



**DM**

# **Complicações Crônicas**

Profa. Dra. Maria Cristina Foss-Freitas

# Complicações Crônicas

## Vasculares

### Macrov.

- ❖ A. coronárias
- ❖ A. cerebrais
- ❖ A. periféricas

### Microv.

- ❖ Nefropatia
- ❖ Retinopatia

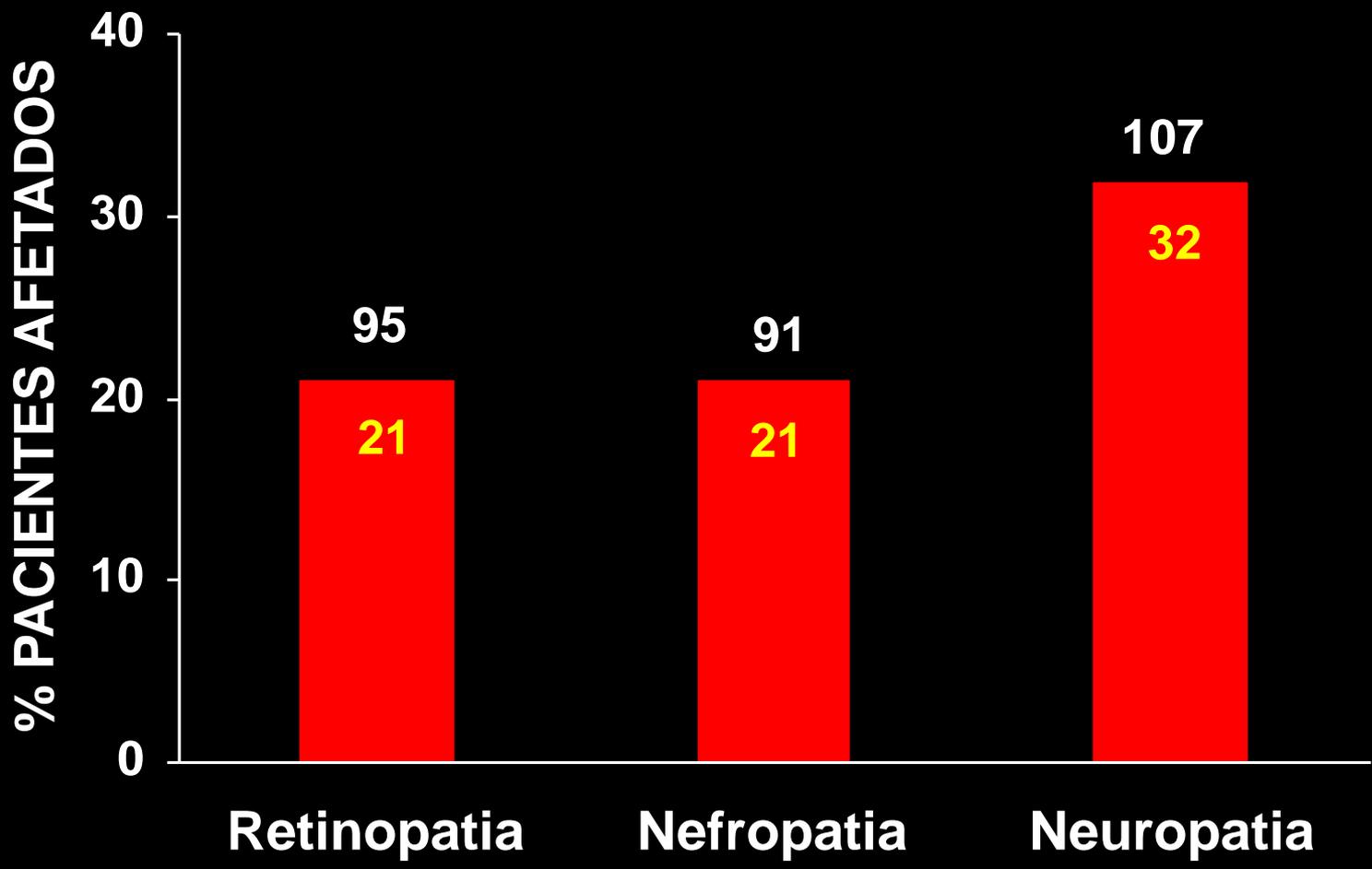
## Neurológicas

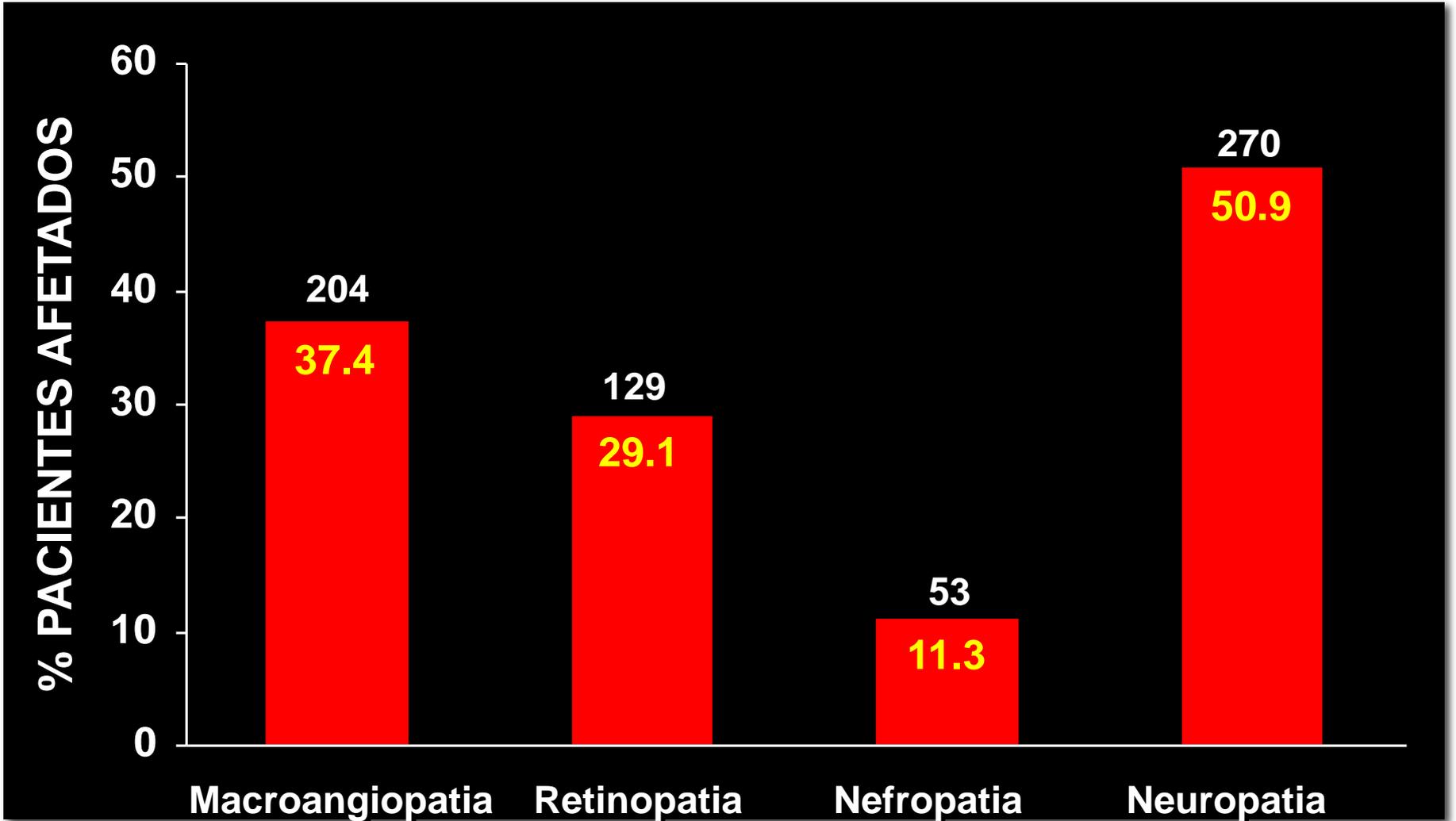
