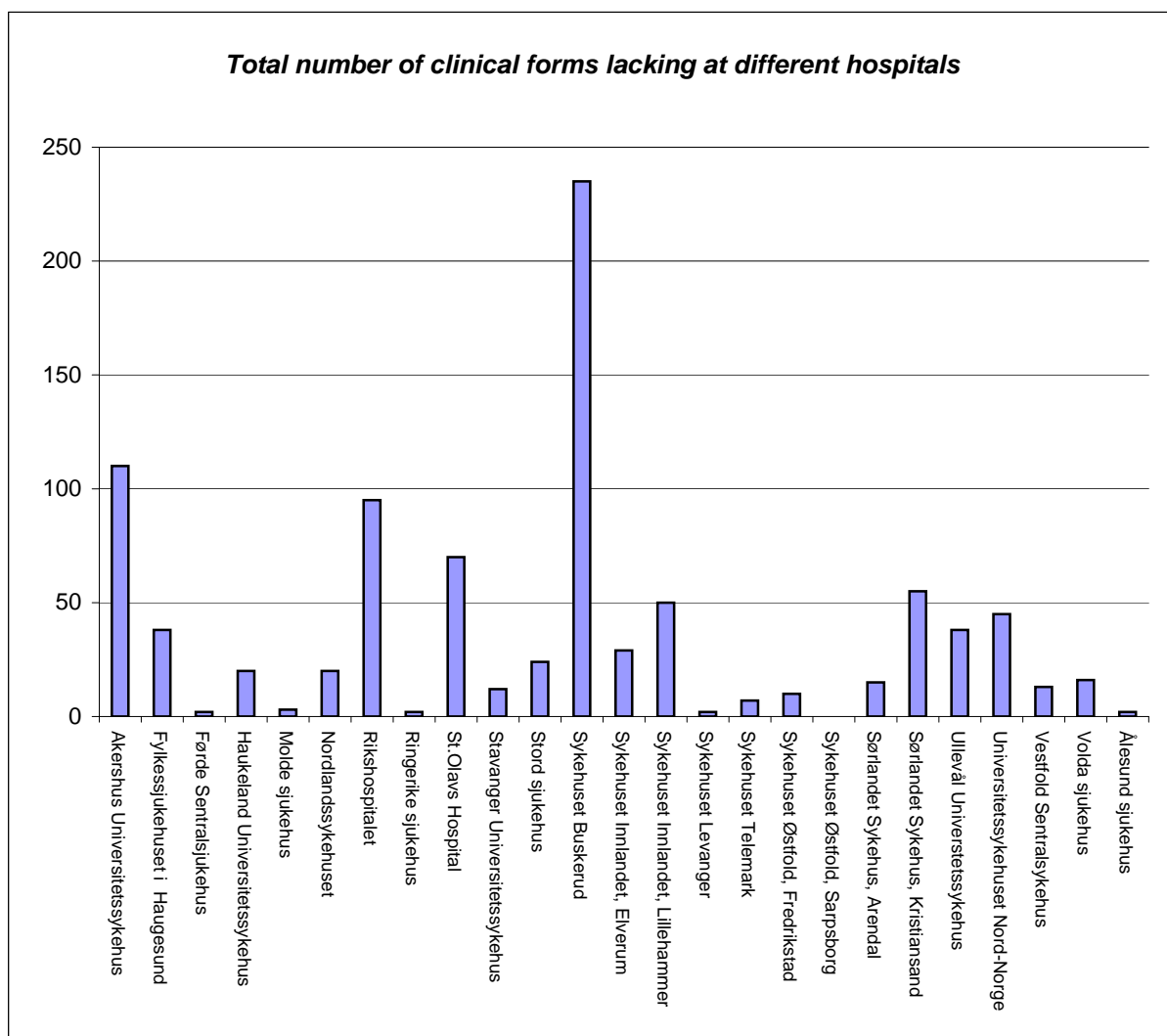
Total number of renal biopsies	9945
Lacking clinical forms	913
Lacking histopathological forms	2026

Number of renal biopsies 2008



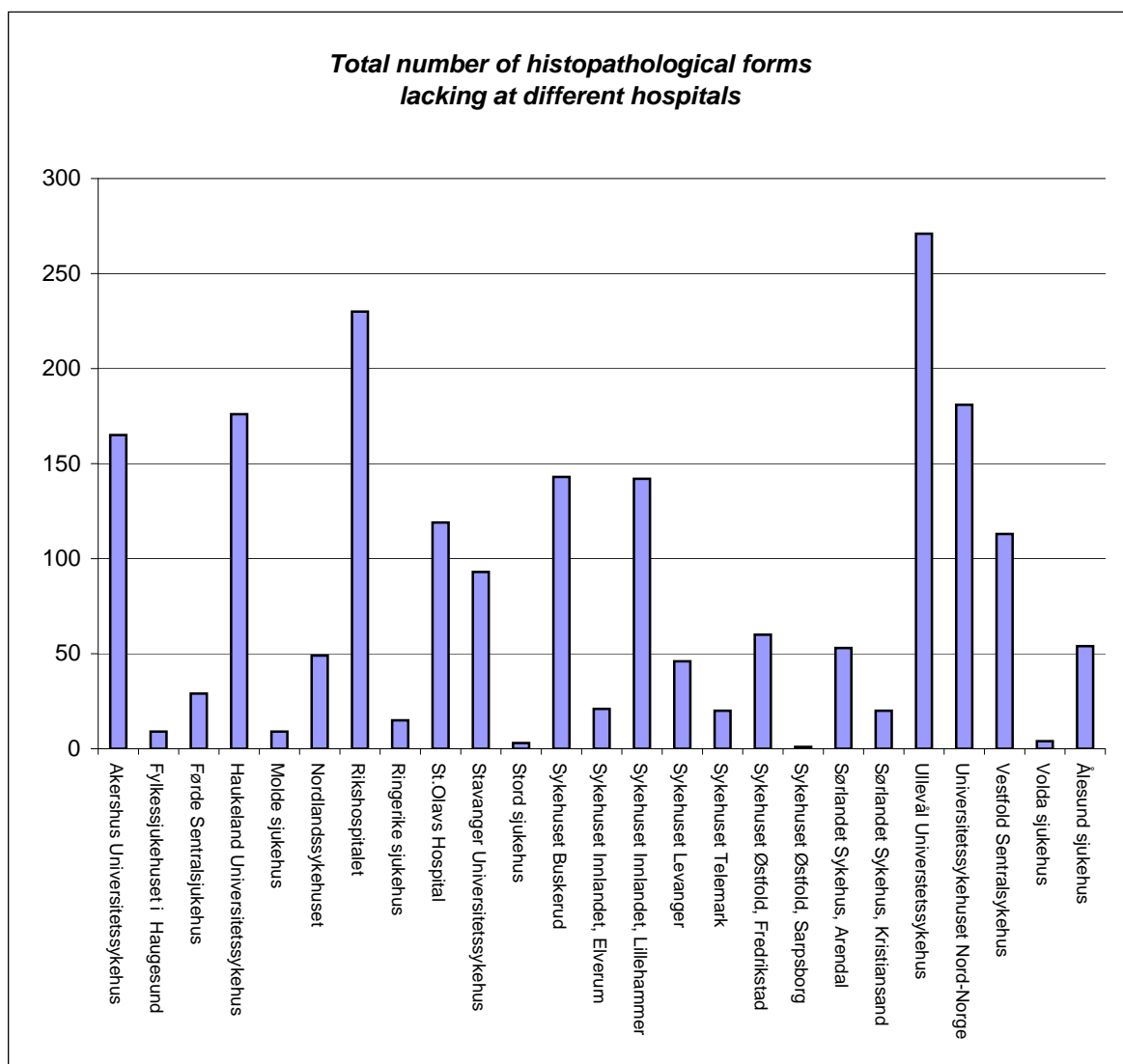
Total number of renal biopsies	626
Lacking clinical forms	88
Lacking histopathological forms	135

Total number of clinical forms lacking at different hospitals



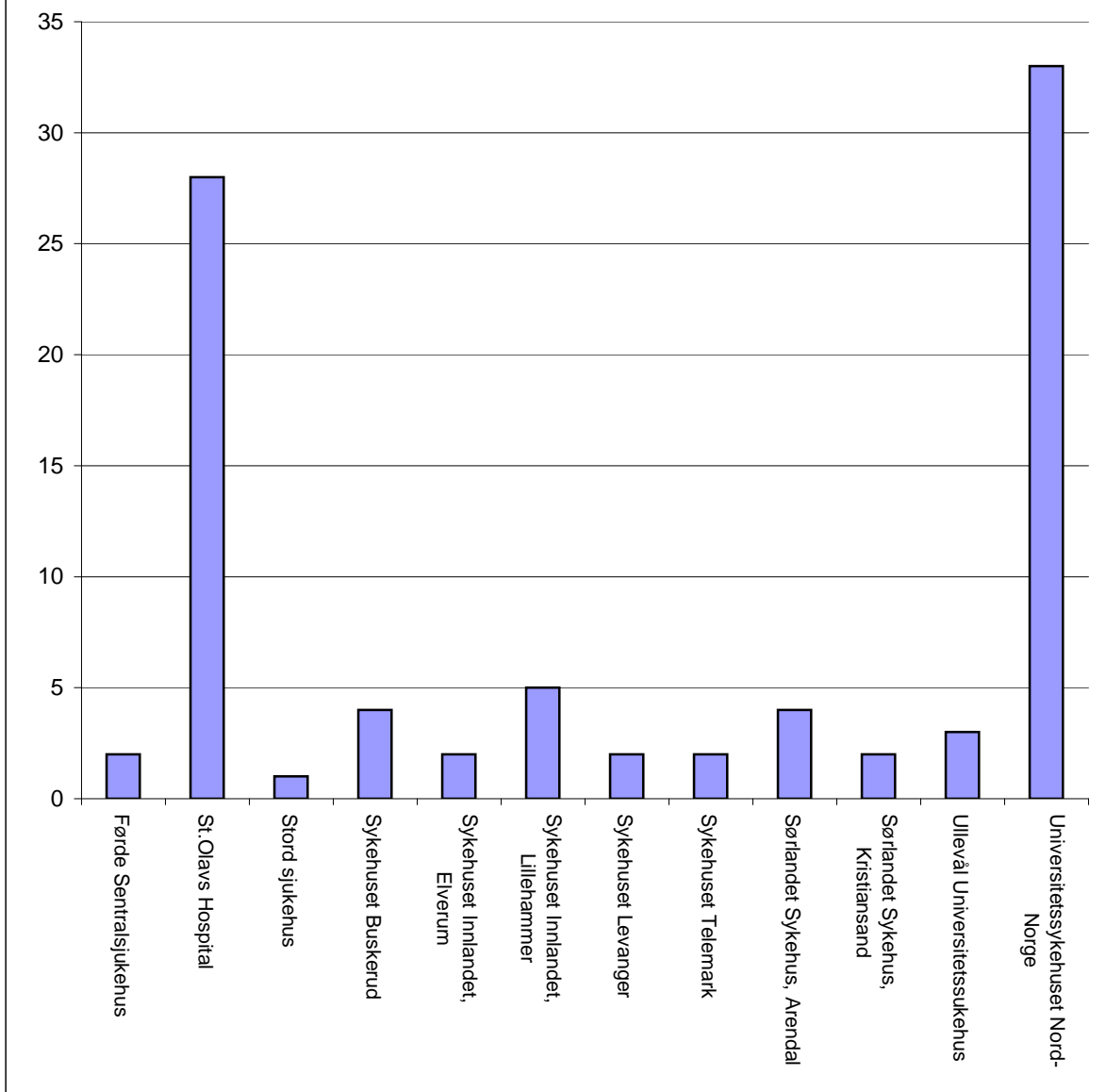
Hospital	Number
Akershus Universitetssykehus	110
Fylkessjukehuset i Haugesund	38
Førde Sentralsjukehus	2
Haukeland Universitetssykehus	20
Molde sjukehus	3
Nordlandssykehuset	20
Rikshospitalet	95
Ringerike sjukehus	2
St.Olavs Hospital	70
Stavanger Universitetssykehus	12
Stord sjukehus	24
Sykehuset Buskerud	235
Sykehuset Innlandet, Elverum	29
Sykehuset Innlandet, Lillehammer	50
Sykehuset Levanger	2
Sykehuset Telemark	7
Sykehuset Østfold, Fredrikstad	10
Sykehuset Østfold, Sarpsborg	0
Sørlandet Sykehus, Arendal	15
Sørlandet Sykehus, Kristiansand	55
Ullevål Universitetssykehus	38
Universitetssykehuset Nord-Norge	45
Vestfold Sentralsykehus	13
Volda sjukehus	16
Ålesund sjukehus	2
Total	913

**Total number of histopathological forms
lacking at different hospitals**



Hospital	Number
Akershus Universitetssykehus	165
Fylkessjukehuset i Haugesund	9
Førde Sentralsjukehus	29
Haukeland Universitetssykehus	176
Molde sjukehus	9
Nordlandssykehuset	49
Rikshospitalet	230
Ringerike sjukehus	15
St.Olavs Hospital	119
Stavanger Universitetssykehus	93
Stord sjukehus	3
Sykehuset Buskerud	143
Sykehuset Innlandet, Elverum	21
Sykehuset Innlandet, Lillehammer	142
Sykehuset Levanger	46
Sykehuset Telemark	20
Sykehuset Østfold, Fredrikstad	60
Sykehuset Østfold, Sarpsborg	1
Sørlandet Sykehus, Arendal	53
Sørlandet Sykehus, Kristiansand	20
Ullevål Universitetssykehus	271
Universitetssykehuset Nord-Norge	181
Vestfold Sentralsykehus	113
Volda sjukehus	4
Ålesund sjukehus	54

