Ophthalmic parameters and the presence of clinically significant macular oedema
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The North Jutland County Diabetic retinopathy Study (NCDRS)
Retinal lesions and their association to clinically significant macular oedema

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Purpose
To explore the influence from retinal lesions on the prevalence of clinically significant macular oedema (CSME) in the present diabetic population.

Methods
This cross-sectional study comprised 656 type 1 diabetic subjects and 328 type 2 diabetic subjects undergoing retinopathy screening in the County of North Jutland, Denmark during the period 1st April 2000 to 30th April 2004. The association between CSME and retinal ophthalmic parameters was explored using logistic regression analysis.

Type 2 diabetic subjects were recruited from larger Aalborg and comprised more than 75% of known type 1 diabetic subjects in this area. Type 2 diabetic subjects were recruited from the entire county of North Jutland due to mali-regulation and comprised less than 5% of all known type 2 diabetic subjects.

Results
The prevalence of proliferative retinopathy was found relatively low in the present diabetic population (Table 1) and lower than previously reported studies (Fig 1). The prevalence of CSME was found relatively high in the present diabetic population (Table 1) and higher than previously reported (Fig 1).

The prevalence of CSME (Fig 2) and also the number of retinal lesions (Fig 3) revealed a non-linear association to an internationally approved retinopathy scale [1].

Table 1
Prevalence in NCDRS of proliferative retinopathy and CSME in type 1 and type 2 diabetes.

<table>
<thead>
<tr>
<th></th>
<th>Type 1</th>
<th>Type 2</th>
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<tbody>
<tr>
<td>Proliferative retinopathy</td>
<td>0.8 %</td>
<td>0.3 %</td>
</tr>
<tr>
<td>CSME</td>
<td>7.9 %</td>
<td>12.8 %</td>
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</tbody>
</table>

The association between the various retinal lesions and the presence of CSME are illustrated in Fig 2a (type 1 diabetes) and Fig 2b (type 2 diabetes).

Conclusions
1. The prevalence of CSME seems increased compared to previous studies.
2. The prevalence of CSME is non-linearly associated to an internationally approved retinopathy scale.
3. The prevalence of CSME increased with the number of retinal lesions.

References