### S. N. Periférico

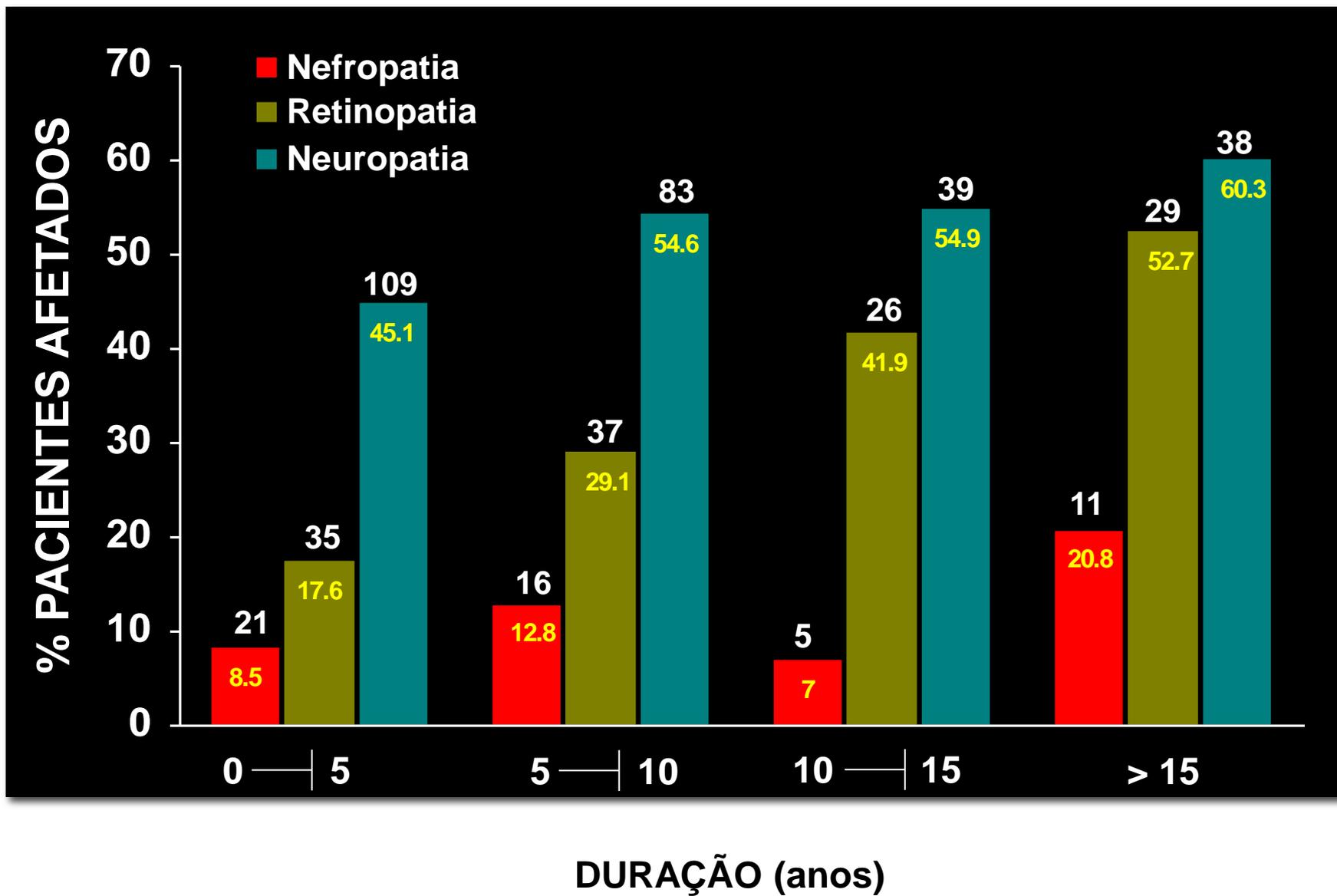
- ❖ Sensitivo - motor
- ❖ Autonômico

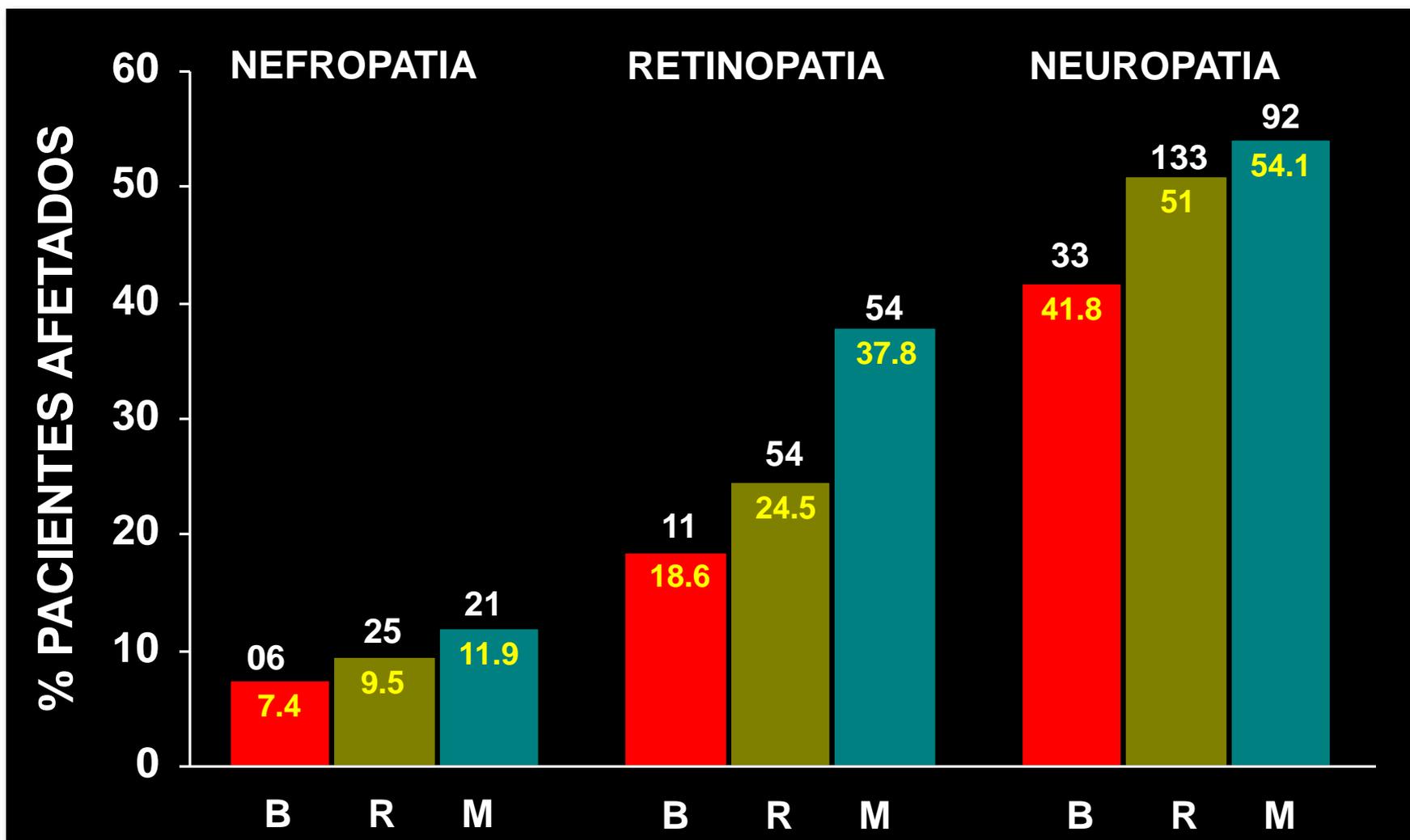
# FREQÜÊNCIA DE COMPLICAÇÕES CRÔNICAS NA POPULAÇÃO BRASILEIRA

Tipo de Complicação	Frequência
Retinopatia Diabética	20 a 30%
Nefropatia Diabética	10 a 20%
Neuropatia Diabética	50 a 60%
Macroangiopatia	40%