Number of clinical forms lacking at different hospitals, 2008



Total

88

Hospital

Number

Førde Sentralsjukehus

2

St. Olavs Hospital

28

Stord sjukehus

1

Sykehuset Buskerud

4

Sykehuset Innlandet, Elverum

2

Sykehuset Innlandet, Lillehammer

5

Sykehuset Levanger

2

Sykehuset Telemark

2

Sørlandet Sykehus, Arendal

4

Sørlandet Sykehus, Kristiansand

2

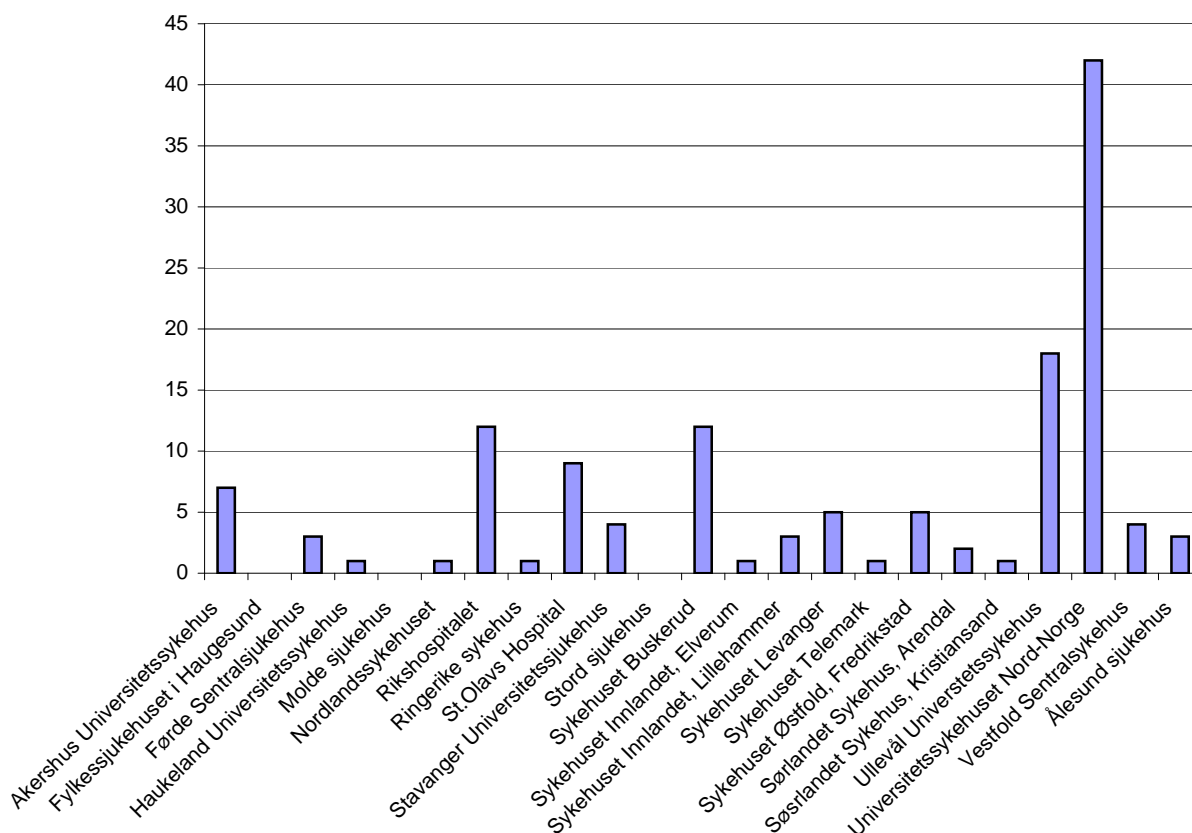
Ullevål Universitetssjukehus

3

Universitetssykehuset Nord-Norge

33

Number of histopathological forms lacking at different hospitals, 2008



Total

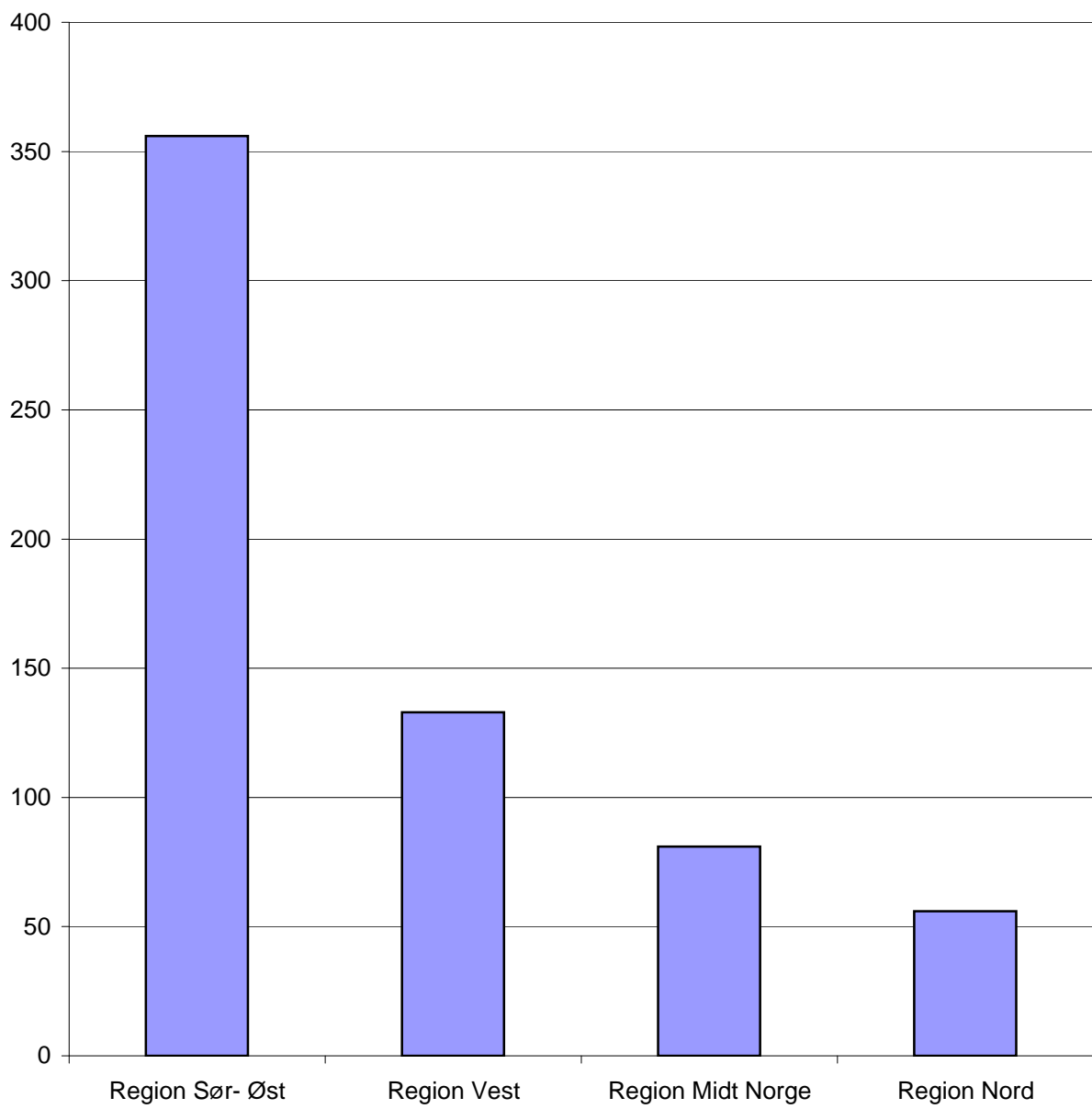
135

Hospital

Number

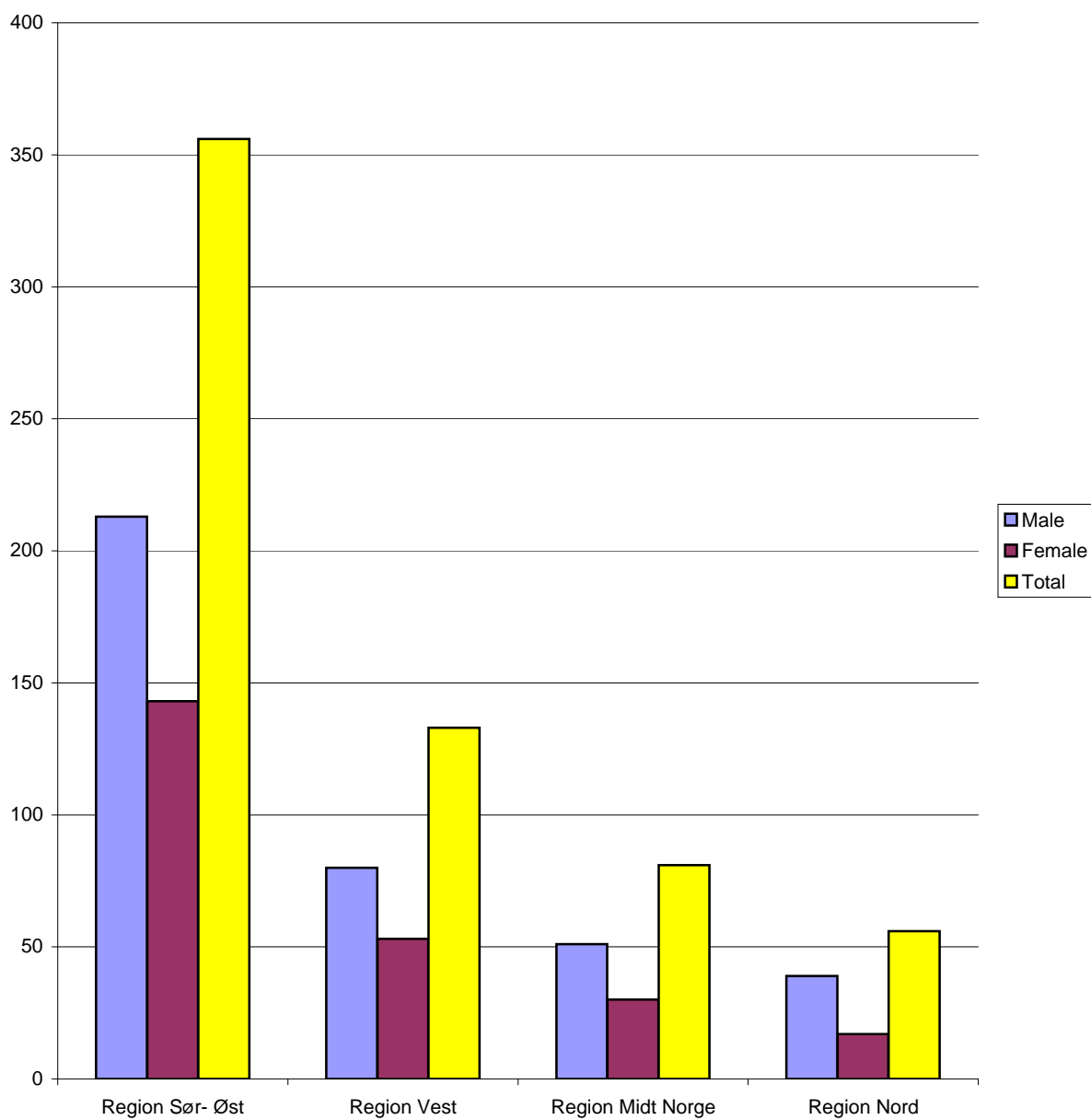
Akershus Universitetssykehus	7
Fylkessjukehuset i Haugesund	0
Førde Sentralsjukehus	3
Haukeland Universitetssykehus	1
Molde sjukehus	0
Nordlandssykehuset	1
Rikshospitalet	12
Ringerike sykehus	1
St.Olavs Hospital	9
Stavanger Universitetssjukehus	4
Stord sjukehus	0
Sykehuset Buskerud	12
Sykehuset Innlandet, Elverum	1
Sykehuset Innlandet, Lillehammer	3
Sykehuset Levanger	5
Sykehuset Telemark	1
Sykehuset Østfold, Fredrikstad	5
Sørlandet Sykehus, Arendal	2
Sørlandet Sykehus, Kristiansand	1
Ullevål Universtetssykehus	18
Universitetssykehuset Nord-Norge	42
Vestfold Sentralsykehus	4

Renal biopsies in different regions, 2008



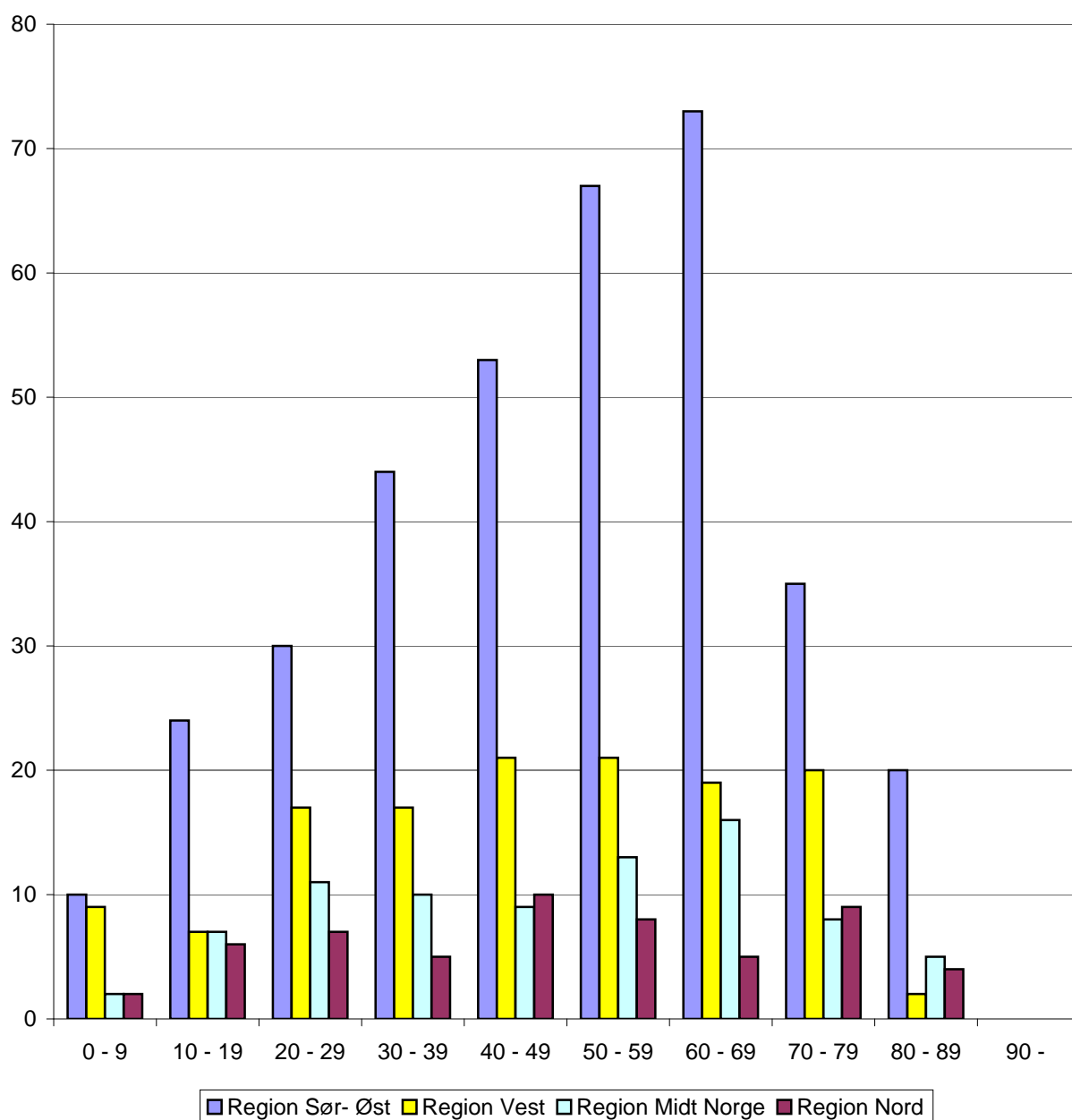
Region	Number
Region Sør- Øst	356
Region Vest	133
Region Midt Norge	81
Region Nord	56

Renal biopsies in different regions, male and female, 2008



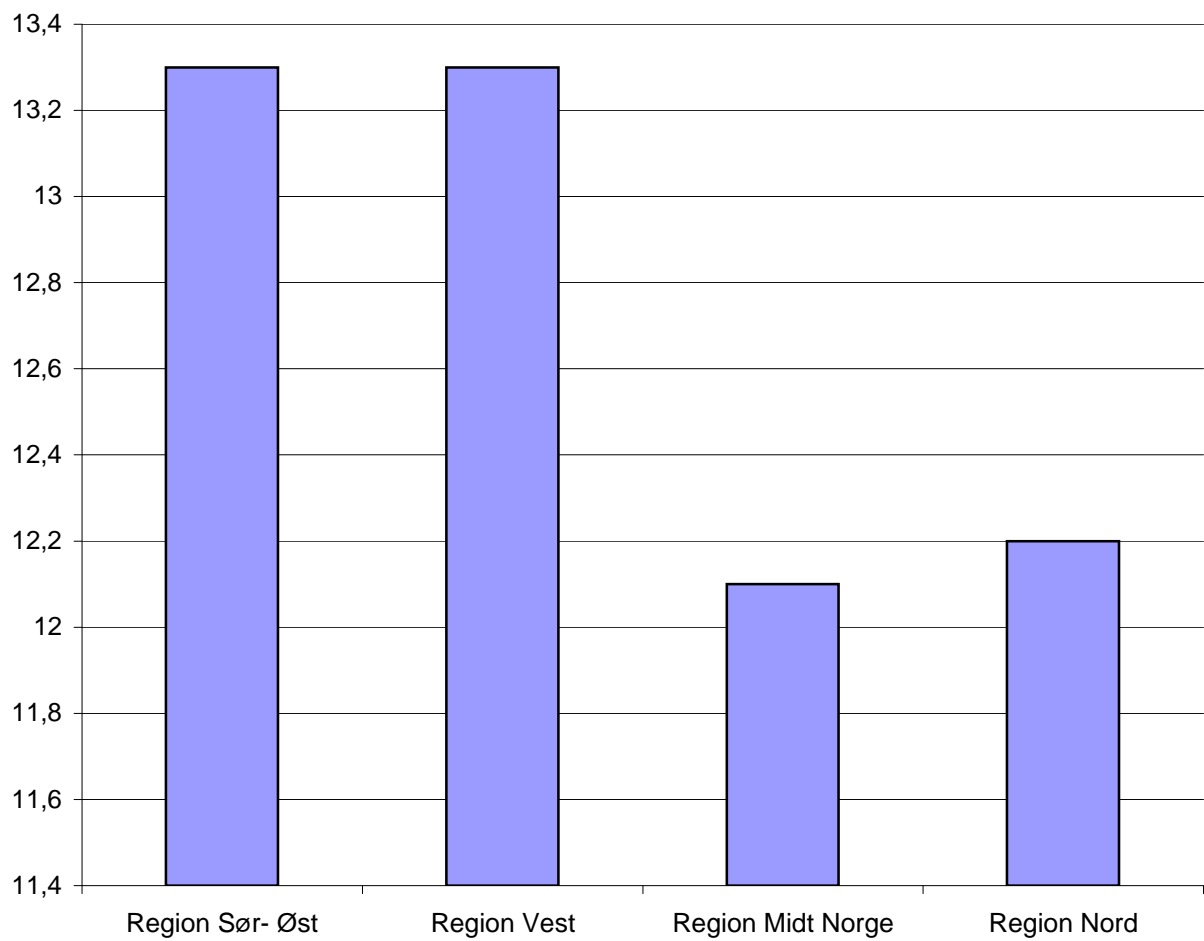
Region	Male	Female	Total
Region Sør- Øst	213	143	356
Region Vest	80	53	133
Region Midt Norge	51	30	81
Region Nord	39	17	56
Total	383	243	626

Patient age and regions, 2008



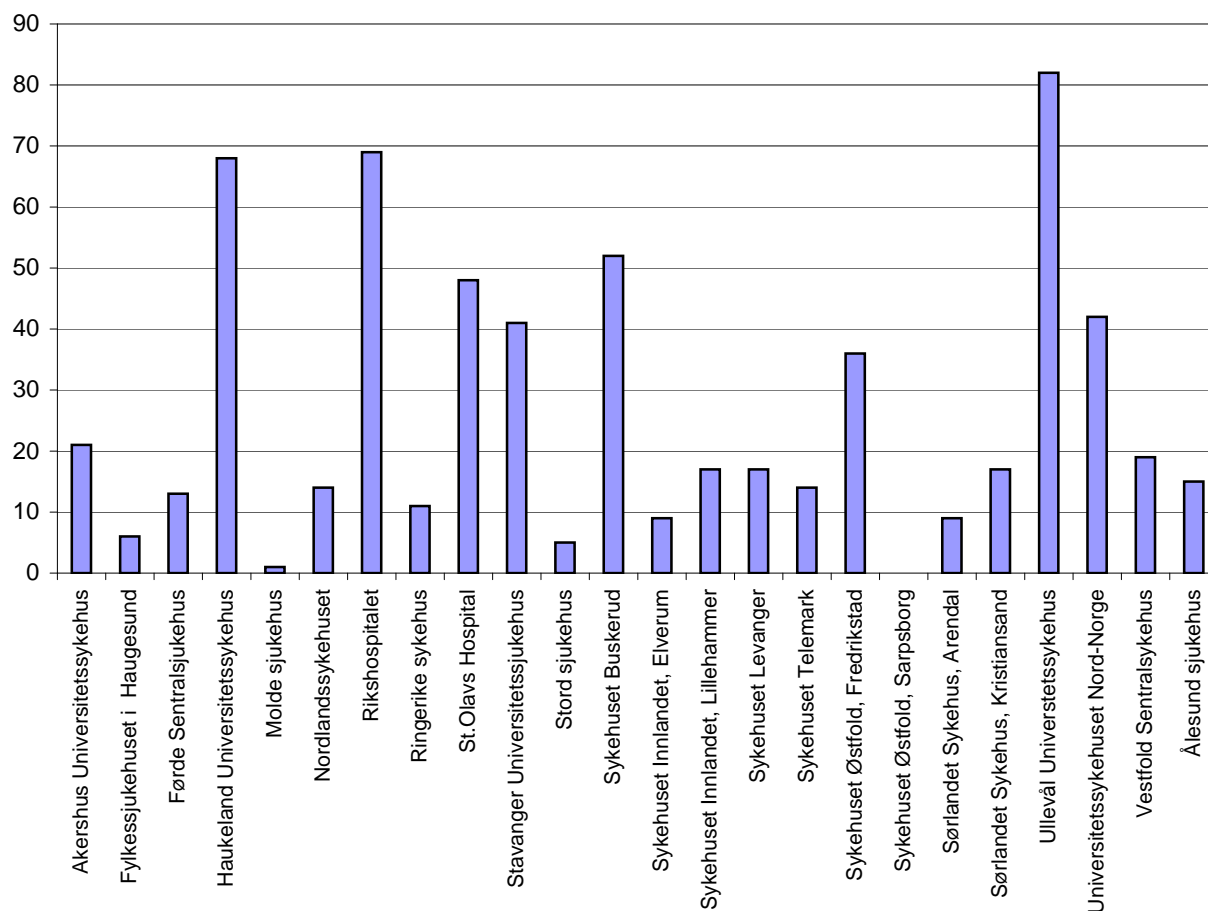
Age	Region Sør-Øst	Region Vest	Region Midt Norge	Region Nord
0 - 9	10	9	2	2
10 - 19	24	7	7	6
20 - 29	30	17	11	7
30 - 39	44	17	10	5
40 - 49	53	21	9	10
50 - 59	67	21	13	8
60 - 69	73	19	16	5
70 - 79	35	20	8	9
80 - 89	20	2	5	4
90 -	0	0	0	0

Number of renal biopsies /100000 inhabitants, 2008



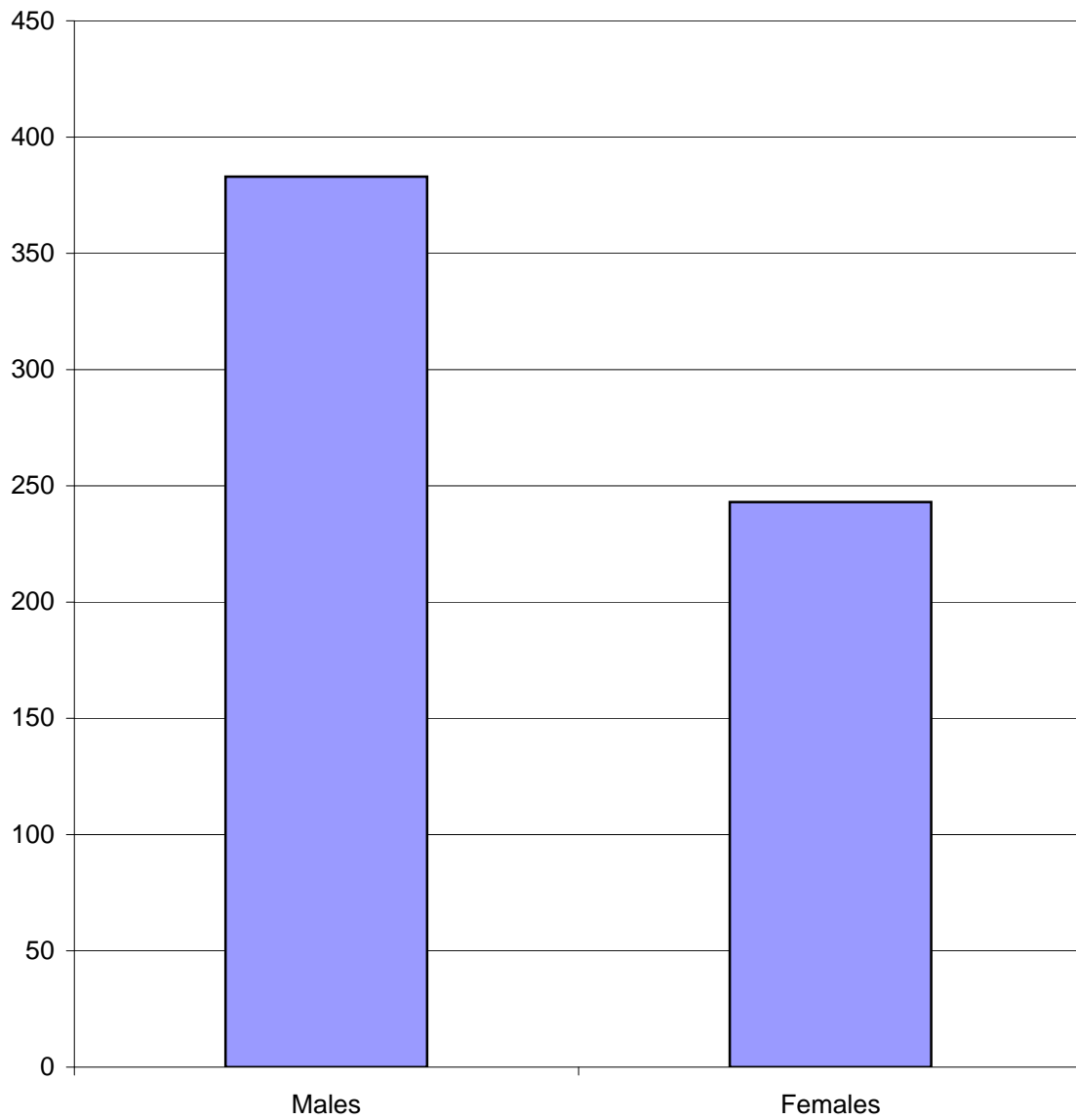
Region	Number
Region Sør- Øst	13,3
Region Vest	13,3
Region Midt Norge	12,1
Region Nord	12,2