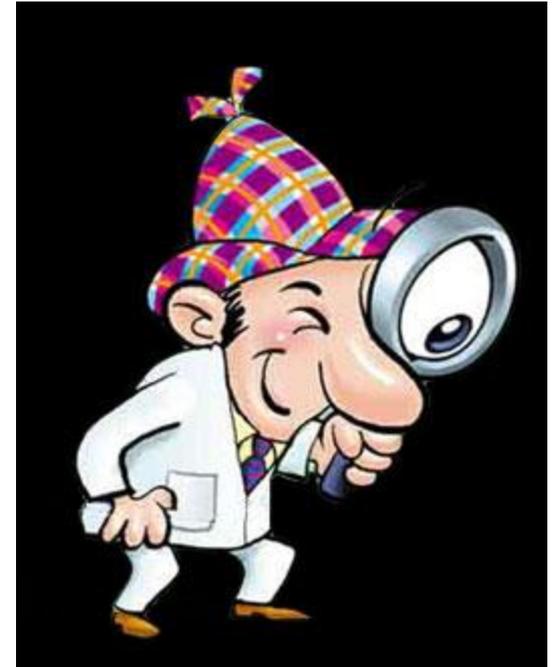






**CONTROLE METABÓLICO**

# ESTUDOS CLÍNICOS

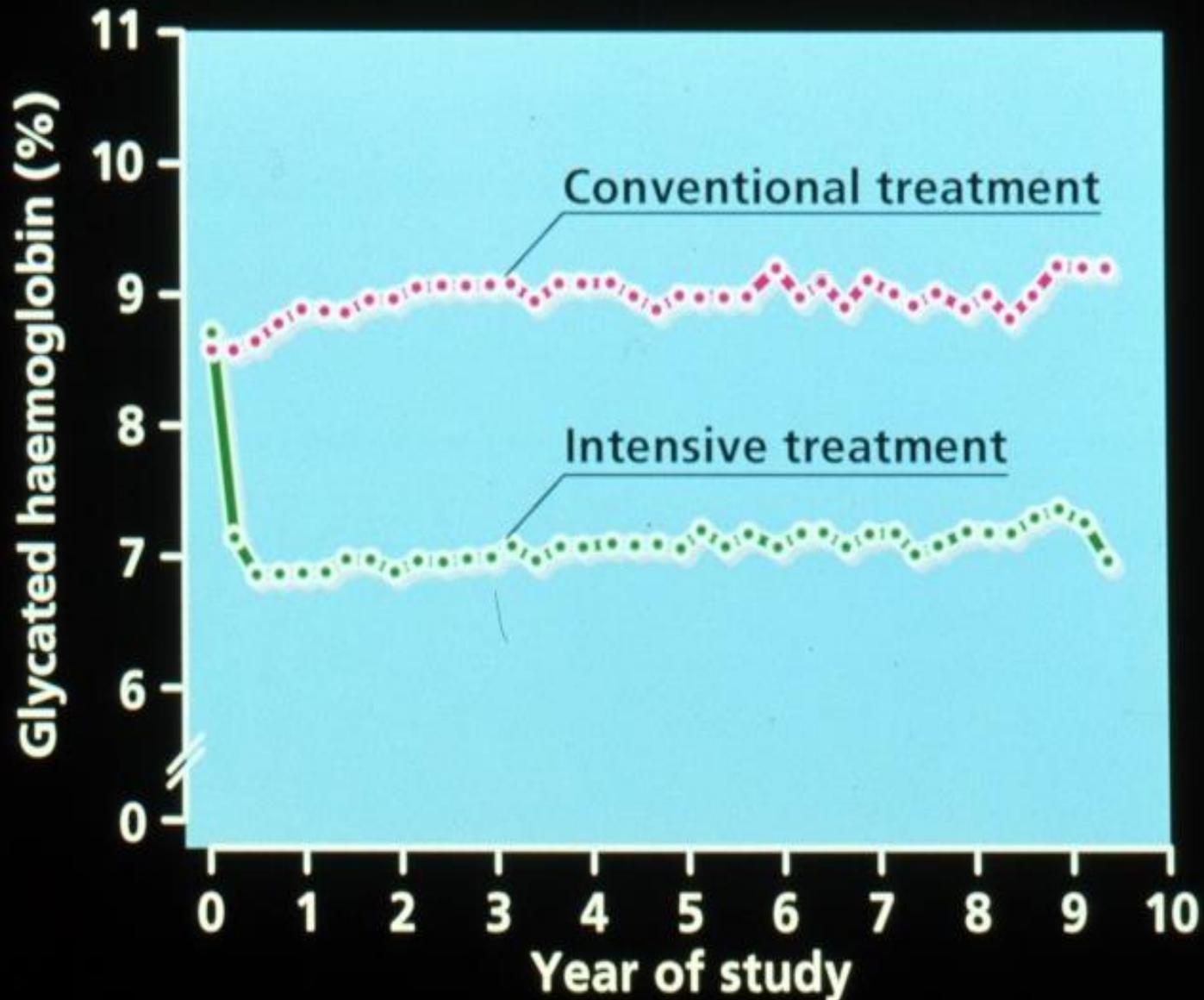


OBSERVACIONAIS

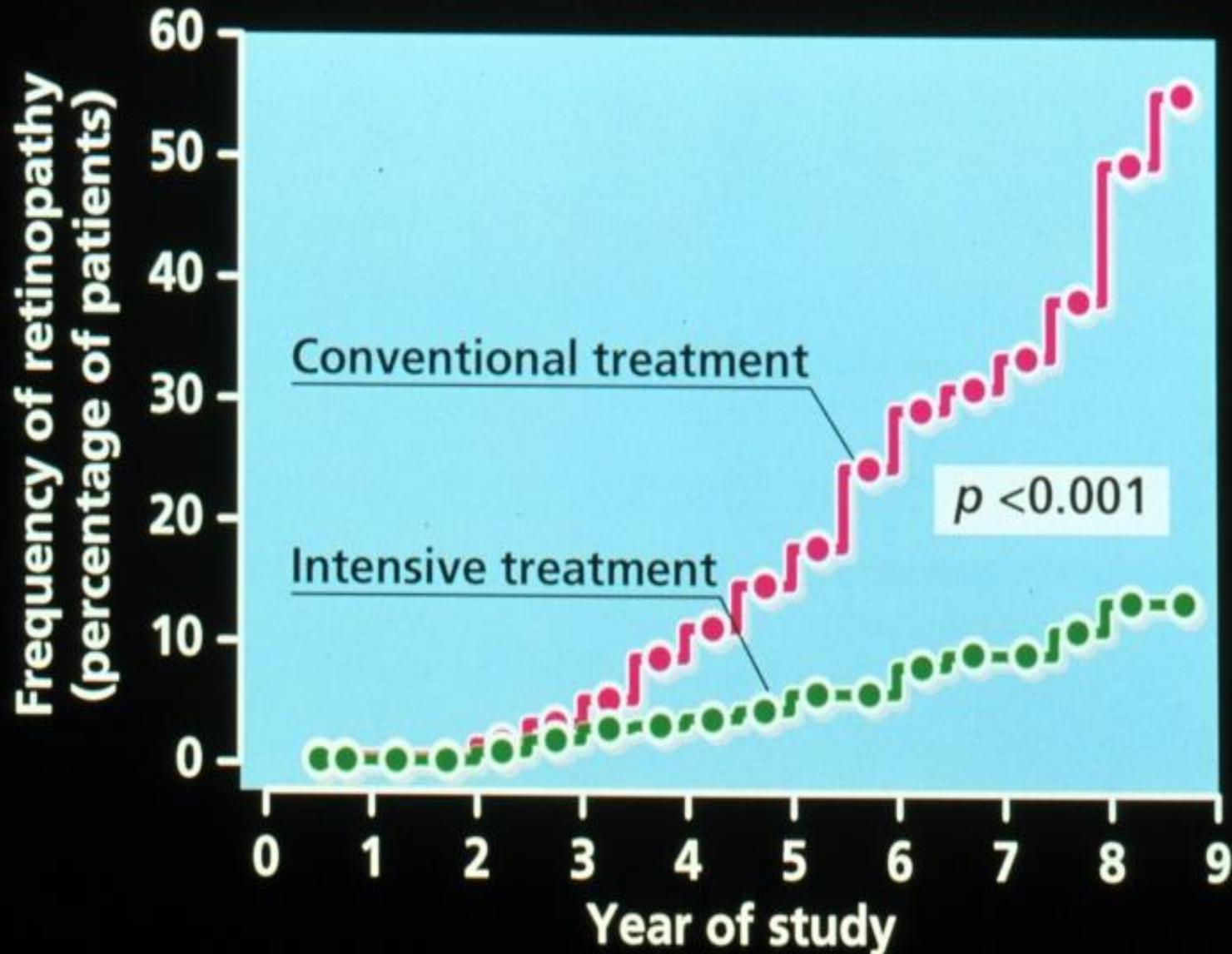
DE INTERVENÇÃO

DCCT  
UKPDS

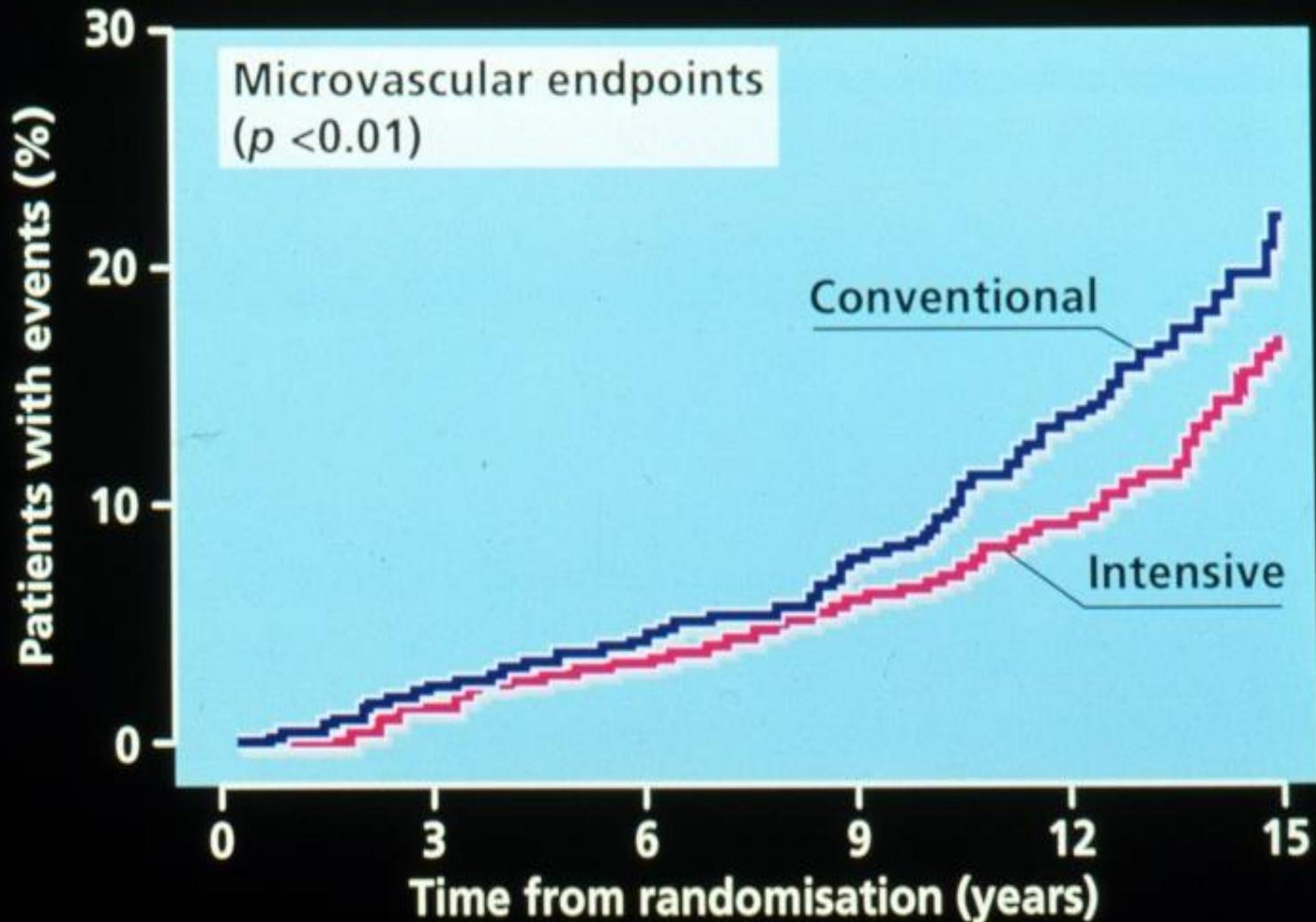
# Glycaemic control in the DCCT



# DCCT: glycaemic control and retinopathy



# UKPDS: blood glucose control and microvascular disease in type 2 diabetes



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## Intensive Diabetes Treatment and Cardiovascular Disease in Patients with Type 1 Diabetes

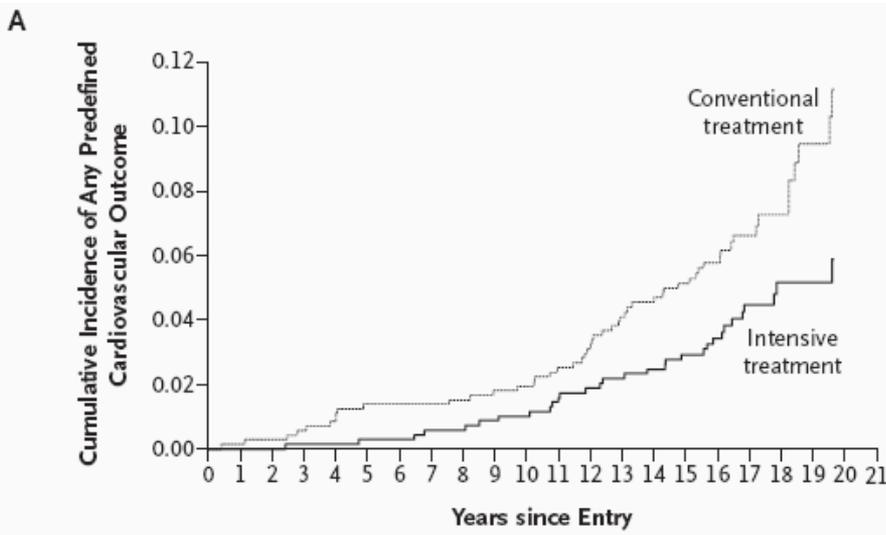