Number of renal biopsies at different hospitals, 2008



Hospital	Number
Akershus Universitetssykehus	21
Fylkessjukehuset i Haugesund	6
Førde Sentralsjukehus	13
Haukeland Universitetssykehus	68
Molde sjukehus	1
Nordlandssykehuset	14
Rikshospitalet	69
Ringerike sykehus	11
St.Olavs Hospital	48
Stavanger Universitetssjukehus	41
Stord sjukehus	5
Sykehuset Buskerud	52
Sykehuset Innlandet, Elverum	9
Sykehuset Innlandet, Lillehammer	17
Sykehuset Levanger	17
Sykehuset Telemark	14
Sykehuset Østfold, Fredrikstad	36
Sykehuset Østfold, Sarpsborg	0
Sørlandet Sykehus, Arendal	9
Sørlandet Sykehus, Kristiansand	17
Ullevål Universtetssykehus	82
Universitetssykehuset Nord-Norge	42
Vestfold Sentralsykehus	19
Ålesund sjukehus	15
Total	626

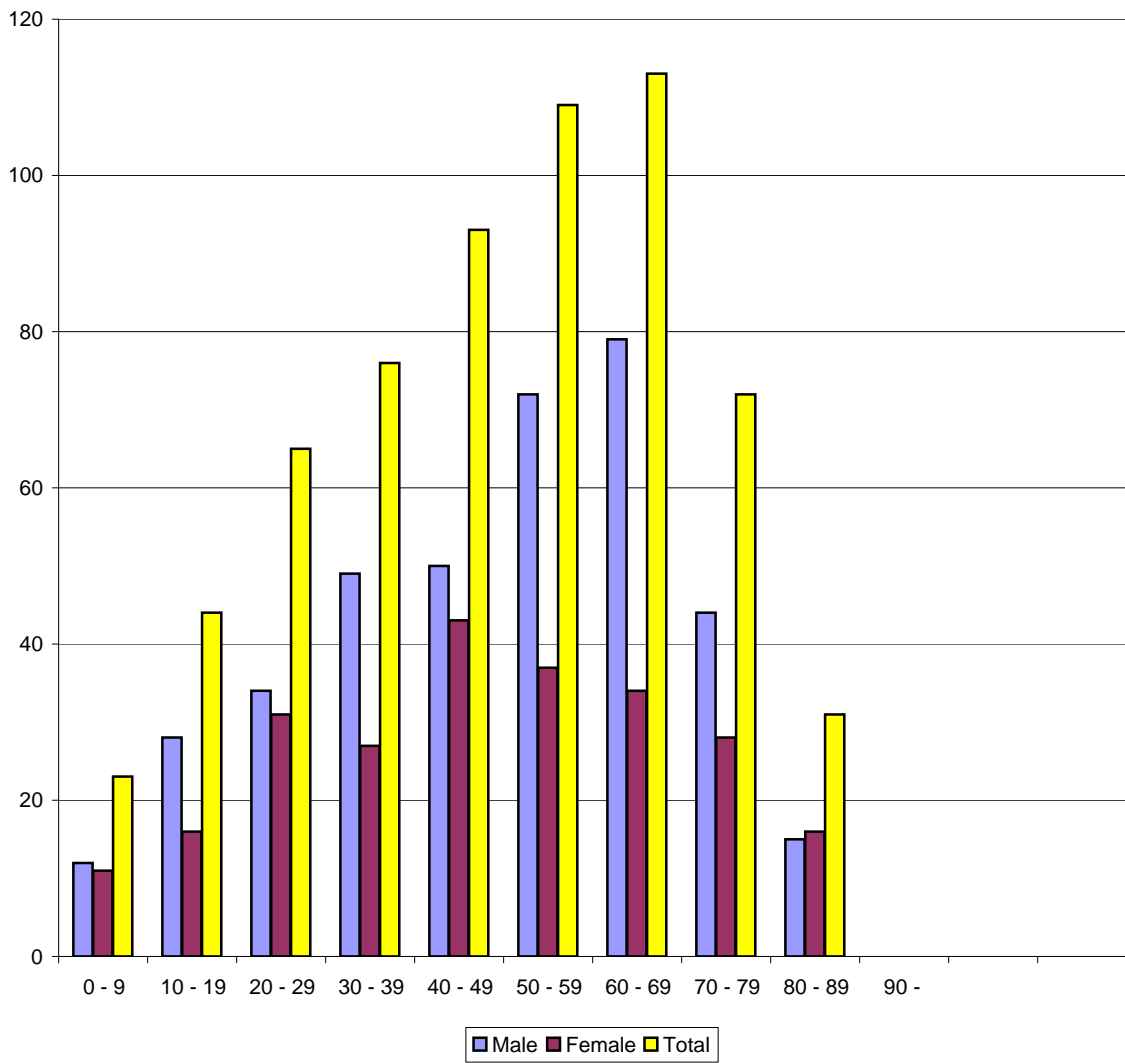
Total number of renal biopsies in males and females, 2008



n=626

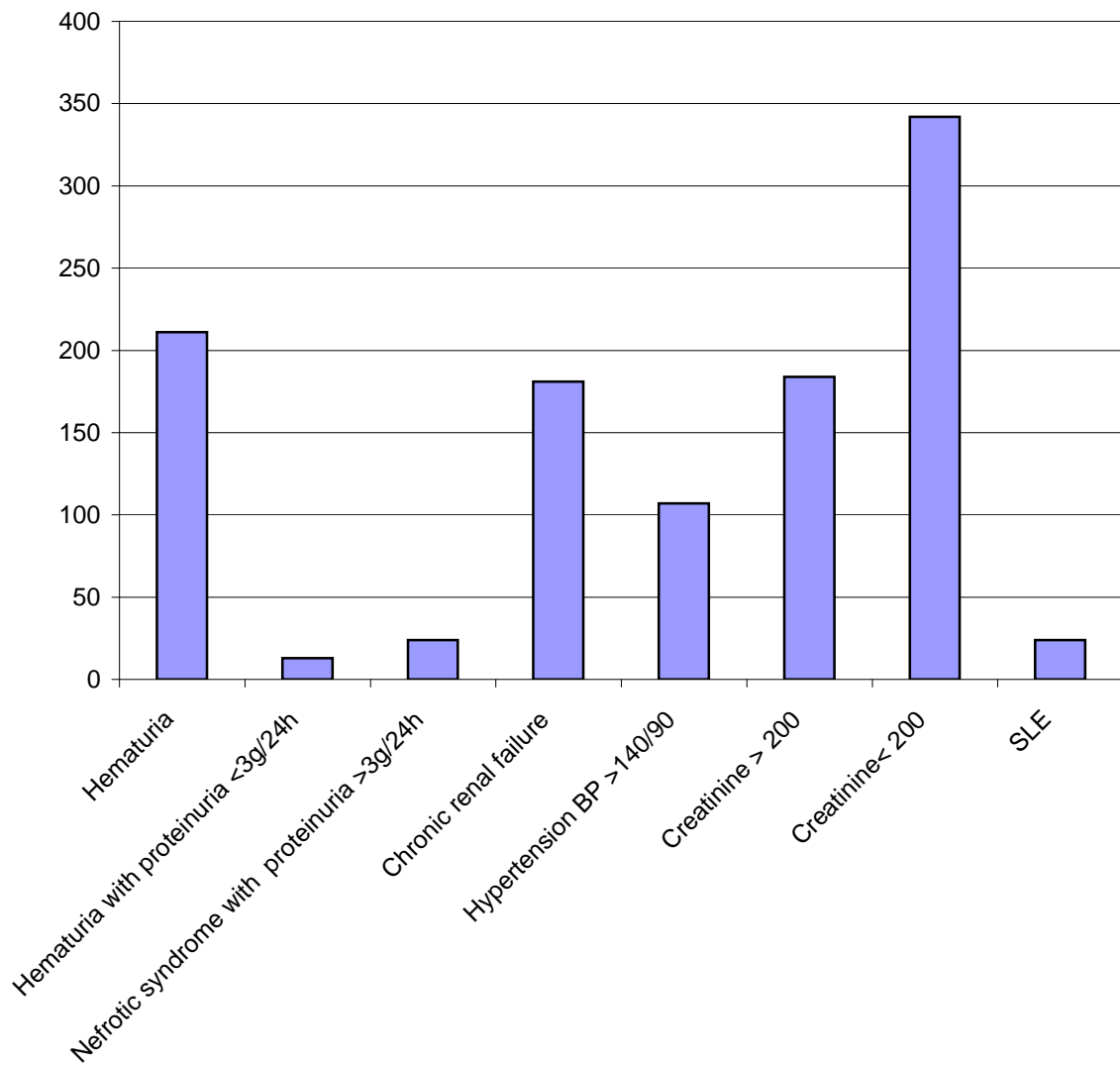
Males	383	(61.2%)
Females	243	(38.8%)

Age and gender, 2008



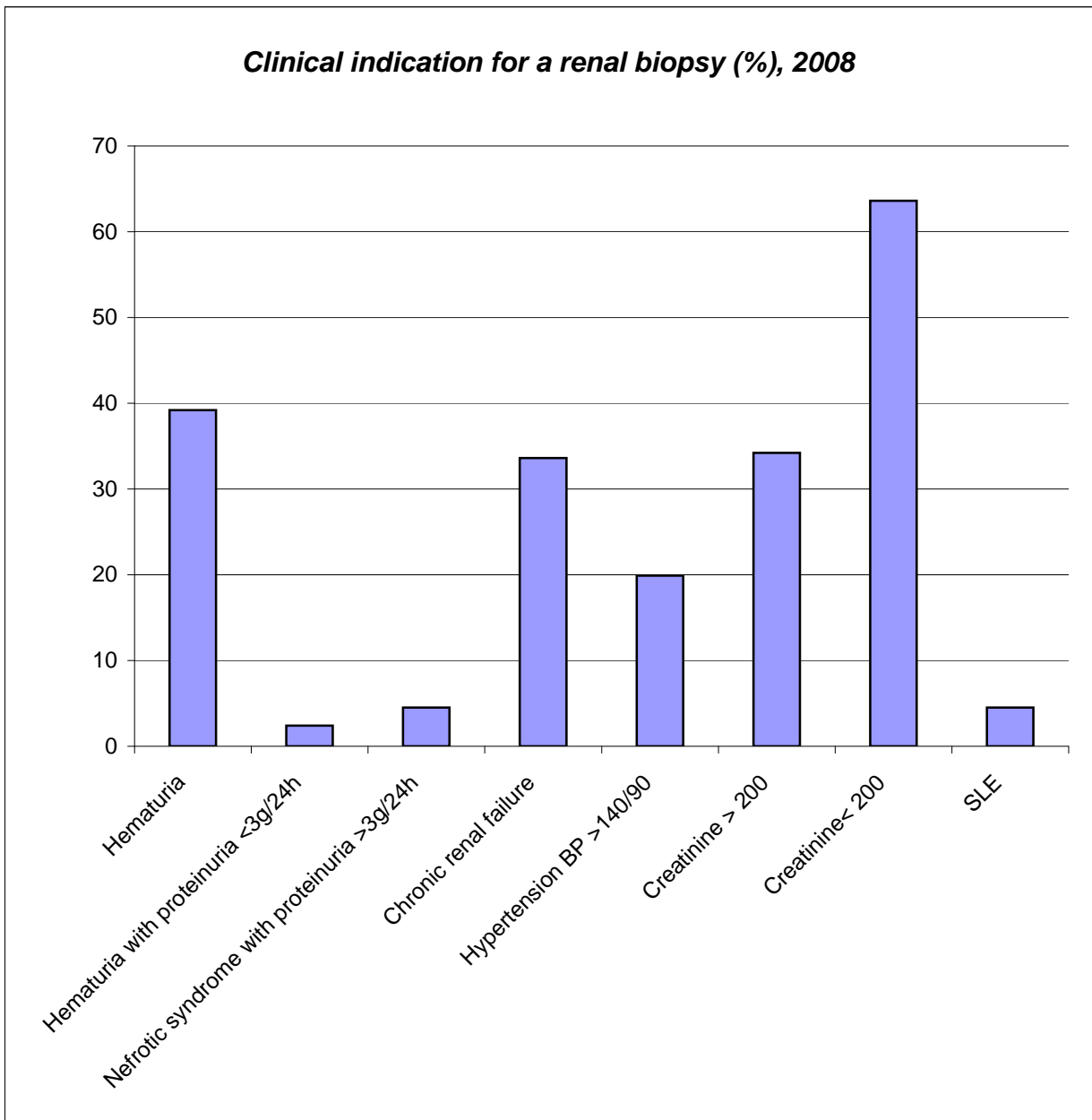
Age	Male	Female	Total
0 - 9	12	11	23
10 - 19	28	16	44
20 - 29	34	31	65
30 - 39	49	27	76
40 - 49	50	43	93
50 - 59	72	37	109
60 - 69	79	34	113
70 - 79	44	28	72
80 - 89	15	16	31
90 -	0	0	0

Clinical indications for a renal biopsy, 2008



Clinical indication	Number
Hematuria	211
Hematuria with proteinuria <3g/24h	13
Nefrotic syndrome with proteinuria >3g/24h	24
Chronic renal failure	181
Hypertension BP >140/90	107
Creatinine > 200	184
Creatinine < 200	342
SLE	24

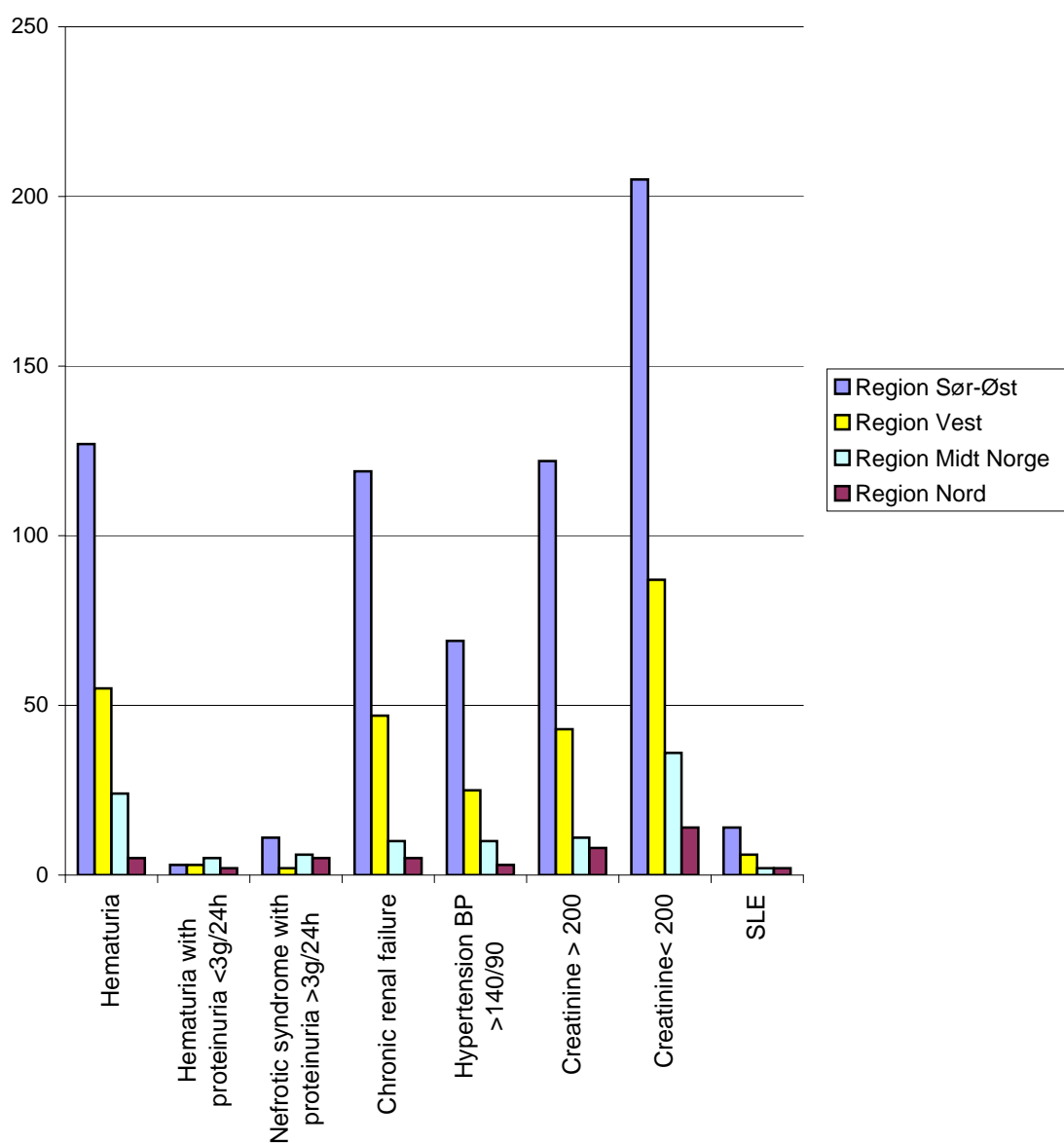
Clinical indication for a renal biopsy (%), 2008