The Diabetes Control and Complications Trial/Epidemiology of Diabetes Interventions  
and Complications (DCCT/EDIC) Study Research Group\*

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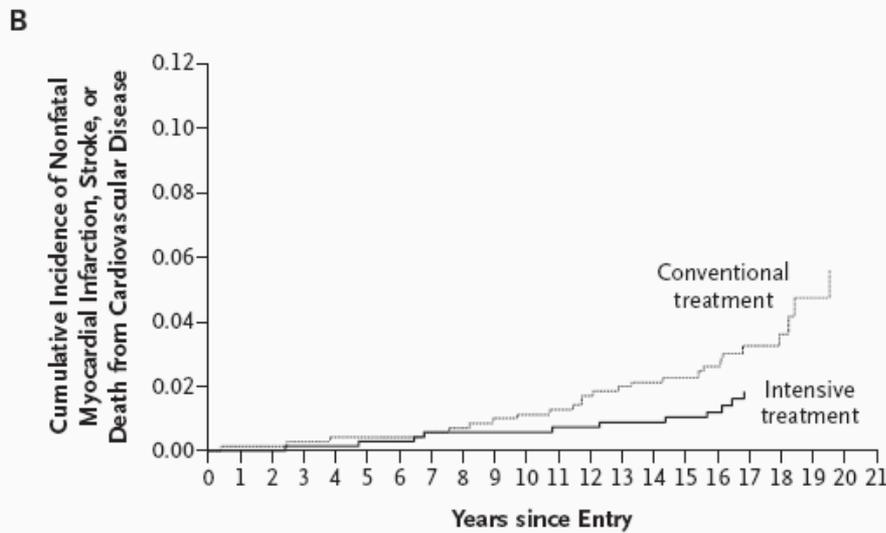
\*Persons and institutions participating in the DCCT/EDIC Study Research Group are listed in the Appendix.