n=538

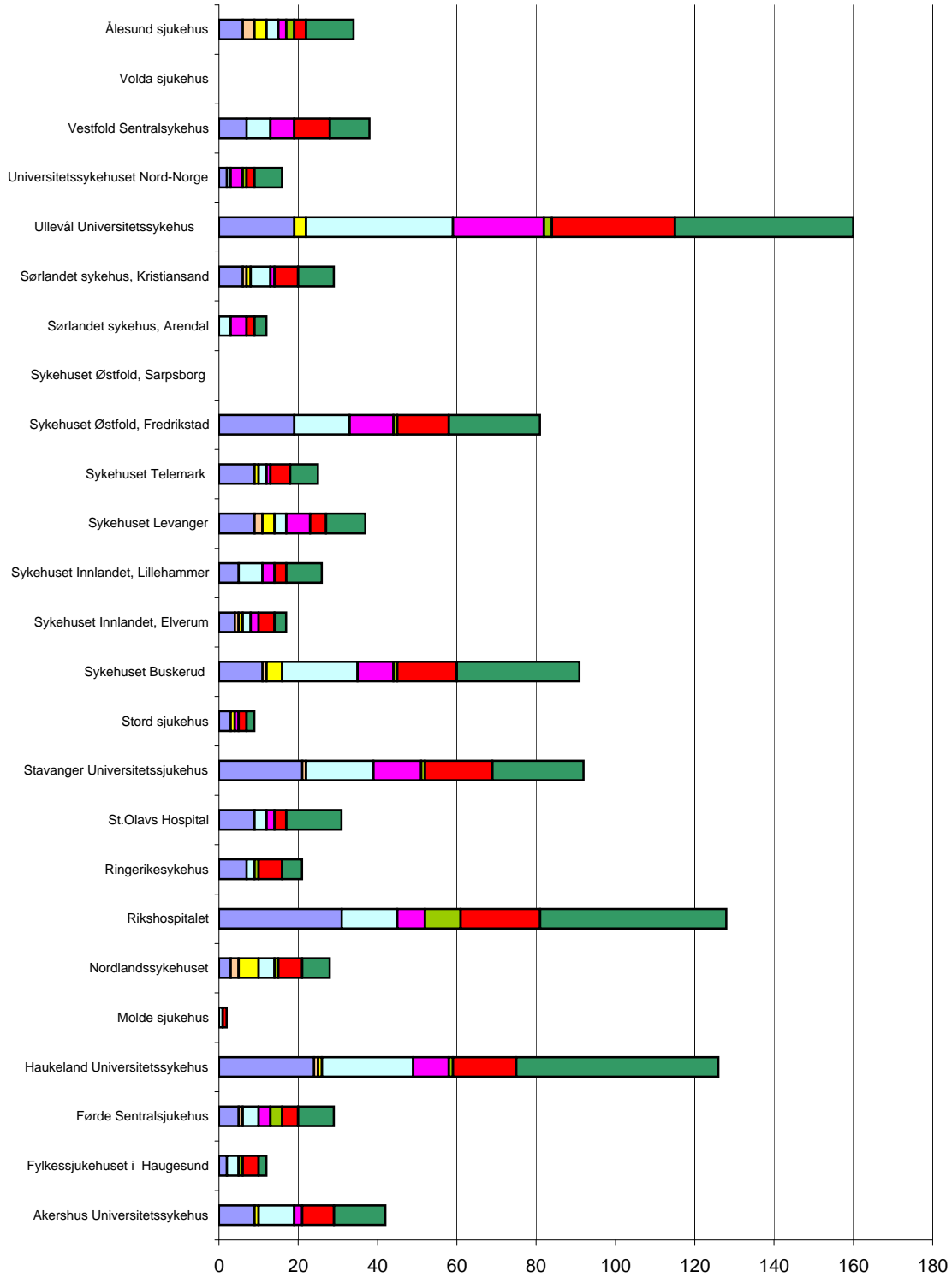
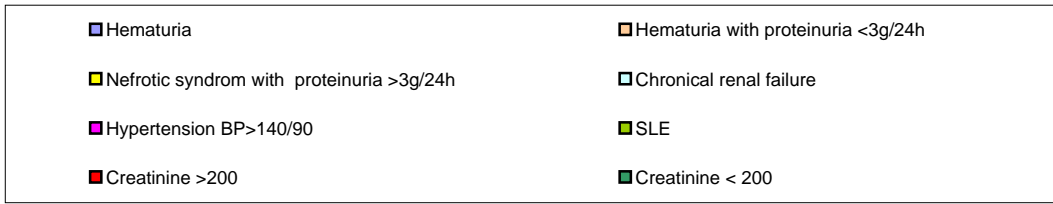
Clinical indication	%
Hematuria	39,2
Hematuria with proteinuria <3g/24h	2,4
Nefrotic syndrome with proteinuria >3g/24h	4,5
Chronic renal failure	33,6
Hypertension BP >140/90	19,9
Creatinine > 200	34,2
Creatinine < 200	63,6
SLE	4,5

Clinical indication in different regions, 2008



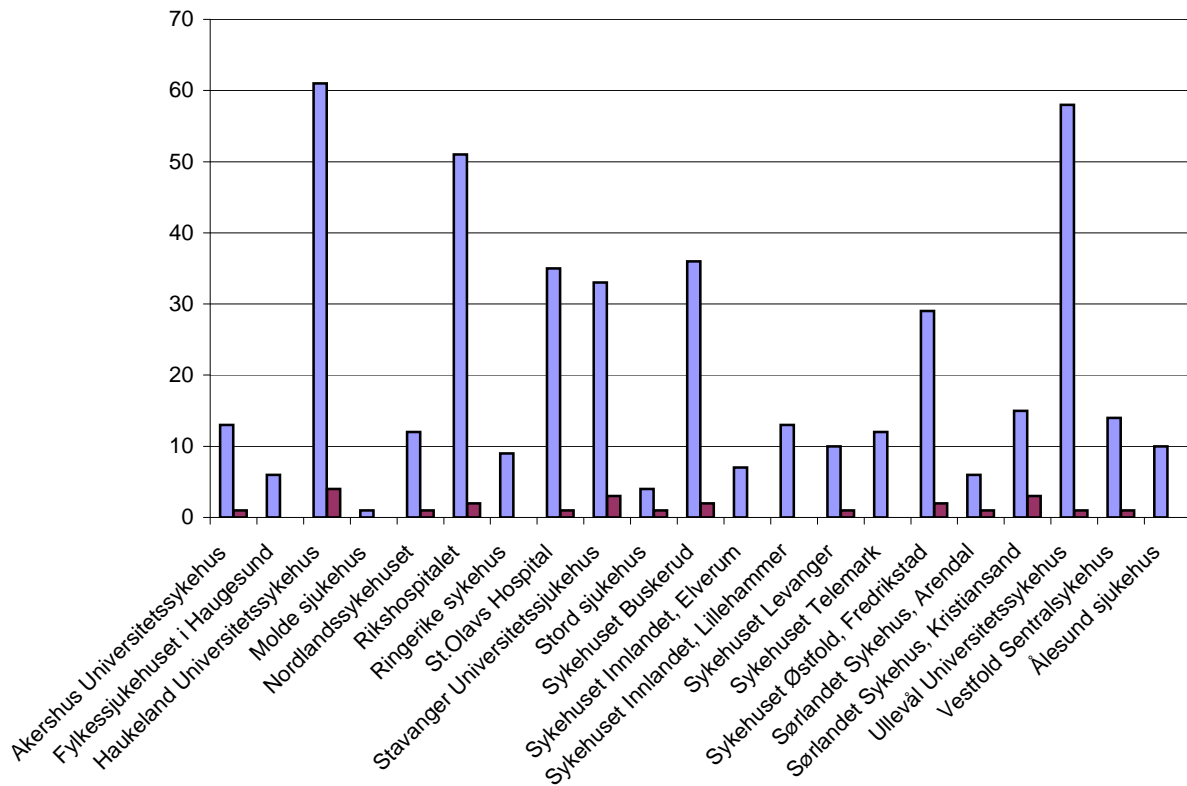
Clinical indication	Region Sør-Øst	Region Vest	Region Midt Norge	Region Nord
Hematuria	127	55	24	5
Hematuria with proteinuria <3g/24h	3	3	5	2
Nefrotic syndrome with proteinuria >3g/24h	11	2	6	5
Chronic renal failure	119	47	10	5
Hypertension BP >140/90	69	25	10	3
Creatinine > 200	122	43	11	8
Creatinine < 200	205	87	36	14
SLE	14	6	2	2

Clinical indications at different hospitals, 2008



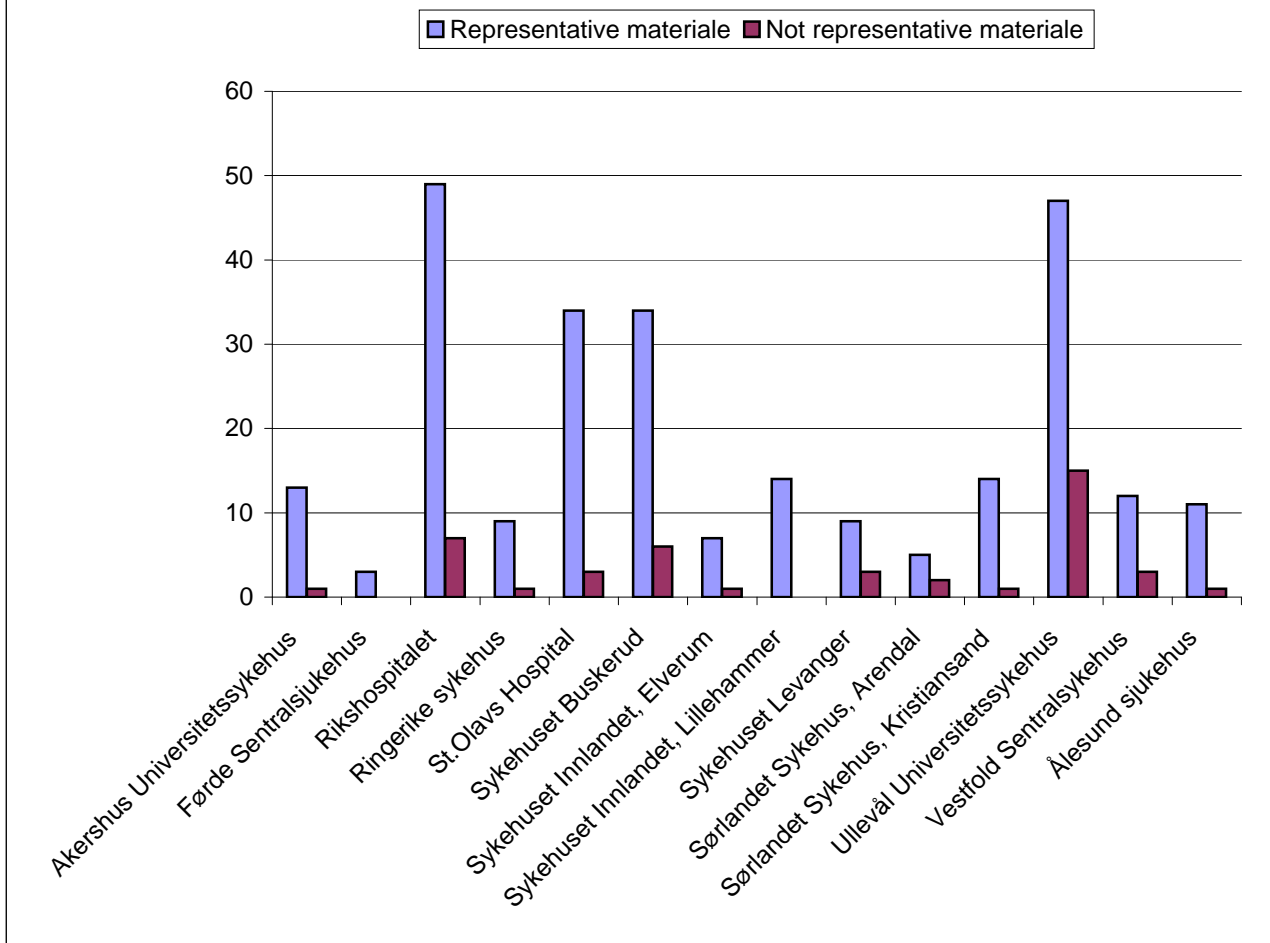
Renal morphology, local pathologist, 2008

■ Representative material ■ Not representative material



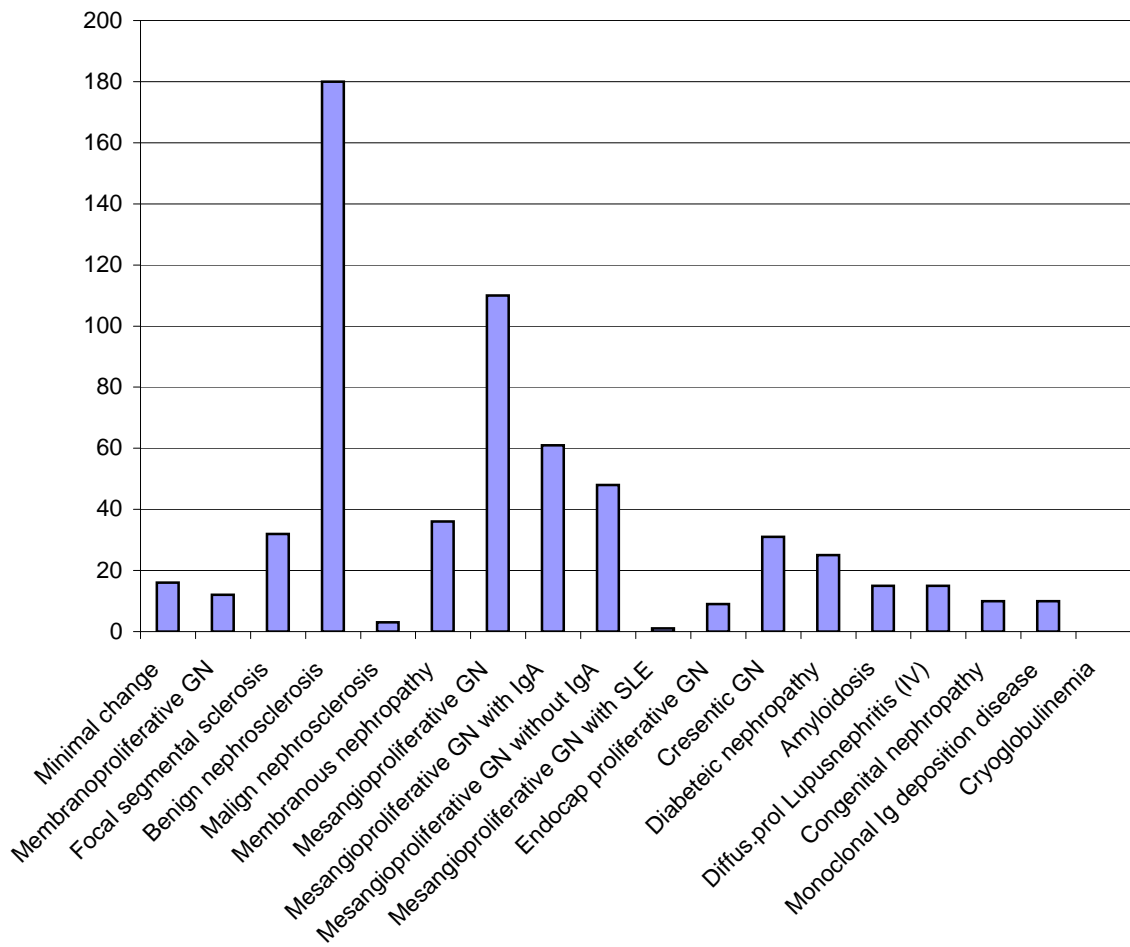
Hospital	Representative material	Not representative material
Akershus Universitetssykehus	13	1
Fylkessjukehuset i Haugesund	6	0
Haukeland Universitetssykehus	61	4
Molde sjukehus	1	0
Nordlandssykehuset	12	1
Rikshospitalet	51	2
Ringerike sykehus	9	0
St.Olavs Hospital	35	1
Stavanger Universitetssjukehus	33	3
Stord sjukehus	4	1
Sykehuset Buskerud	36	2
Sykehuset Innlandet, Elverum	7	0
Sykehuset Innlandet, Lillehammer	13	0
Sykehuset Levanger	10	1
Sykehuset Telemark	12	0
Sykehuset Østfold, Fredrikstad	29	2
Sørlandet Sykehus, Arendal	6	1
Sørlandet Sykehus, Kristiansand	15	3
Ullevål Universitetssykehus	58	1
Vestfold Sentralsykehus	14	1
Ålesund sjukehus	10	0
Total	435	24

Renal morphology, register patologist, 2008



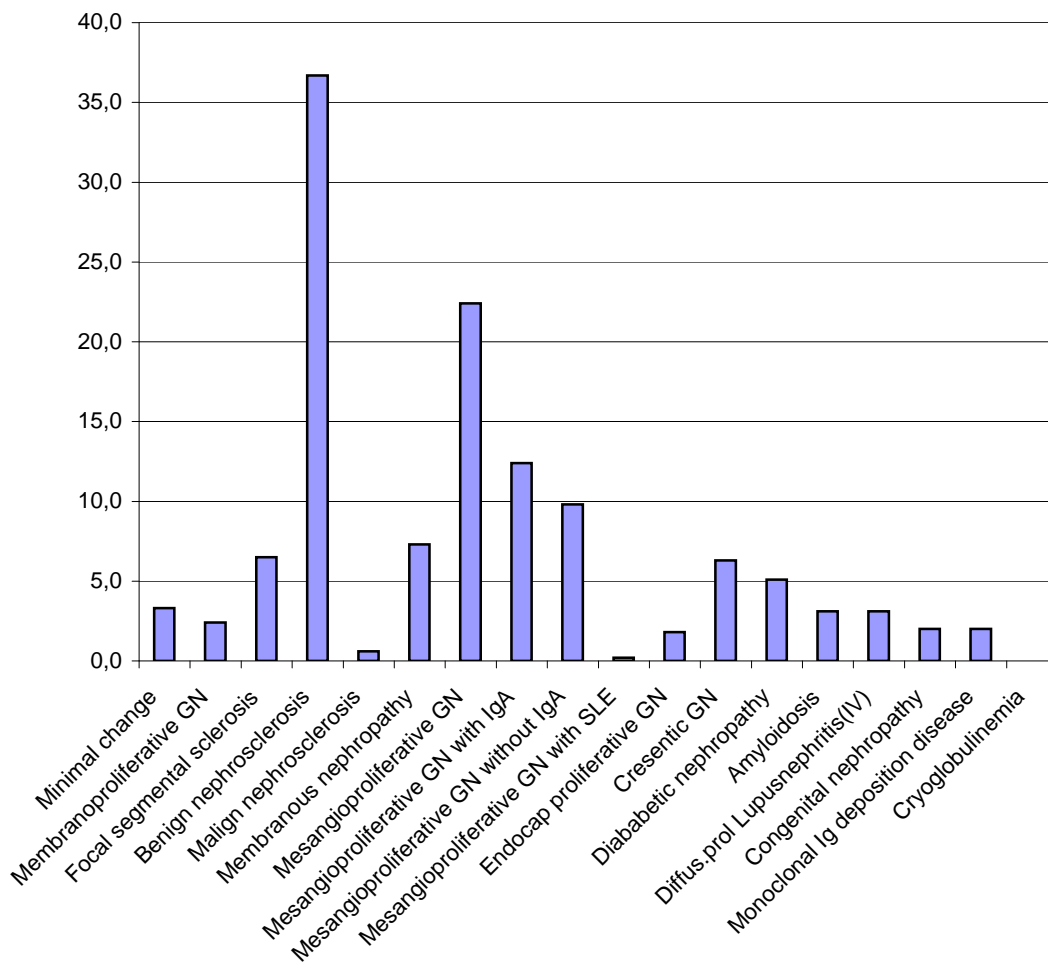
Hospital	Representative materiale	Not representative materiale
Akershus Universitetssykehus	13	1
Førde Sentralsjukehus	3	0
Rikshospitalet	49	7
Ringerike sykehus	9	1
St.Olavs Hospital	34	3
Sykehuset Buskerud	34	6
Sykehuset Innlandet, Elverum	7	1
Sykehuset Innlandet, Lillehammer	14	0
Sykehuset Levanger	9	3
Sørlandet Sykehus, Arendal	5	2
Sørlandet Sykehus, Kristiansand	14	1
Ullevål Universitetssykehus	47	15
Vestfold Sentralsykehus	12	3
Ålesund sjukehus	11	1
Total	261	44

Histopathology diagnosis, 2008



Diagnosis	Number
Minimal change	16
Membranoproliferative GN	12
Focal segmental sclerosis	32
Benign nephrosclerosis	180
Malign nephrosclerosis	3
Membranous nephropathy	36
Mesangioproliferative GN	110
Mesangioproliferative GN with IgA	61
Mesangioproliferative GN without IgA	48
Mesangioproliferative GN with SLE	1
Endocap proliferative GN	9
Crescentic GN	31
Diabetic nephropathy	25
Amyloidosis	15
Diffus.prol Lupusnephritis (IV)	15
Congenital nephropathy	10
Monoclonal Ig deposition disease	10
Cryoglobulinemia	0