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No. at Risk				
Intensive treatment	705	683	629	113
Conventional treatment	714	688	618	92



No. at Risk				
Intensive treatment	705	686	640	118
Conventional treatment	721	694	637	96

- Redução de 42% em DCV
- Redução de 57% qualquer evento

ORIGINAL ARTICLE

# 10-Year Follow-up of Intensive Glucose Control in Type 2 Diabetes

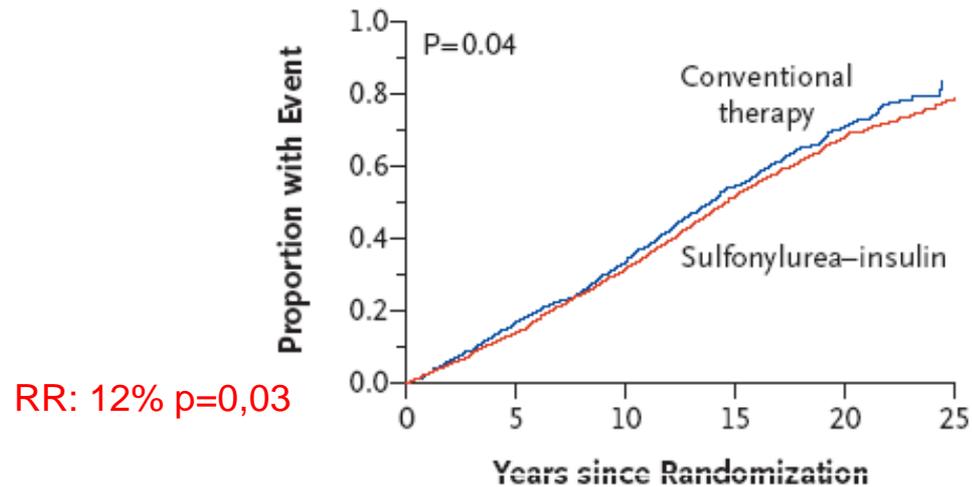
Rury R. Holman, F.R.C.P., Sanjoy K. Paul, Ph.D., M. Angelyn Bethel, M.D.,  
David R. Matthews, F.R.C.P., and H. Andrew W. Neil, F.R.C.P.

This article (10.1056/NEJMoa0806470) was published at [www.nejm.org](http://www.nejm.org) on September 10, 2008.

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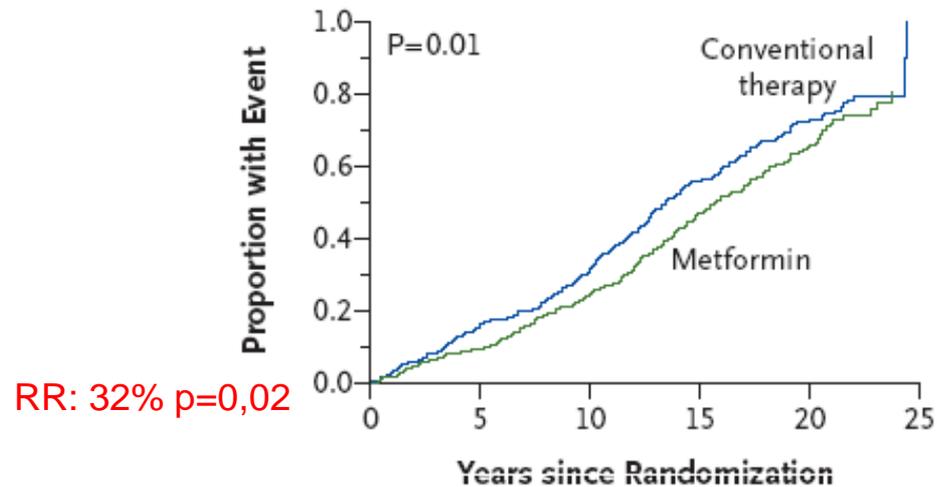
### A Any Diabetes-Related End Point



#### No. at Risk

	0	5	10	15	20	25
Conventional therapy	1138	913	679	370	104	5
Sulfonylurea-insulin	2729	2270	1692	933	277	32

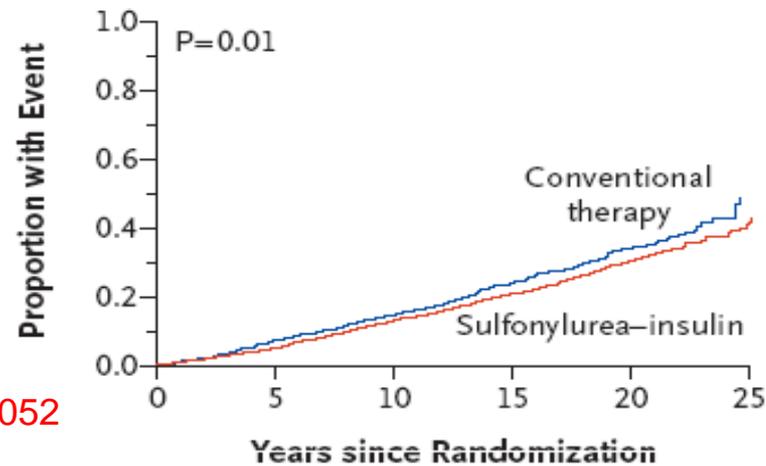
### B Any Diabetes-Related End Point



#### No. at Risk

	0	5	10	15	20	25
Conventional therapy	411	333	255	132	45	2
Metformin	342	300	236	144	62	7

### C Myocardial Infarction

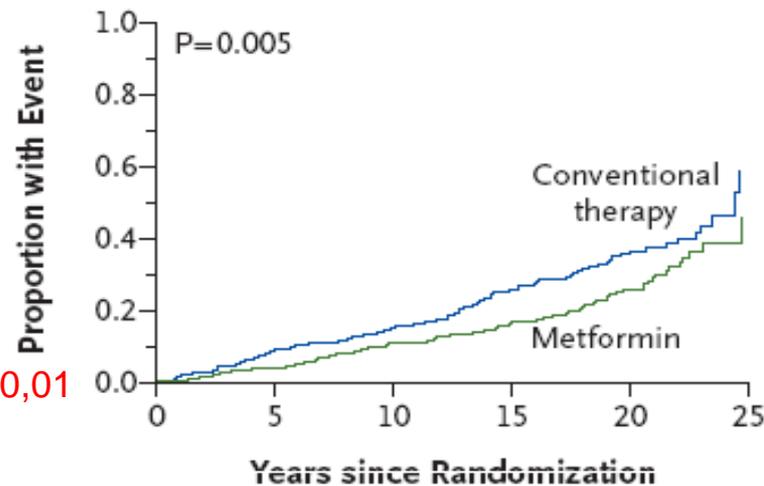


RR: 16% p=0,052

#### No. at Risk

Conventional therapy	1138	1013	857	578	221	20
Sulfonylurea-insulin	2729	2488	2097	1459	577	66

### D Myocardial Infarction

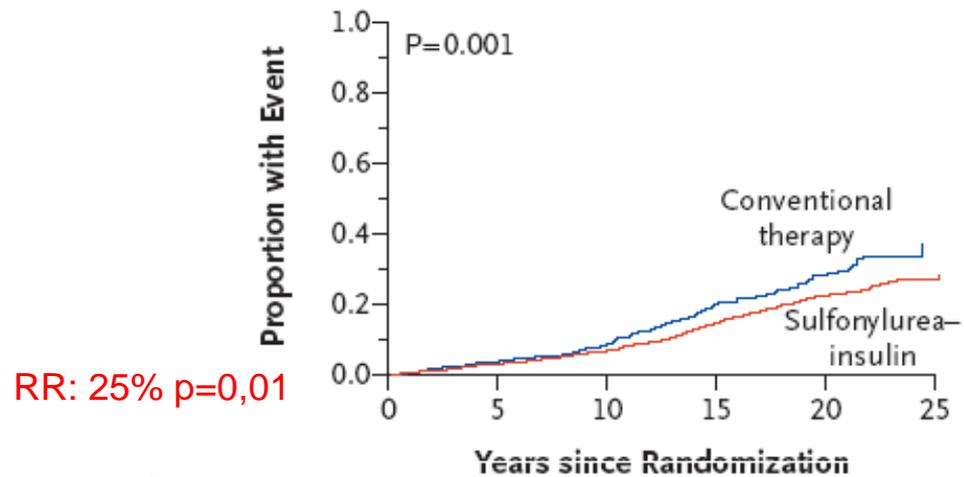


RR:39% p=0,01

#### No. at Risk

Conventional therapy	411	360	311	213	95	4
Metformin	342	317	274	214	106	16

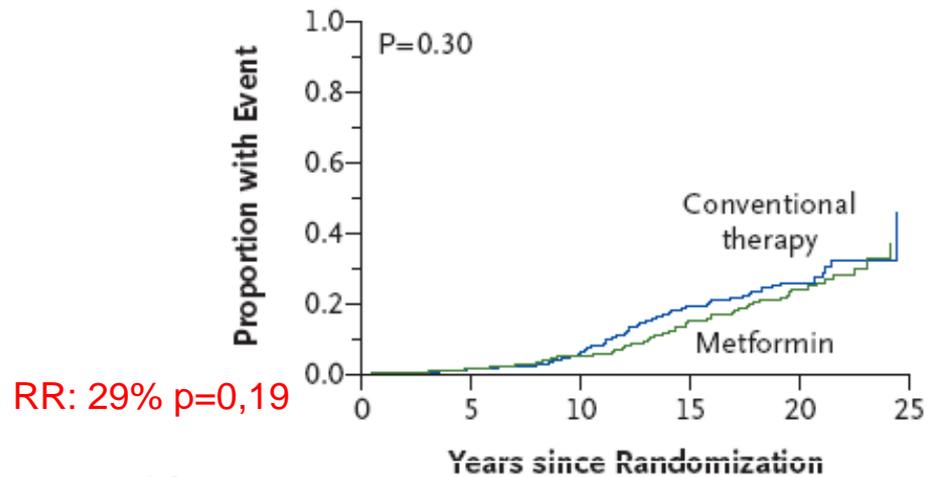
### E Microvascular Disease



#### No. at Risk

Conventional therapy	1138	1018	844	508	172	13
Sulfonylurea-insulin	2729	2465	2076	1368	488	53

### F Microvascular Disease



#### No. at Risk

Conventional therapy	411	377	316	186	72	2
Metformin	342	319	278	197	92	16

# O que isso tudo significa?

- O tratamento anti hiperglicêmico em qualquer fase reduz complicações microvasculares.
- A prevenção de doença macrovascular provavelmente precisa ser precoce
- Metas para HbA<sub>1c</sub> precisam ser vistas no contexto de como e quando são atingidas
- É preciso olhar além das metas de HbA<sub>1c</sub> para a prevenção de DCV
- É necessário avaliar prospectivamente o efeito e segurança de drogas anti diabéticas e estratégias



# DM x DCV

**Lesão Patológica**



**Aterosclerose**

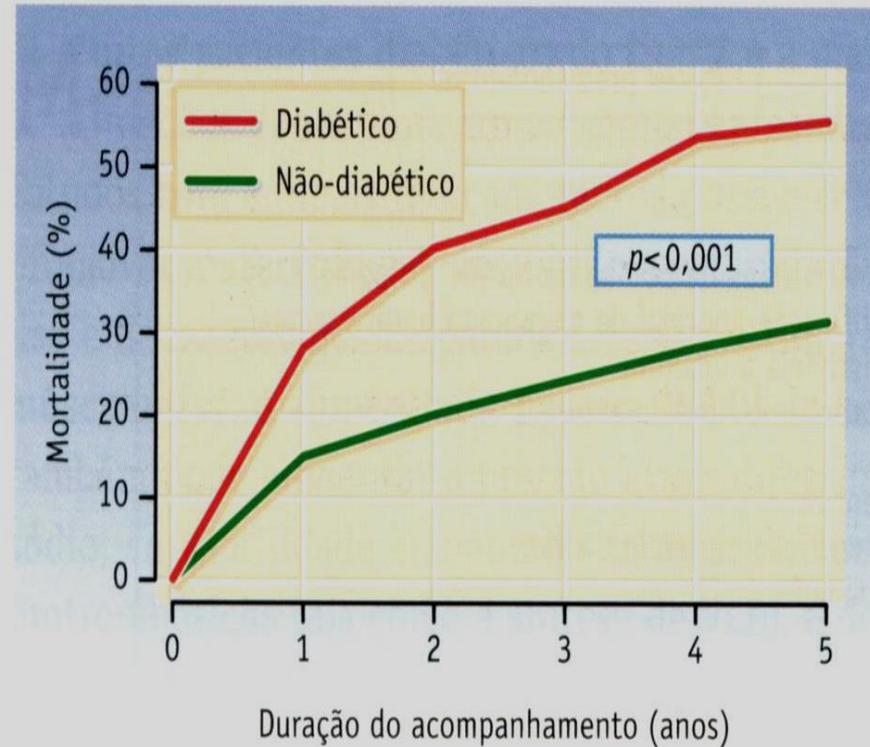
**↑ Intensidade**

**↑ Extensão**

**Evolução Agressiva**

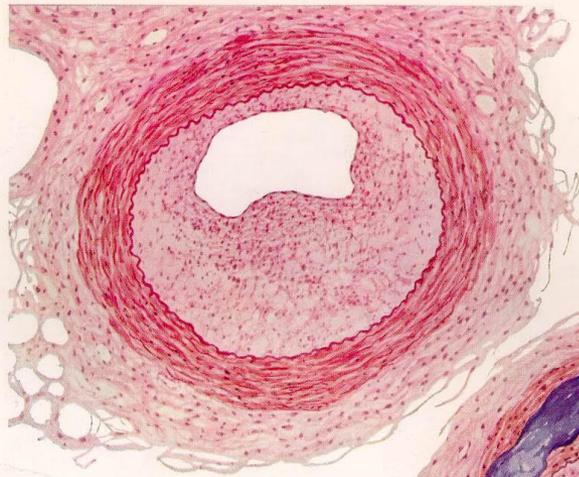
# MACROVASCULOPATIA

- 75% das causas de morte em DM são por doença coronariana
- Doença aterosclerótica é 2 vezes maior em homens e 3 vezes maior em mulheres
- O acometimento vascular é mais intenso e múltiplo
- Risco de “isquemia silenciosa”