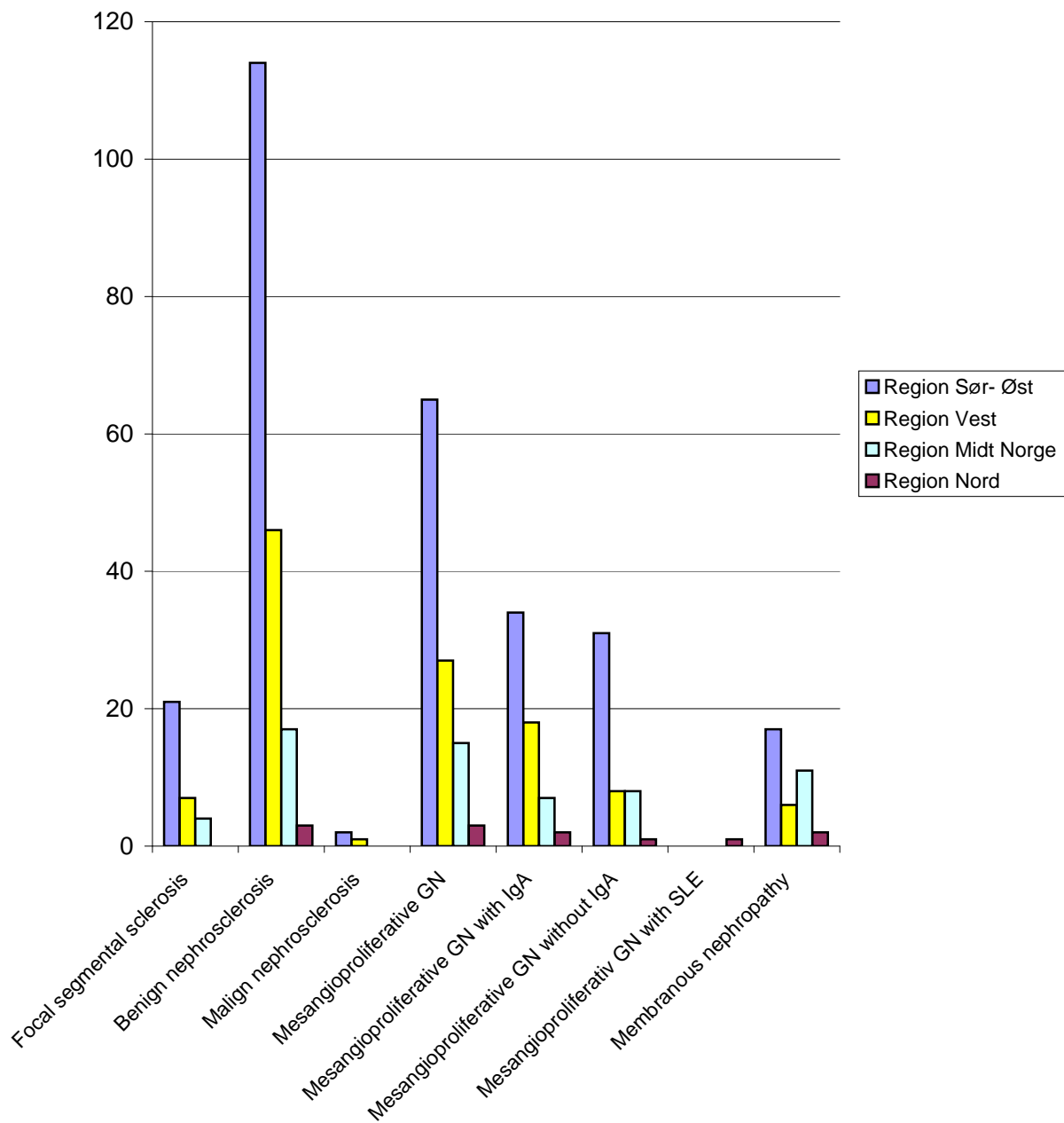
Histopathology diagnosis % of all, 2008



n=491

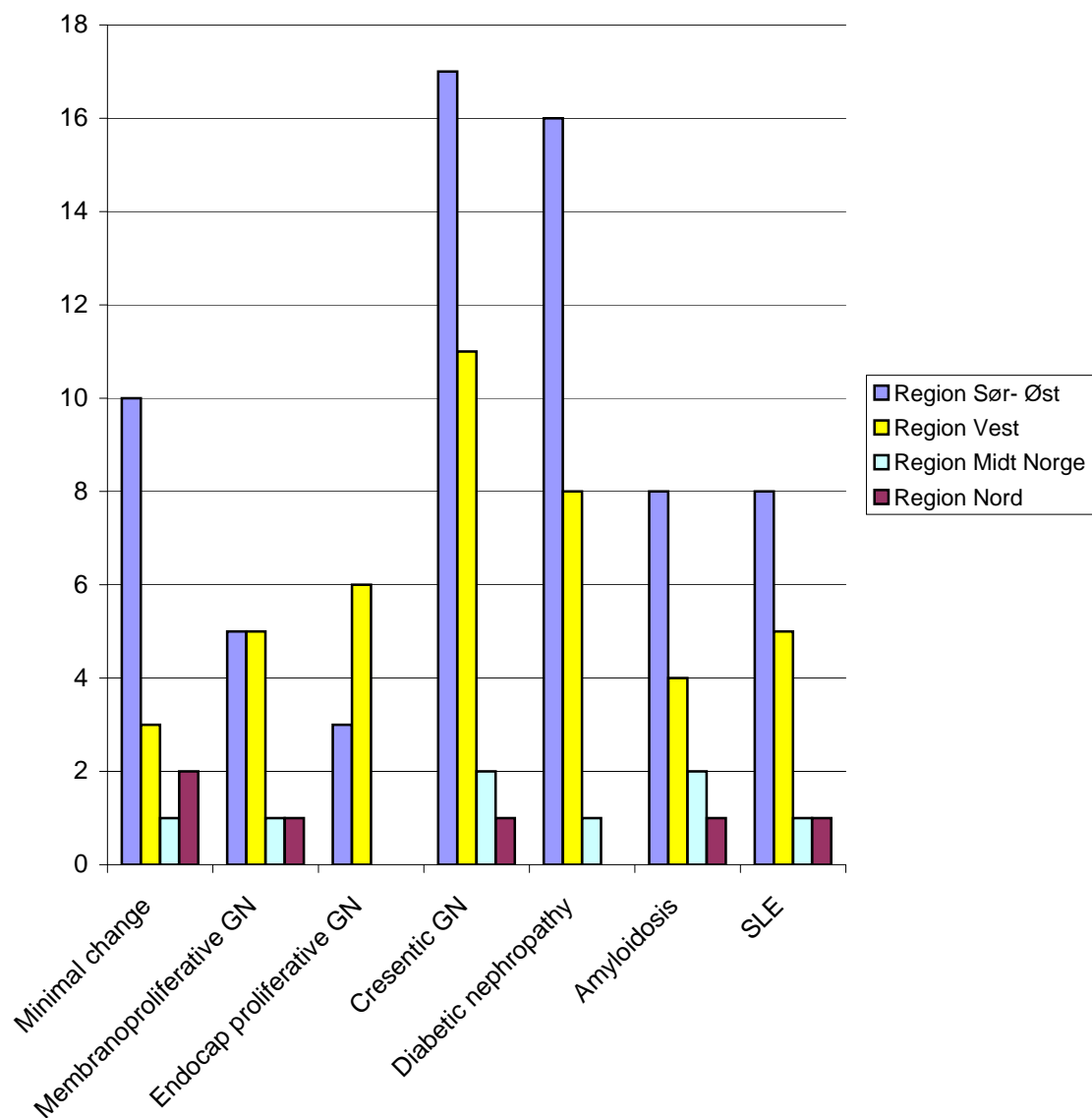
Diagnosis	%
Minimal change	3,3
Membranoproliferative GN	2,4
Focal segmental sclerosis	6,5
Benign nephrosclerosis	36,7
Malign nephrosclerosis	0,6
Membranous nephropathy	7,3
Mesangioproliferative GN	22,4
Mesangioproliferative GN with IgA	12,4
Mesangioproliferative GN without IgA	9,8
Mesangioproliferative GN with SLE	0,2
Endocap proliferative GN	1,8
Crescentic GN	6,3
Diabetic nephropathy	5,1
Amyloidosis	3,1
Diffus.prol Lupusnephritis(IV)	3,1
Congenital nephropathy	2,0
Monoclonal Ig deposition disease	2,0
Cryoglobulinemia	0,0

Renal pathology in different regions, 2008



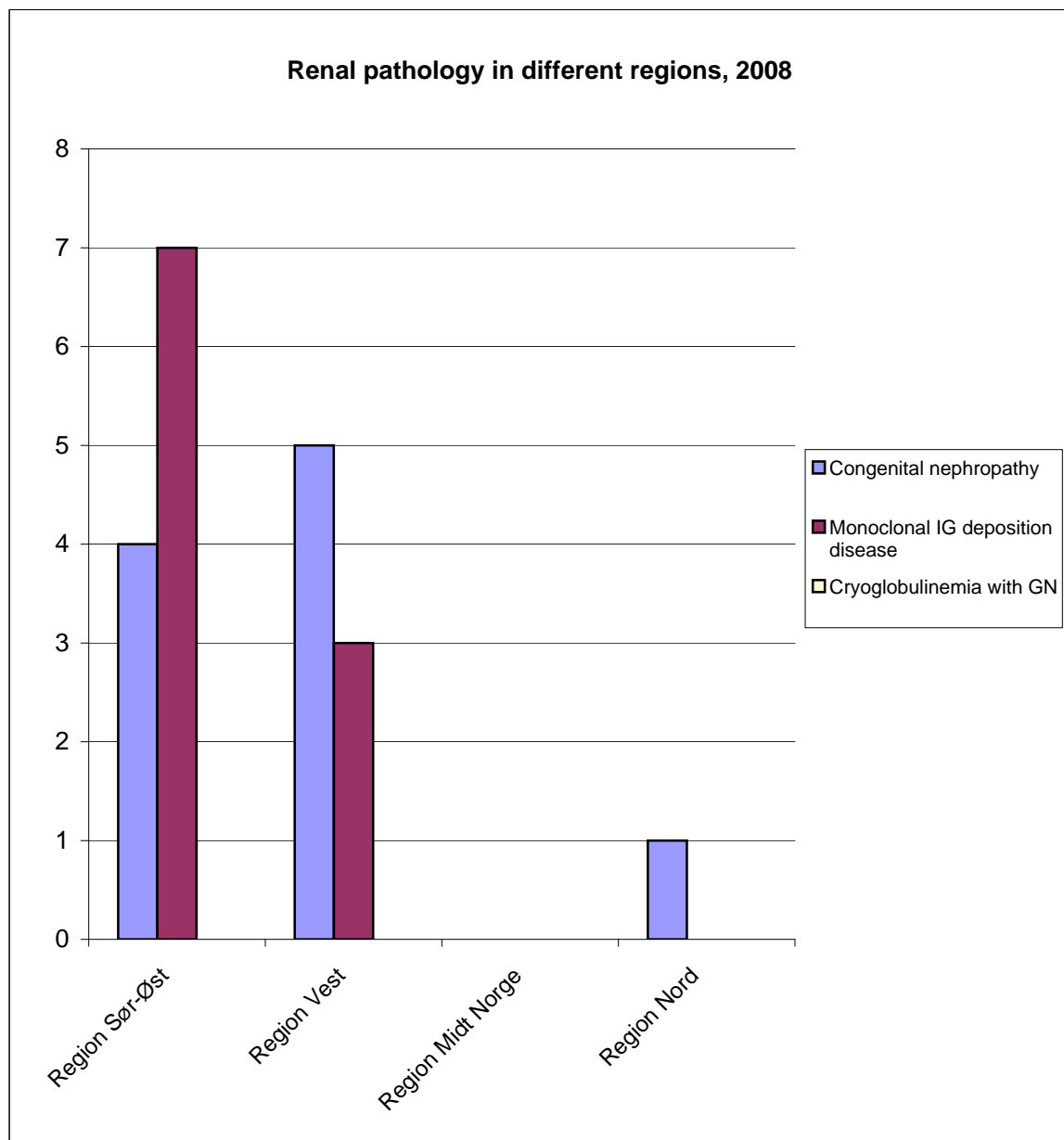
Diagnosis	Region Sør- Øst	Region Vest	Region Midt Norge	Region Nord
Focal segmental sclerosis	21	7	4	0
Benign nephrosclerosis	114	46	17	3
Malign nephrosclerosis	2	1	0	0
Mesangioproliferative GN	65	27	15	3
Mesangioproliferative GN with IgA	34	18	7	2
Mesangioproliferative GN without IgA	31	8	8	1
Mesangioproliferativ GN with SLE	0	0	0	1
Membranous nephropathy	17	6	11	2

Renal pathology in different regions, 2008



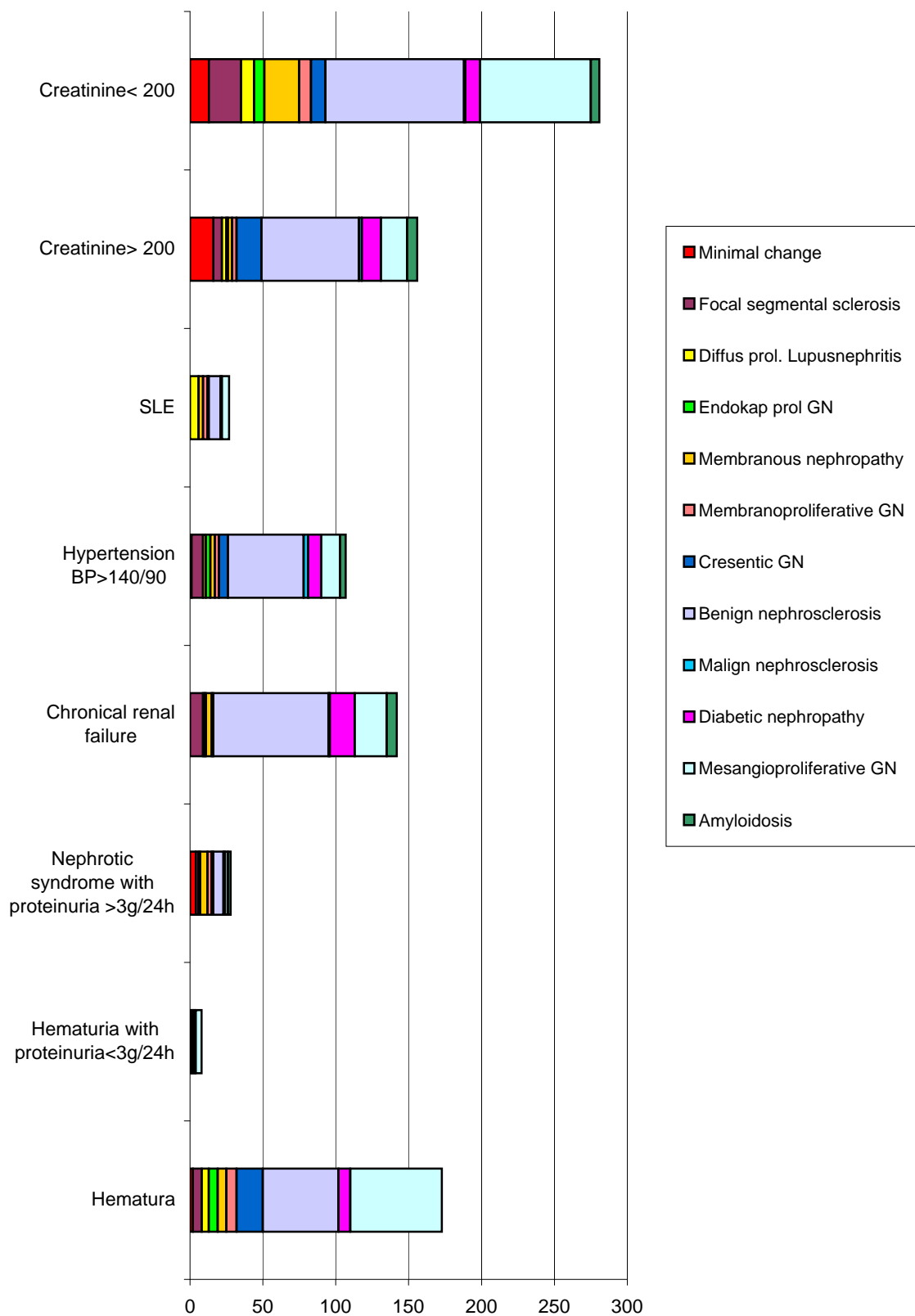
Diagnosis	Region Sør-Øst	Region Vest	Region Midt Norge	Region Nord
Minimal change	10	3	1	2
Membranoproliferative GN	5	5	1	1
Endocap proliferative GN	3	6	0	0
Cresentic GN	17	11	2	1
Diabetic nephropathy	16	8	1	0
Amyloidosis	8	4	2	1
SLE	8	5	1	1

Renal pathology in different regions, 2008

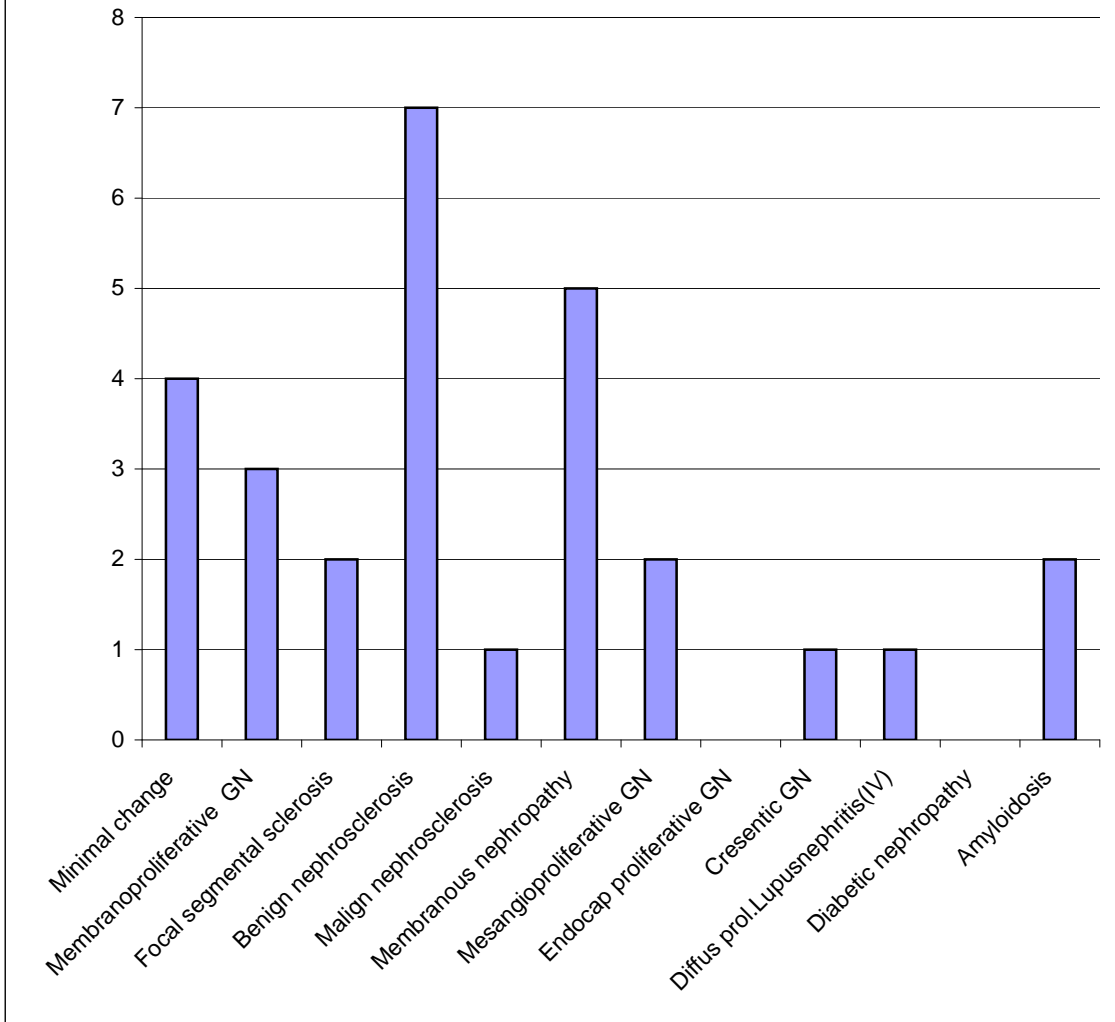


Diagnosis	Region Sør-Øst	Region Vest	Region Midt Norge	Region Nord
Congenital nephropathy	4	5	0	1
Monoclonal IG deposition disease	7	3	0	0
Cryoglobulinemia with GN	0	0	0	0

Clinical indication with morphology, 2008

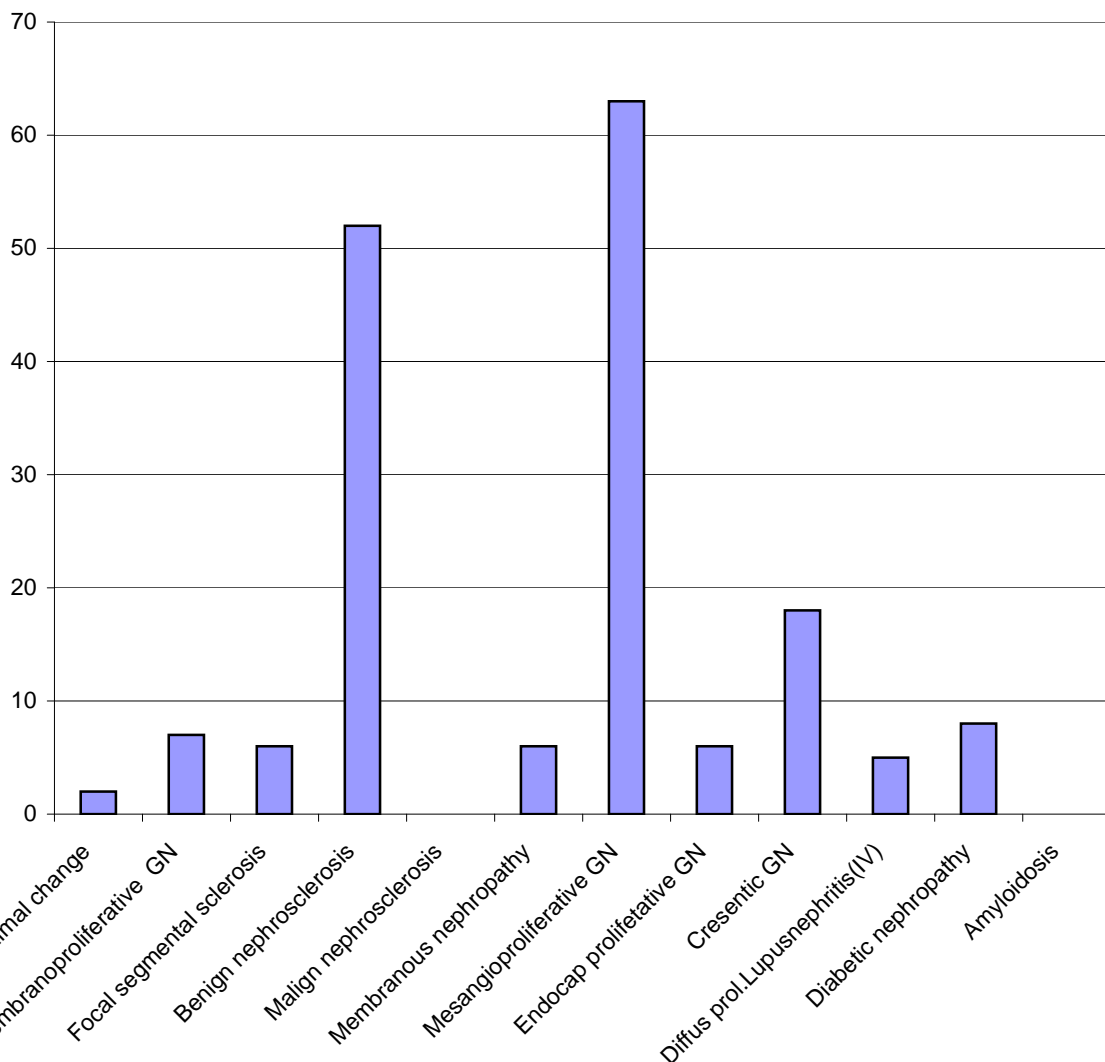


Morphology in patients with nephrotic syndrom and proteinuria>3g/24h, 2008



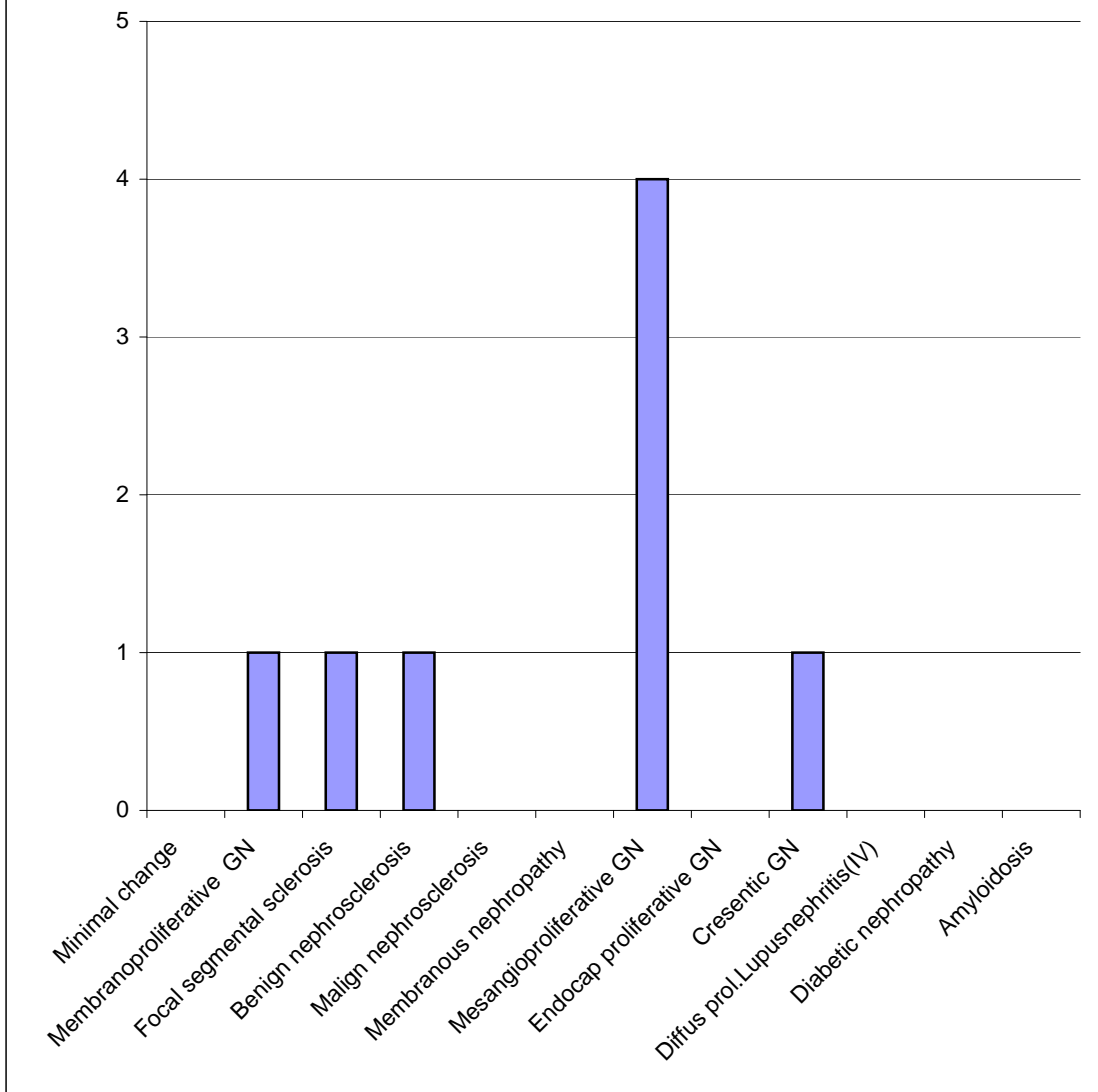
Morphology	Number
Minimal change	4
Membranoproliferative GN	3
Focal segmental sclerosis	2
Benign nephrosclerosis	7
Malign nephrosclerosis	1
Membranous nephropathy	5
Mesangioproliferative GN	2
Endocap proliferative GN	0
Cresentic GN	1
Diffus prol.Lupusnephritis(IV)	1
Diabetic nephropathy	0
Amyloidosis	2

Morphology in patients with Hematuria,2008



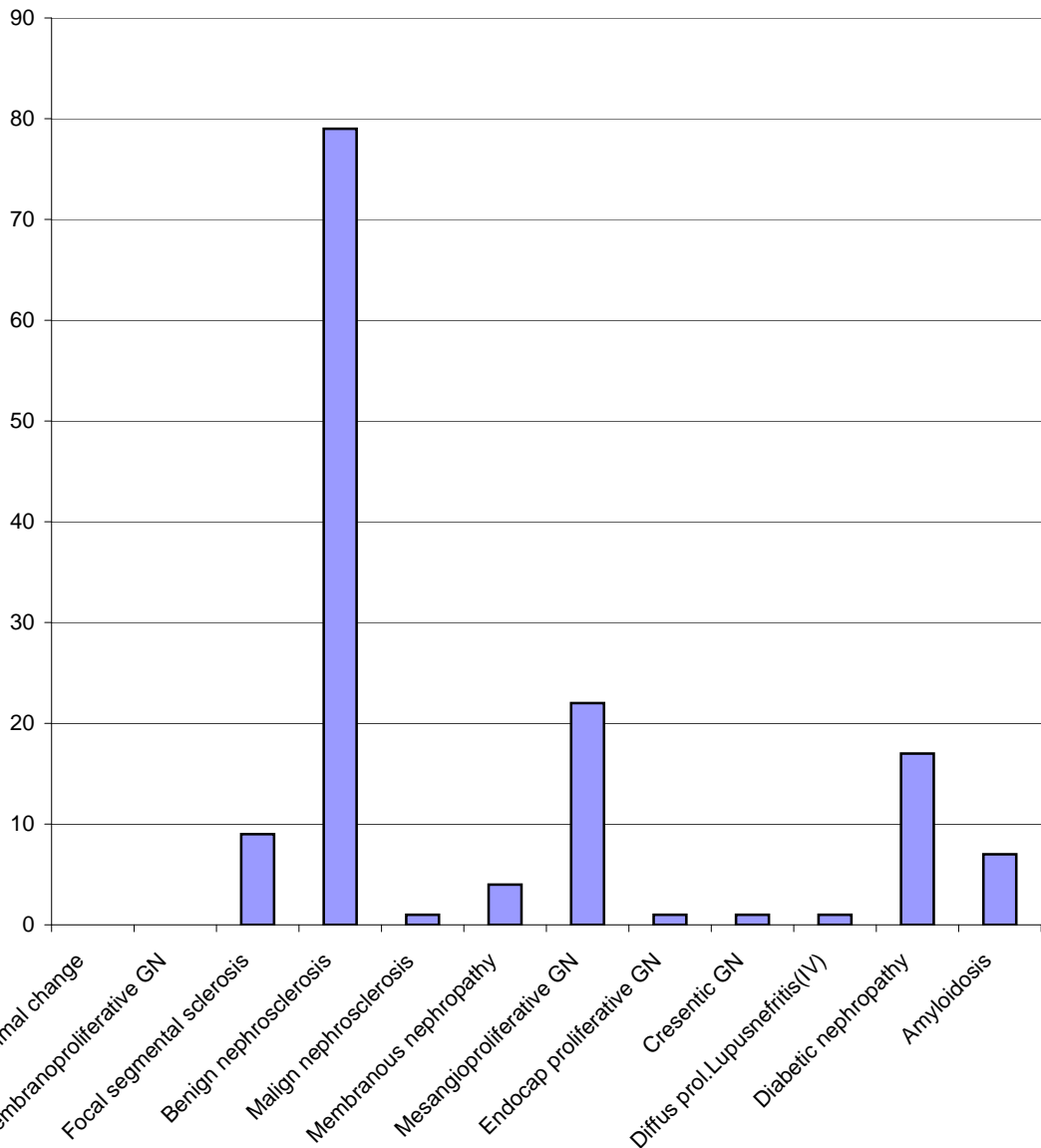
Morphology	Number
Minimal change	2
Membranoproliferative GN	7
Focal segmental sclerosis	6
Benign nephrosclerosis	52
Malign nephrosclerosis	0
Membranous nephropathy	6
Mesangioproliferative GN	63
Endocap proliferative GN	6
Cresentic GN	18
Diffus prol.Lupusnephritis(IV)	5
Diabetic nephropathy	8
Amyloidosis	0

**Morphology in patients with hematuria
and proteinuria <3g/24h, 2008**



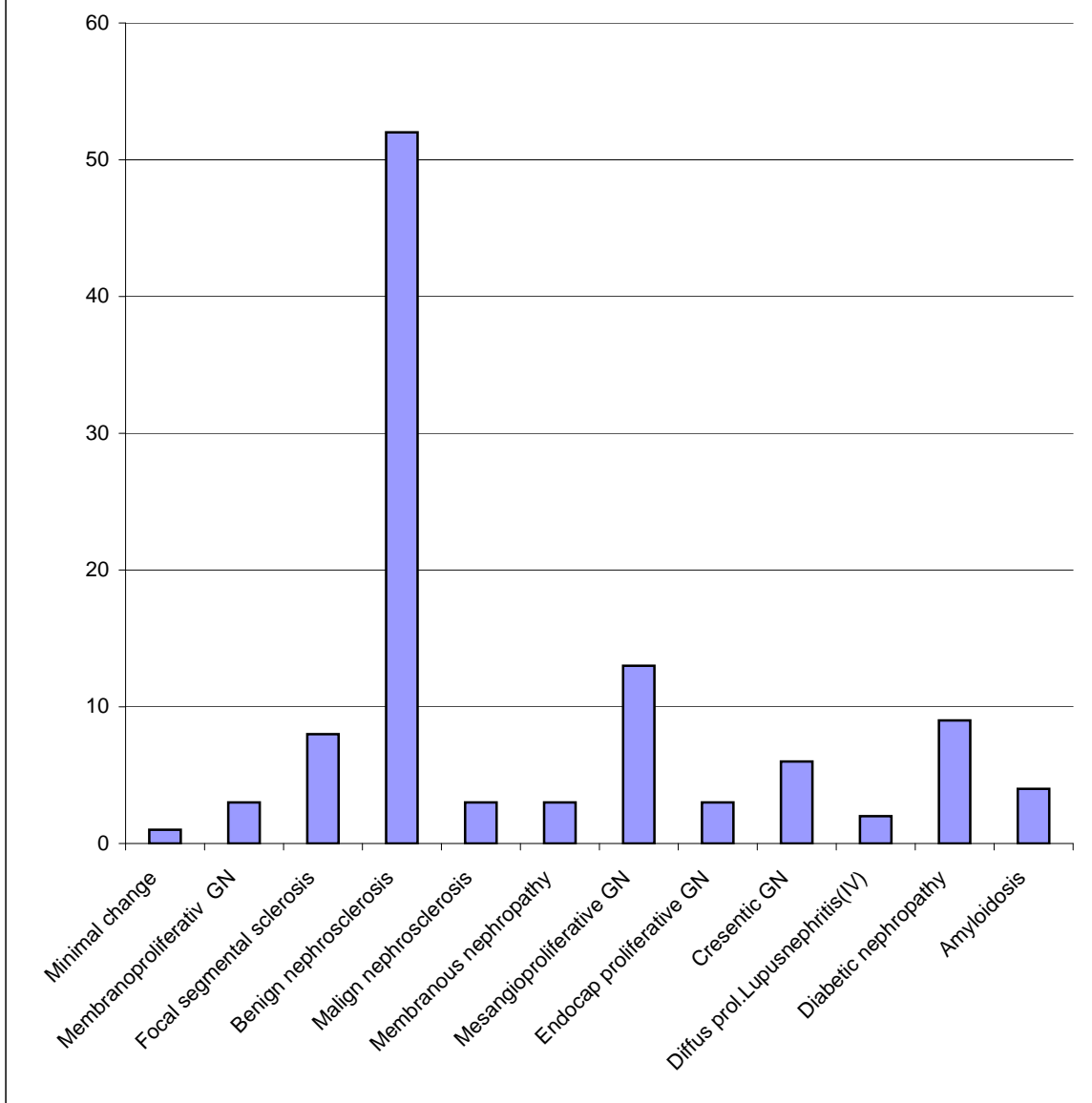
Morphology	Number
Minimal change	0
Membranoproliferative GN	1
Focal segmental sclerosis	1
Benign nephrosclerosis	1
Malign nephrosclerosis	0
Membranous nephropathy	0
Mesangioproliferative GN	4
Endocap proliferative GN	0
Cresentic GN	1
Diffus prol.Lupusnephritis(IV)	0
Diabetic nephropathy	0
Amyloidosis	0

Morphology in patients with chronic renal failure, 2008



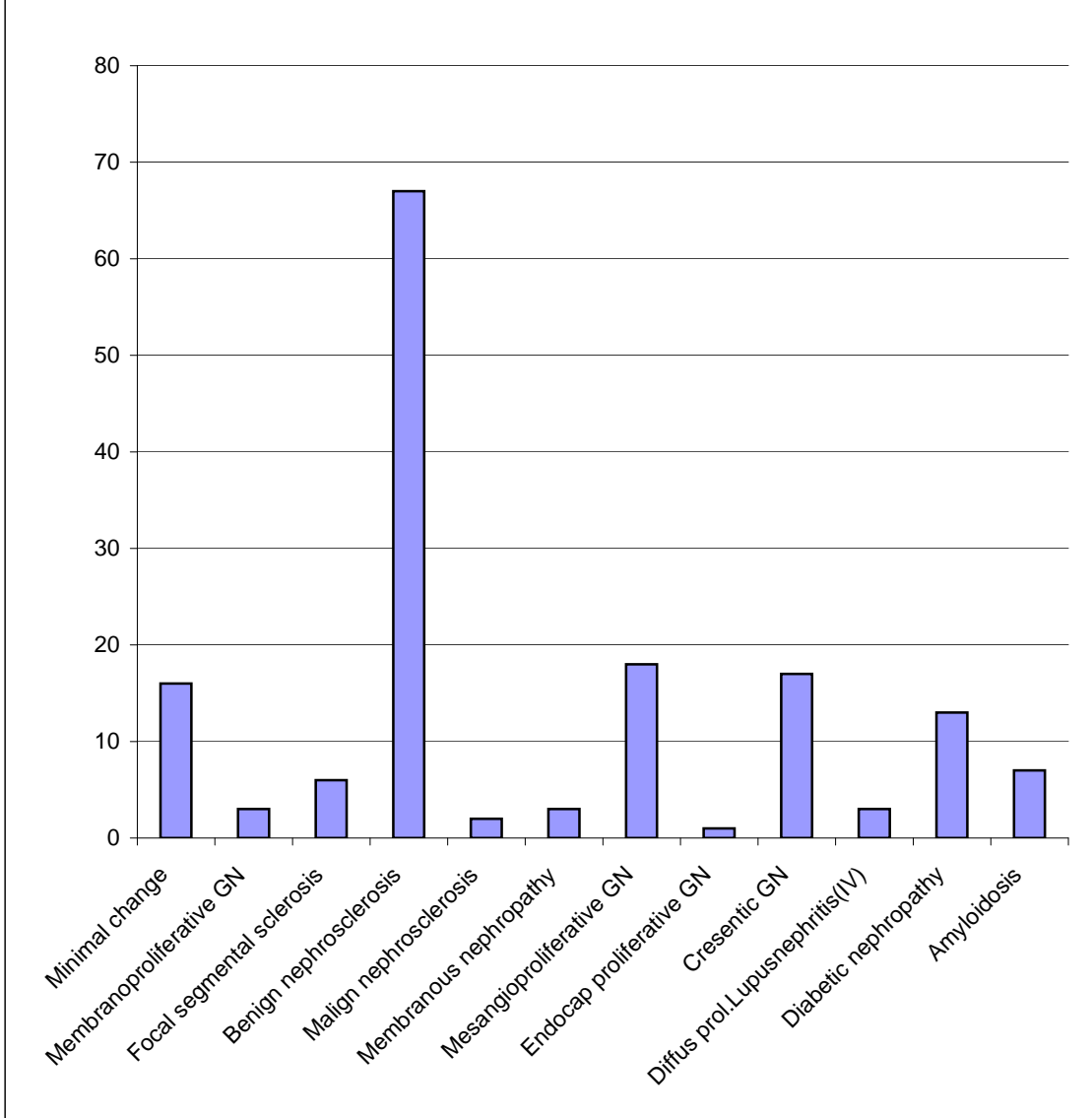
Morphology	Number
Minimal change	0
Membranoproliferative GN	0
Focal segmental sclerosis	9
Benign nephrosclerosis	79
Malign nephrosclerosis	1
Membranous nephropathy	4
Mesangioproliferative GN	22
Endocap proliferative GN	1
Crescentic GN	1
Diffus prol.Lupusnephritis(IV)	1
Diabetic nephropathy	17
Amyloidosis	7