**Figura 21.9**

Mortalidade em cinco anos entre pacientes diabéticos e não-diabéticos durante o acompanhamento após o infarto do miocárdio.



INTIMAL PROLIFERATION  
(ATHEROSCLEROSIS);  
LUMEN GREATLY REDUCED

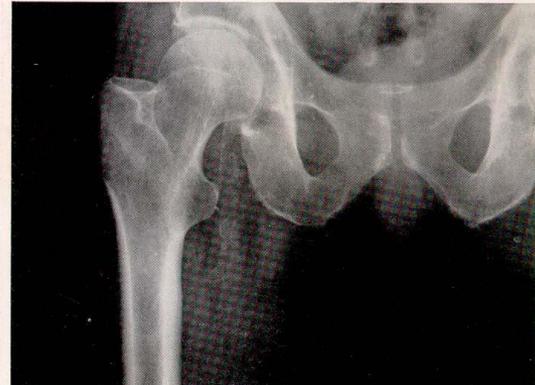
*F. Netter M.D.*  
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MEDIAL CALCIFICATION  
(MÖNCKEBERG'S TYPE  
OF SCLEROSIS) PLUS  
SOME INTIMAL  
THICKENING AND  
THROMBOSIS

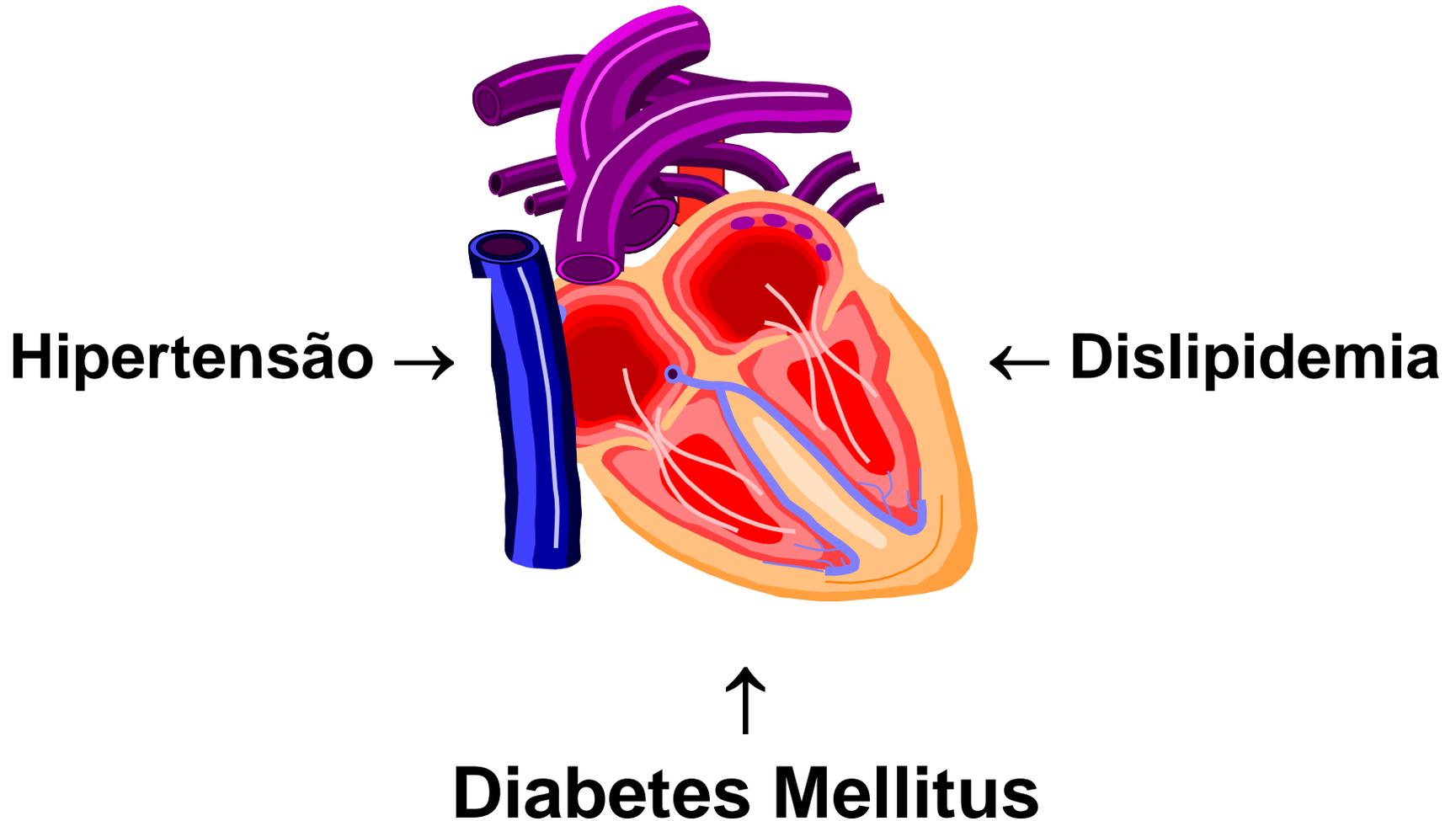


AORTOGRAM: OBSTRUCTION OF LEFT  
ILIAC ARTERY IN A DIABETIC



CALCIFIED FEMORAL ARTERY IN A DIABETIC  
DEMONSTRATED BY X-RAY

# DM x SCV



# COMPONENTES DA SÍNDROME METABÓLICA

- Obesidade (abdominal)
- Intolerância à glicose
- Hipertensão arterial
- Dislipidemia
- Doença cardiovascular
- Resistência à insulina
- Microalbuminúria
- Distúrbio de coagulação
- Hiperandrogenismo
- Hiperuricemia



FIM