Morphology in patients with hypertension BP >140/90, 2008



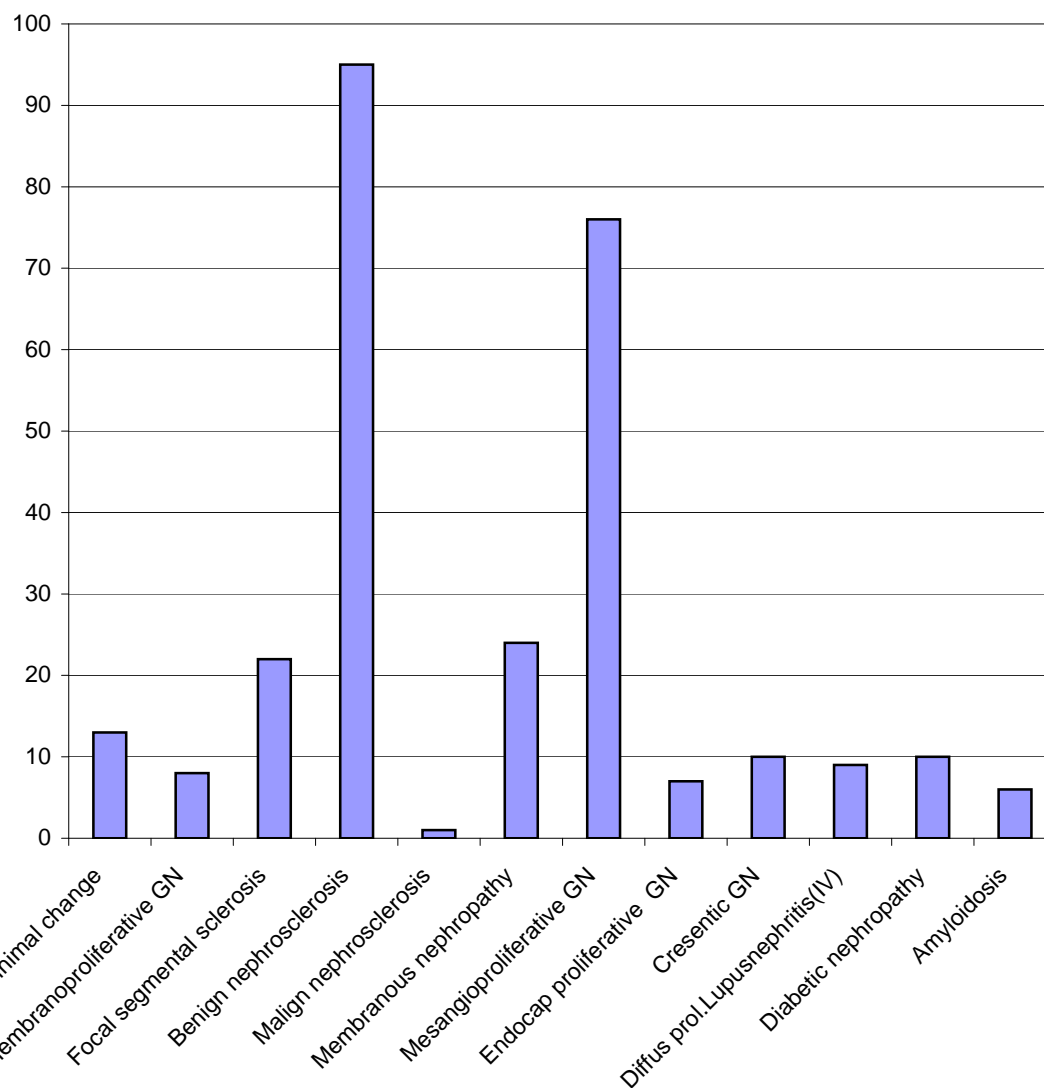
Morphology	Number
Minimal change	1
Membranoproliferativ GN	3
Focal segmental sclerosis	8
Benign nephrosclerosis	52
Malign nephrosclerosis	3
Membranous nephropathy	3
Mesangioproliferative GN	13
Endocap proliferative GN	3
Cresentic GN	6
Diffus prol.Lupusnephritis(IV)	2
Diabetic nephropathy	9
Amyloidosis	4

Morphology in patients with creatinine >200, 2008



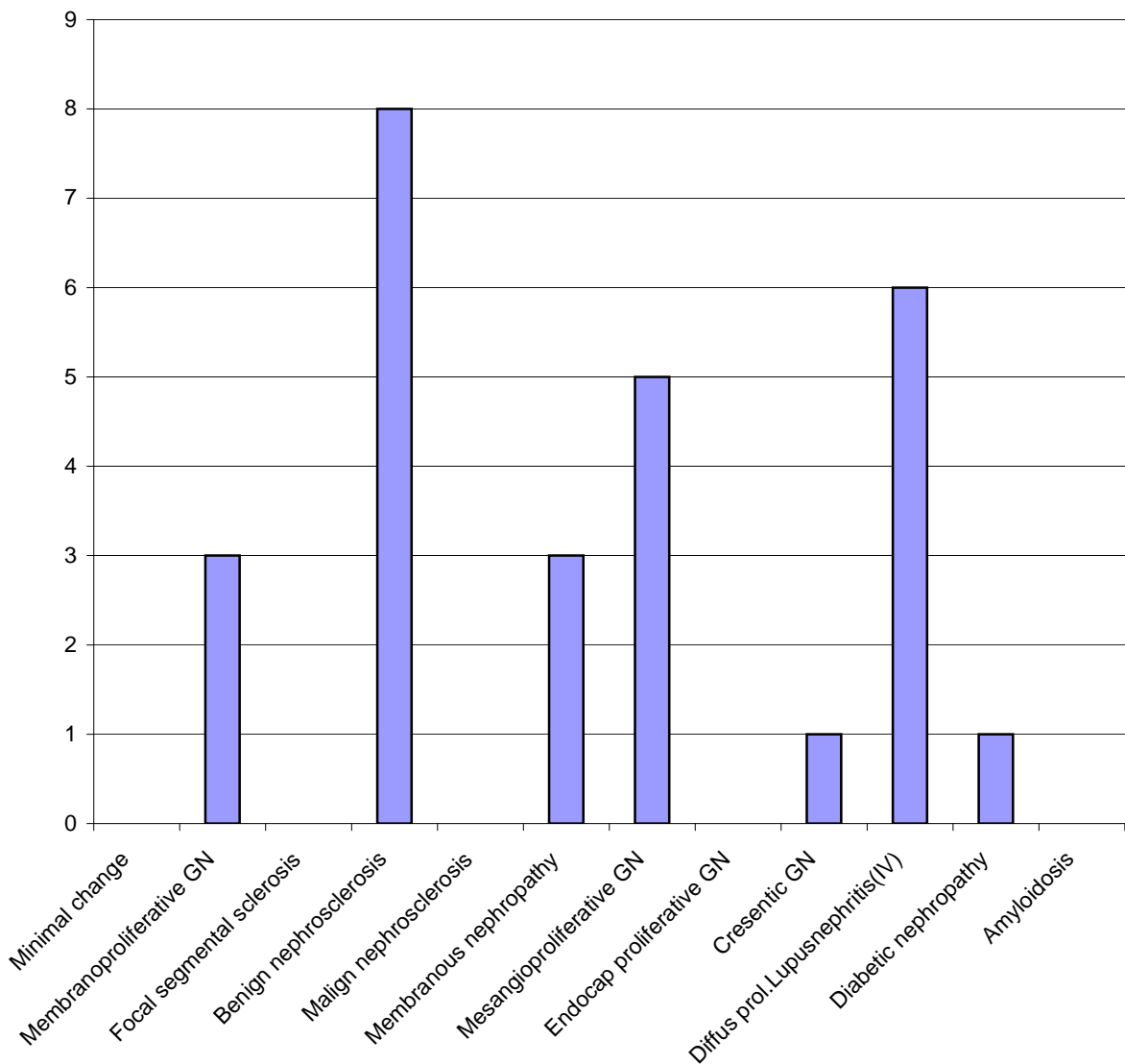
Morphology	Number
Minimal change	16
Membranoproliferative GN	3
Focal segmental sclerosis	6
Benign nephrosclerosis	67
Malign nephrosclerosis	2
Membranous nephropathy	3
Mesangioproliferative GN	18
Endocap proliferative GN	1
Crescentic GN	17
Diffus prol.Lupusnephritis(IV)	3
Diabetic nephropathy	13
Amyloidosis	7

Morphology in patients with creatinine <200, 2008



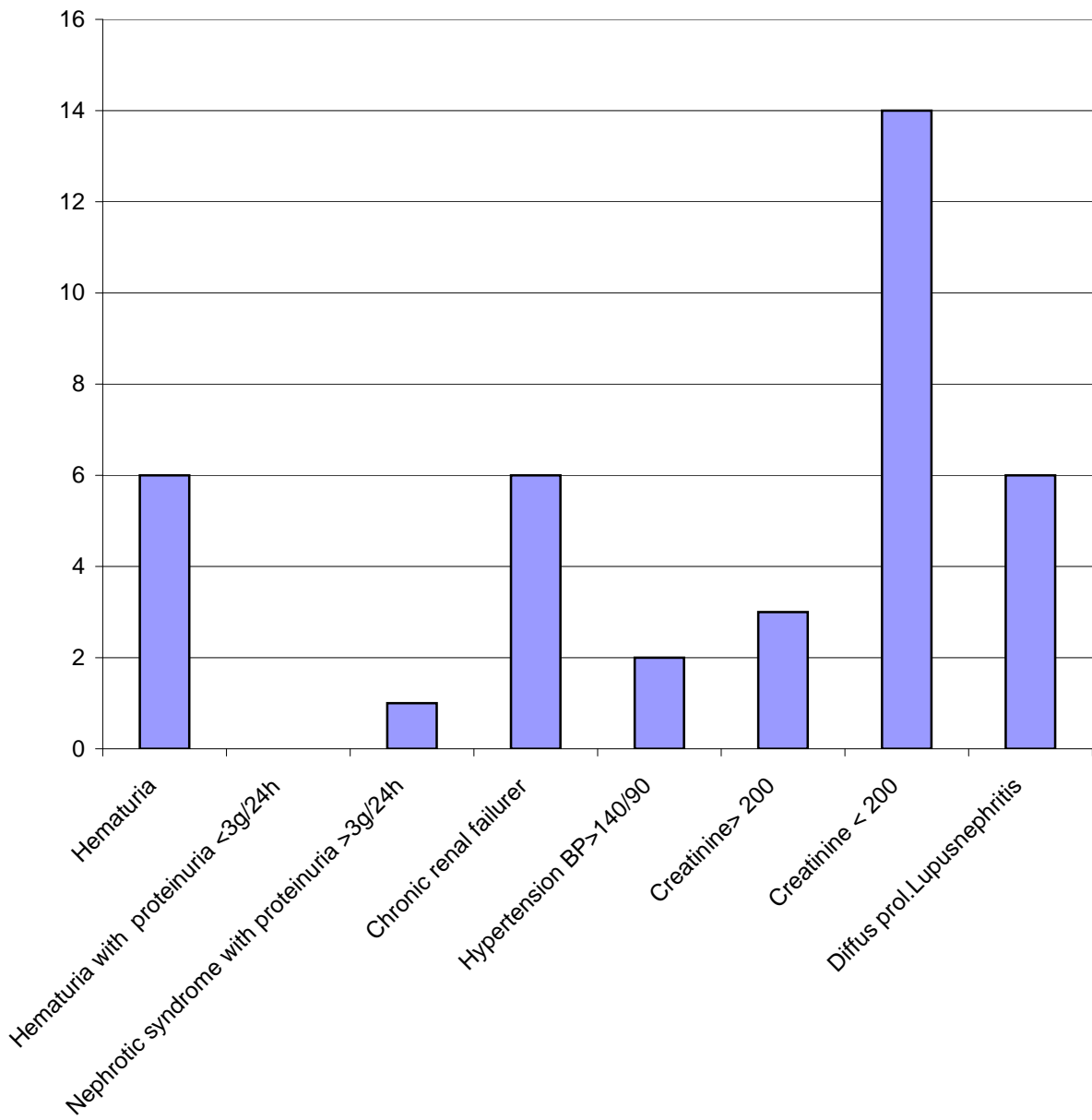
Morphology	Number
Minimal change	13
Membranoproliferative GN	8
Focal segmental sclerosis	22
Benign nephrosclerosis	95
Malign nephrosclerosis	1
Membranous nephropathy	24
Mesangioproliferative GN	76
Endocap proliferative GN	7
Crescentic GN	10
Diffus prol.Lupusnephritis(IV)	9
Diabetic nephropathy	10
Amyloidosis	6

Morphology in patients with SLE, 2008



Morphology	Number
Minimal change	0
Membranoproliferative GN	3
Focal segmental sclerosis	0
Benign nephrosclerosis	8
Malign nephrosclerosis	0
Membranous nephropathy	3
Mesangioproliferative GN	5
Endocap proliferative GN	0
Crescentic GN	1
Diffus prol.Lupusnephritis(IV)	6
Diabetic nephropathy	1
Amyloidosis	0

SLE based on clinical form information and on Diffus prol. Lupus nephritis, 2008

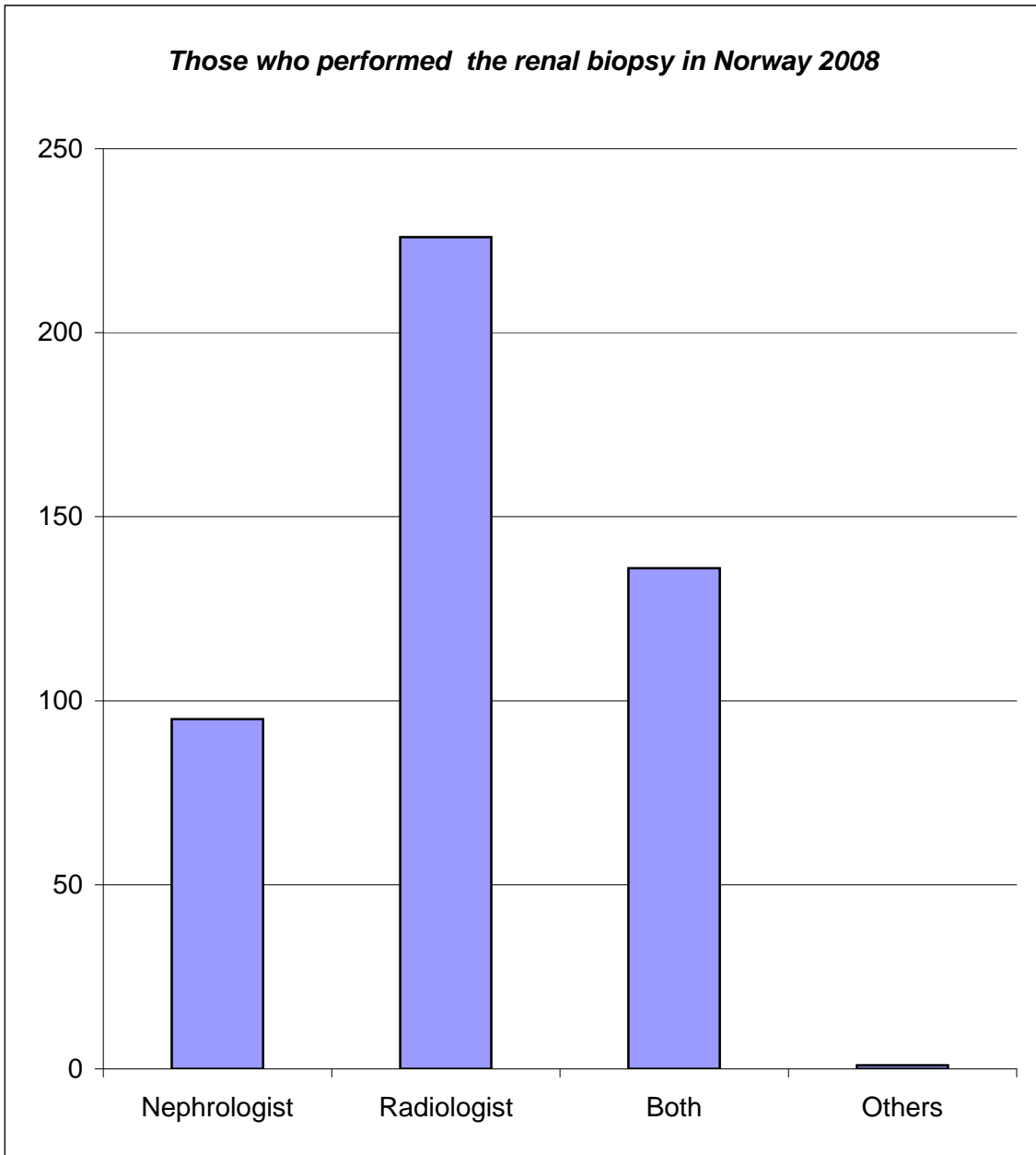


Clinical indication

Number

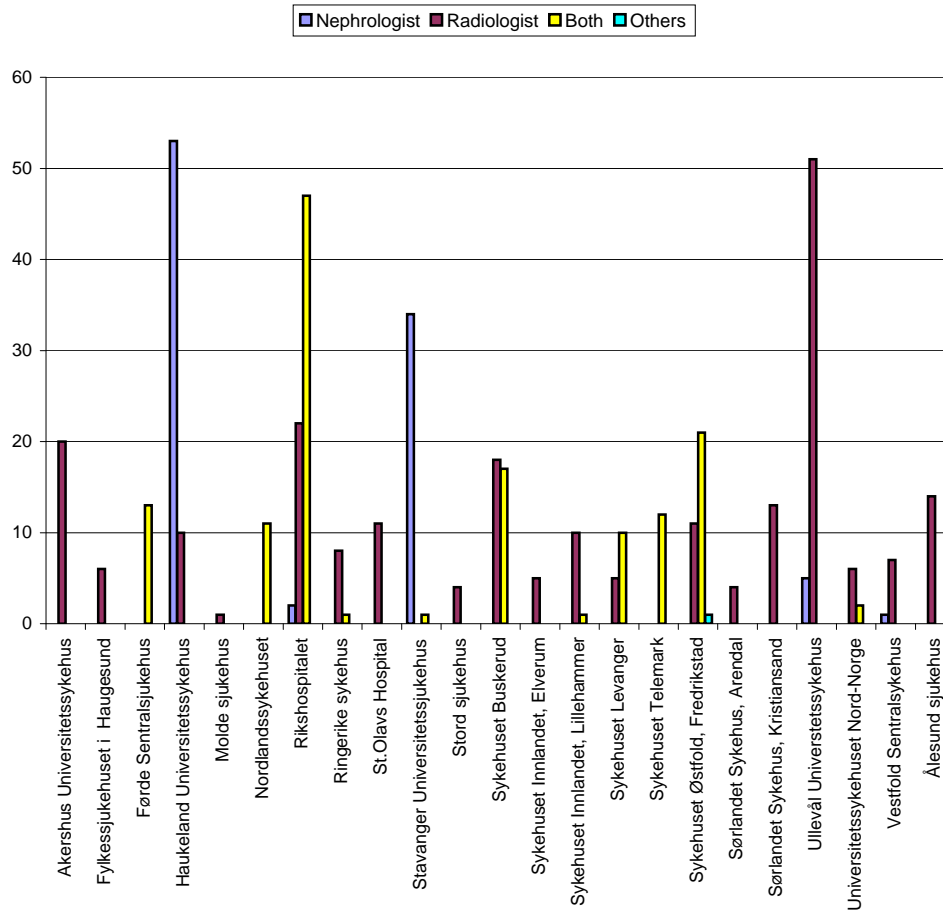
Hematuria	6
Hematuria with proteinuria <3g/24h	0
Nephrotic syndrome with proteinuria >3g/24h	1
Chronic renal failurer	6
Hypertension BP>140/90	2
Creatinine> 200	3
Creatinine < 200	14
Diffus prol.Lupusnephritis	6

Those who performed the renal biopsy in Norway 2008



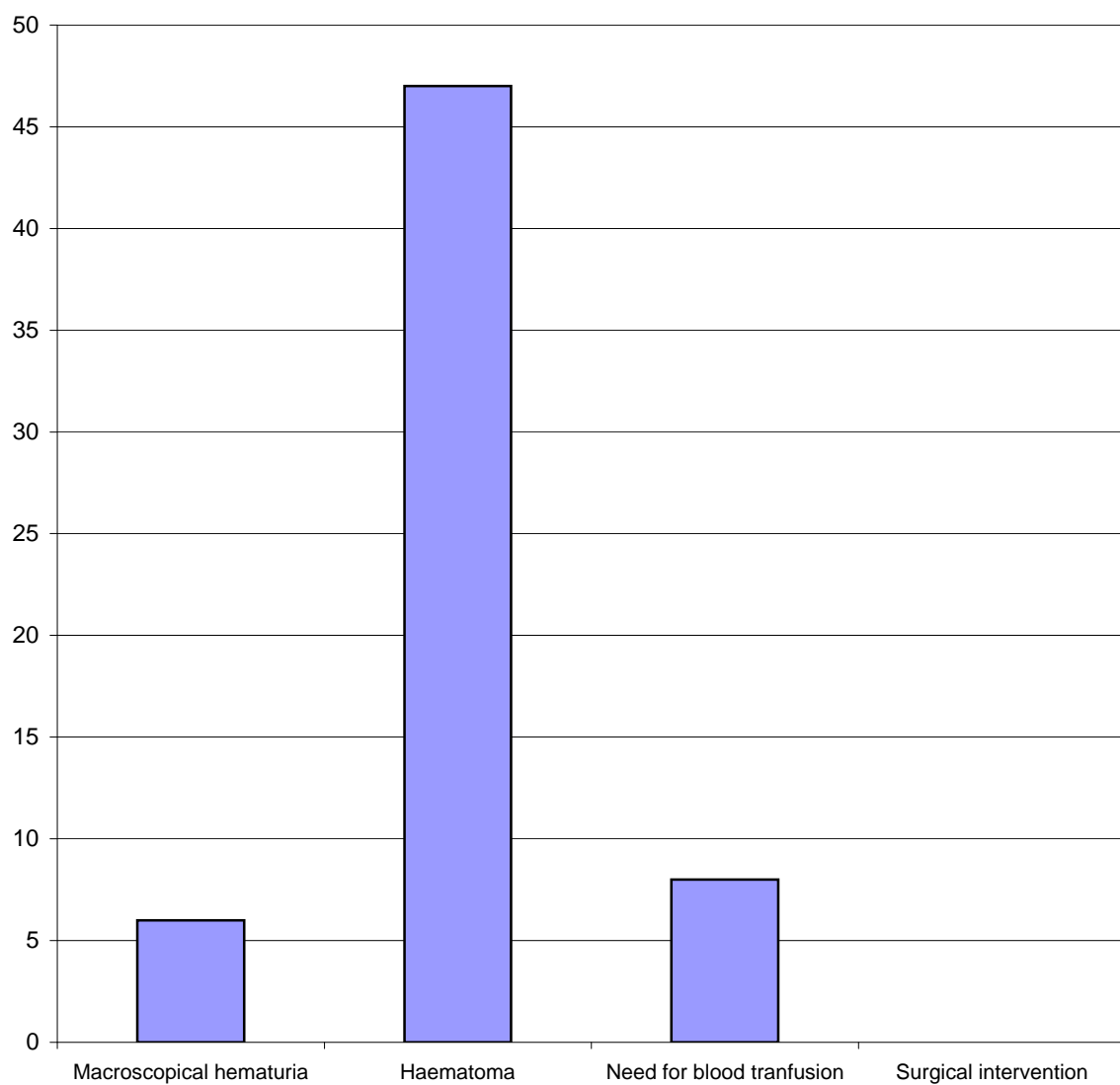
Performed the biopsy	Number
Nephrologist	95
Radiologist	226
Both	136
Others	1

Those who performed the renal biopsy at different hospitals, 2008



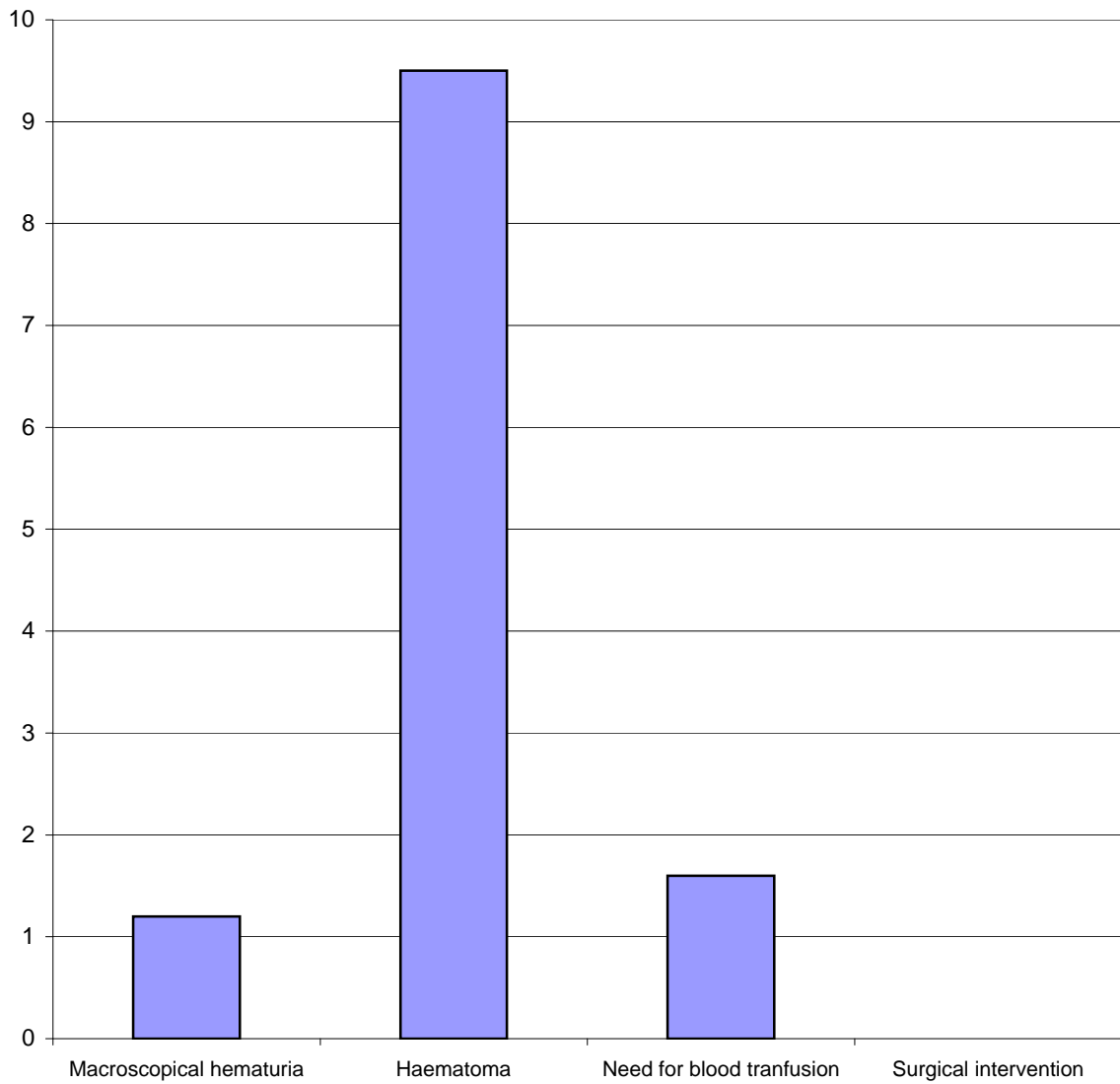
Hospital	Nephrologist	Radiologist	Both	Others
Akershus Universitetssykehus	0	20	0	0
Fylkessjukehuset i Haugesund	0	6	0	0
Førde Sentralsjukehus	0	0	13	0
Haukeland Universitetssykehus	53	10	0	0
Molde sjukehus	0	1	0	0
Nordlandssykehuset	0	0	11	0
Rikshospitalet	2	22	47	0
Ringerike sykehus	0	8	1	0
St.Olavs Hospital	0	11	0	0
Stavanger Universitetssjukehus	34	0	1	0
Stord sjukehus	0	4	0	0
Sykehuset Buskerud	0	18	17	0
Sykehuset Innlandet, Elverum	0	5	0	0
Sykehuset Innlandet, Lillehammer	0	10	1	0
Sykehuset Levanger	0	5	10	0
Sykehuset Telemark	0	0	12	0
Sykehuset Østfold, Fredrikstad	0	11	21	1
Sørlandet Sykehus, Arendal	0	4	0	0
Sørlandet Sykehus, Kristiansand	0	13	0	0
Ullevål Universtetssykehus	5	51	0	0
Universitetssykehuset Nord-Norge	0	6	2	0
Vestfold Sentralsykehus	1	7	0	0
Ålesund sjukehus	0	14	0	0
Toltal	95	226	136	1

Complications to renal biopsies, 2008



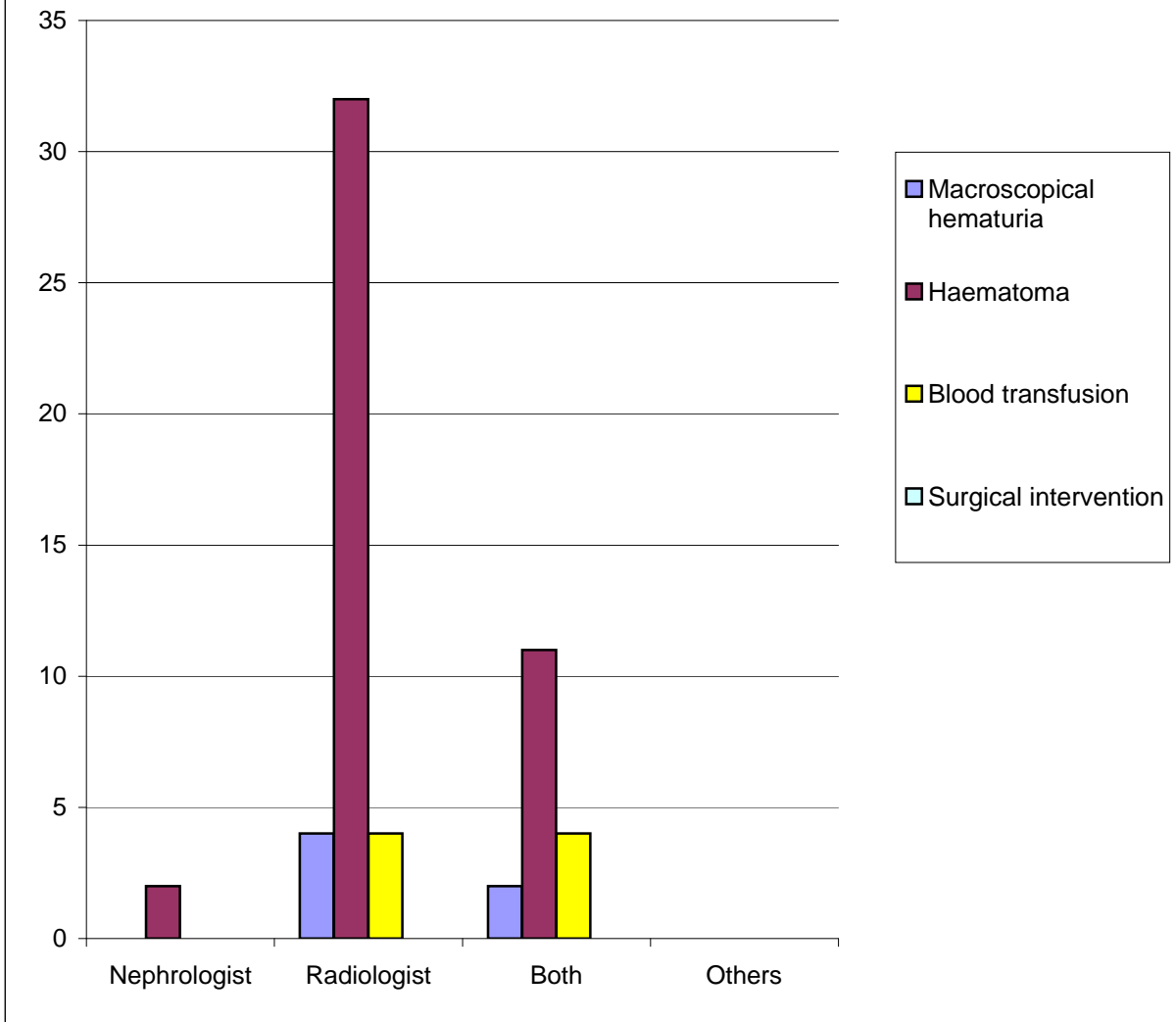
Macroscopical hematuria	6
Haematoma	47
Need for blood tranfusion	8
Surgical intervention	0

Complication to renal biopsies (%), 2008



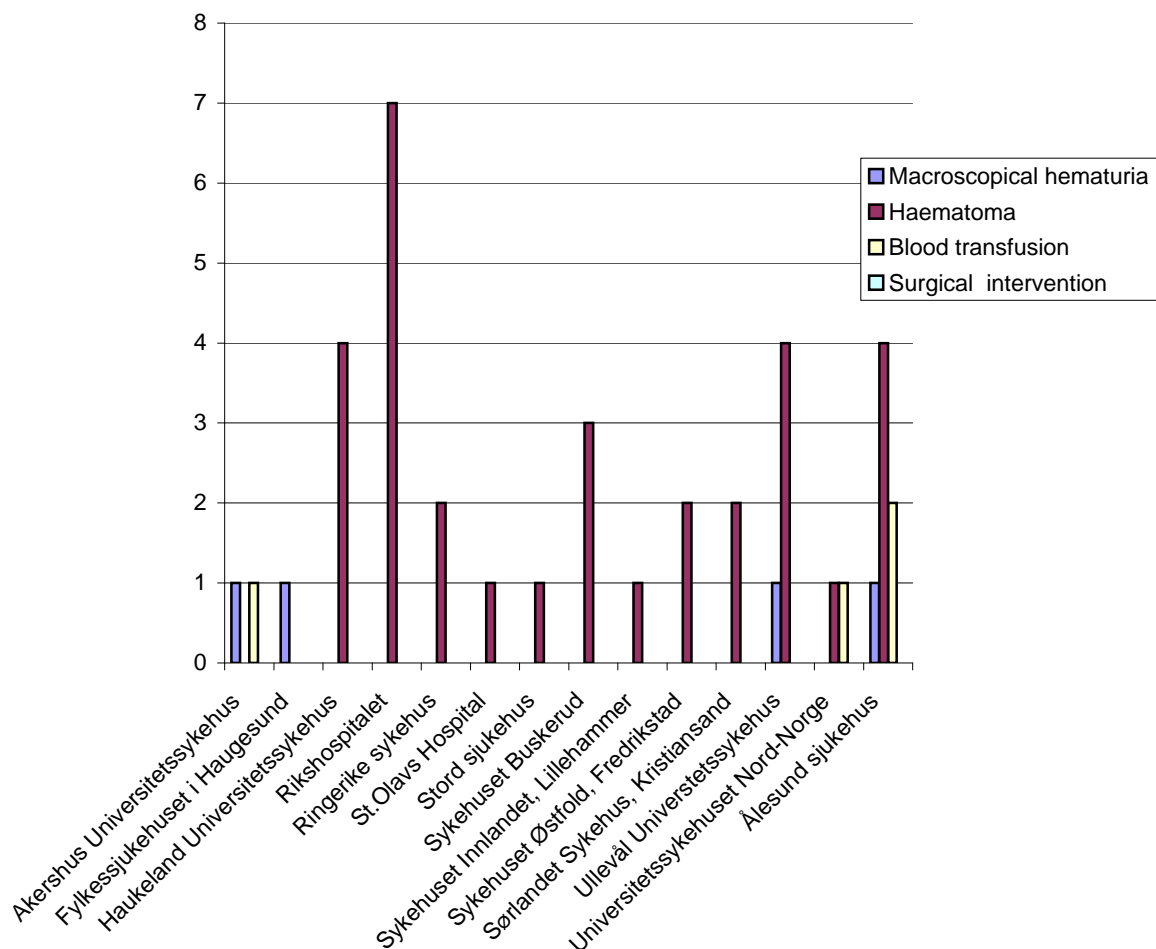
Macroscopical hematuria	1,2
Haematoma	9,5
Need for blood tranfusion	1,6
Surgical intervention	0

Complications to renal biopsies and who performed it, 2008



Complications	Nephrologist	Radiologist	Both	Others
Macroscopical hematuria	0	4	2	0
Haematoma	2	32	11	0
Blood transfusion	0	4	4	0
Surgical intervention	0	0	0	0

Complications to renal biopsy performed by radiologist, 2008



Hospital	Macroscopical hematuria	Haematoma	Blood transfusion	Surgical intervention
Akershus Universitetssykehus	1	0	1	0
Fylkessjukehuset i Haugesund	1	0	0	0
Haukeland Universitetssykehus	0	4	0	0
Rikshospitalet	0	7	0	0
Ringerike sykehus	0	2	0	0
St.Olavs Hospital	0	1	0	0
Stord sjukehus	0	1	0	0
Sykehuset Buskerud	0	3	0	0
Sykehuset Innlandet, Lillehammer	0	1	0	0
Sykehuset Østfold, Fredrikstad	0	2	0	0
Sørlandet Sykehus, Kristiansand	0	2	0	0
Ullevål Universtetssykehus	1	4	0	0
Universitetssykehuset Nord-Norge	0	1	1	0
Ålesund sjukehus	1	4	2	0
Total	4	32	4	0