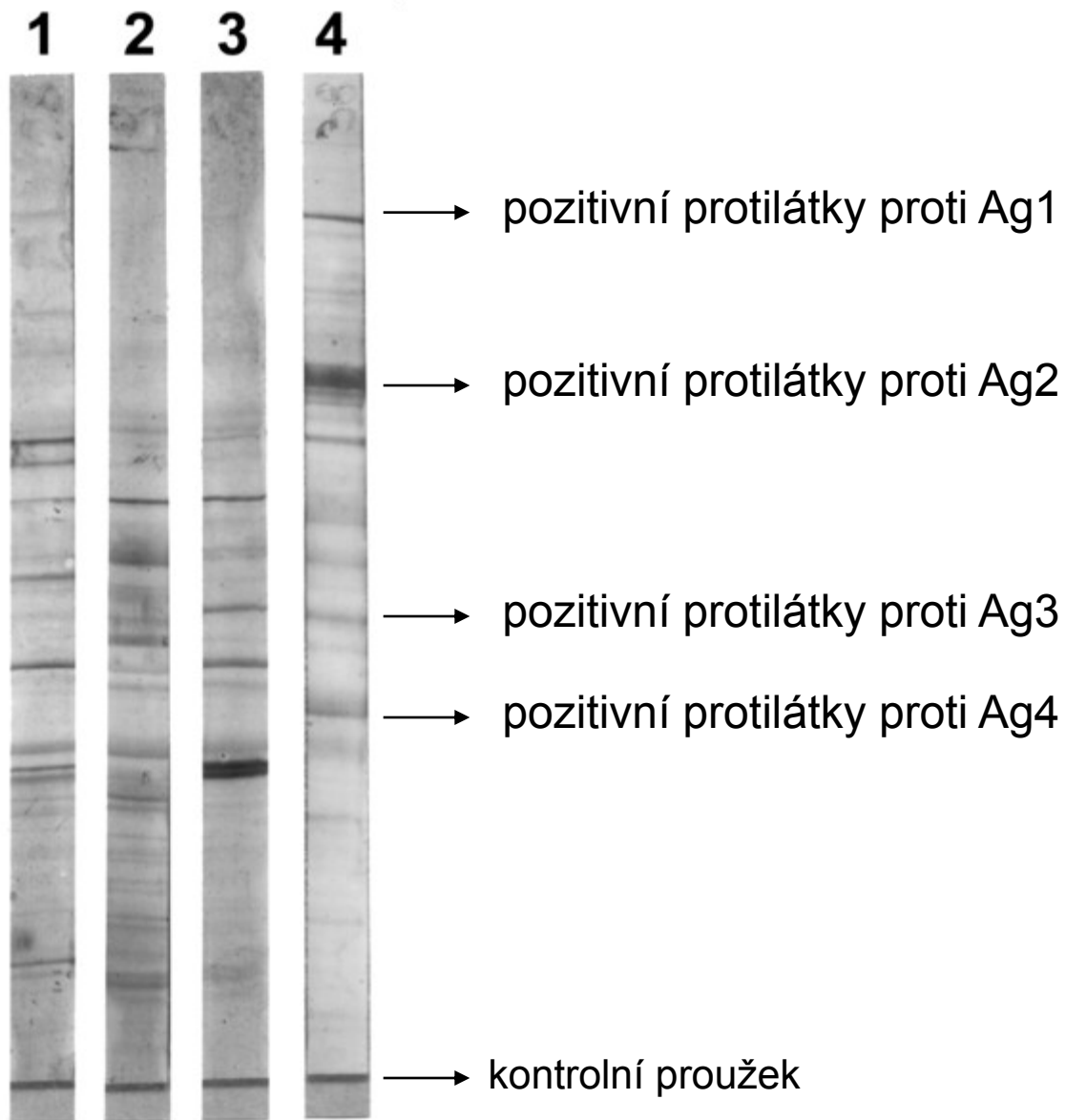


Imunoblot, elektroforéza,
imunofixace

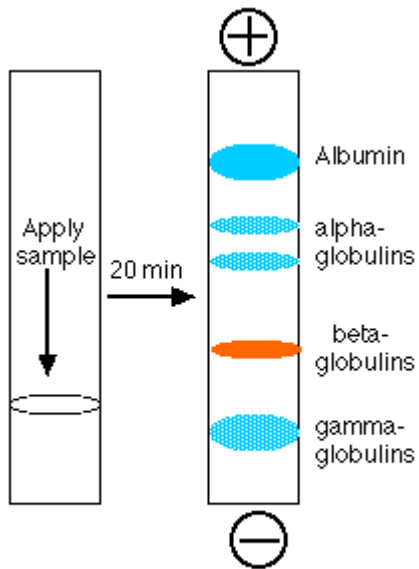
Imunoblot



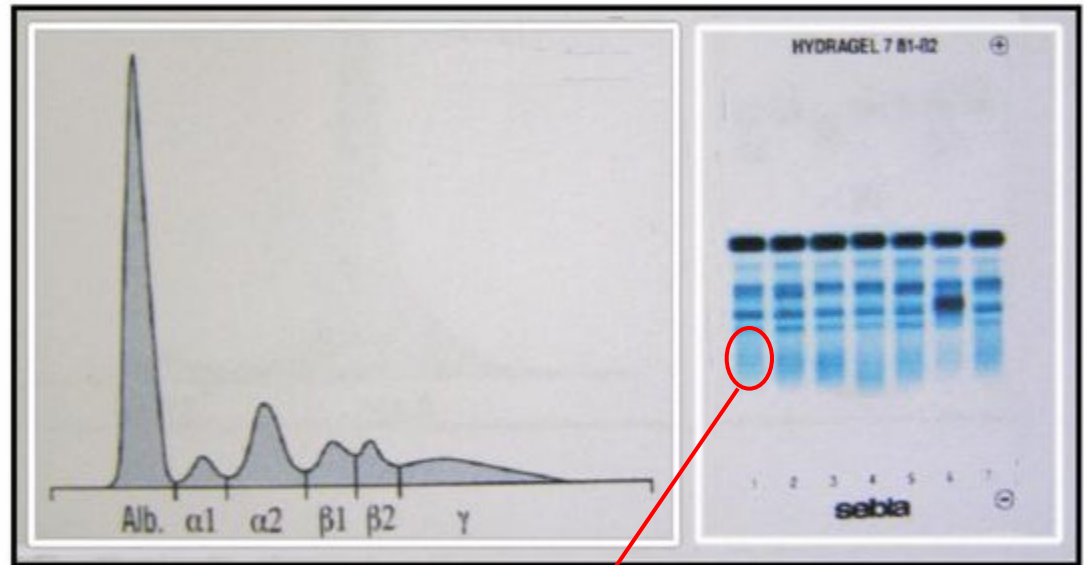
Elektroforéza

sérové proteiny mohou být elektroforeticky separovány

HYDRAGEL PROTEINE K20



Separating serum proteins
by electrophoresis



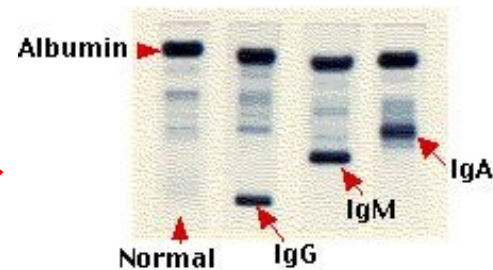
imunoglobuliny

- lze zachytit pouze hrubé změny:

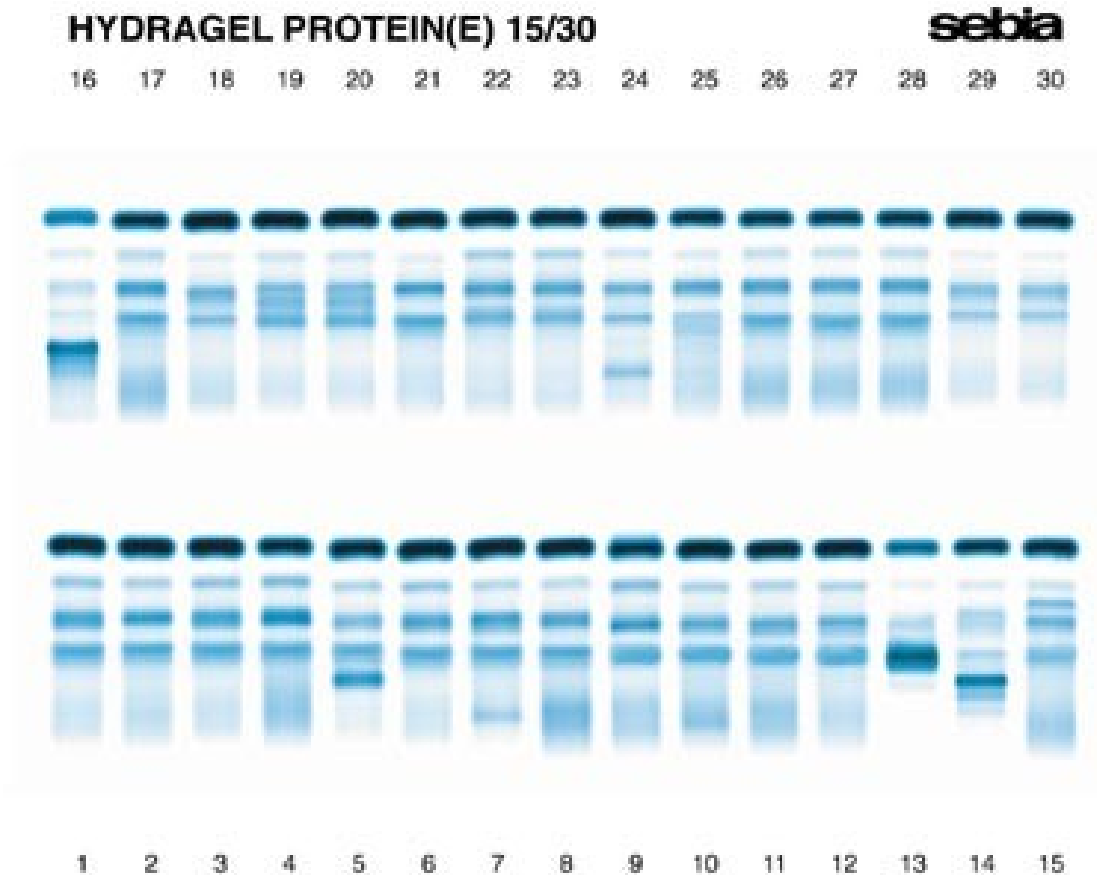
hypergamaglobulinémii,

hypogamaglobulinemii či monoklonální

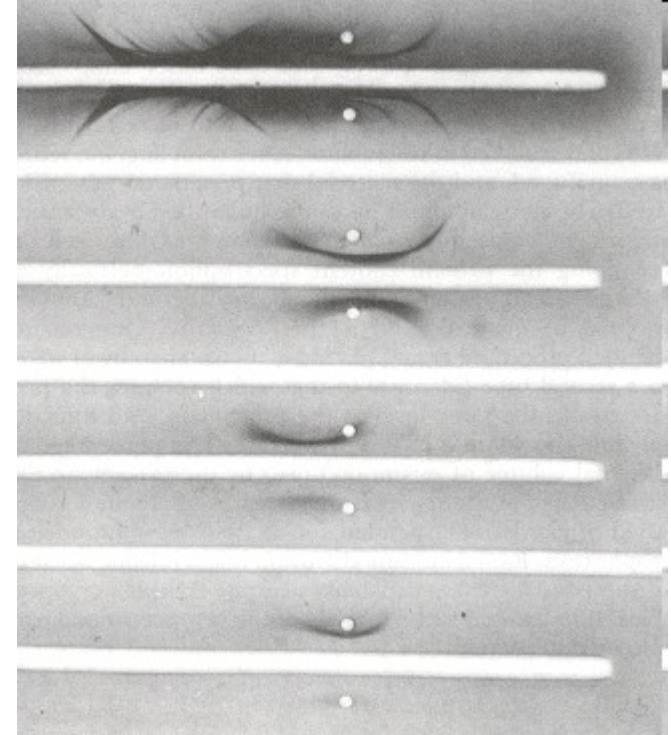
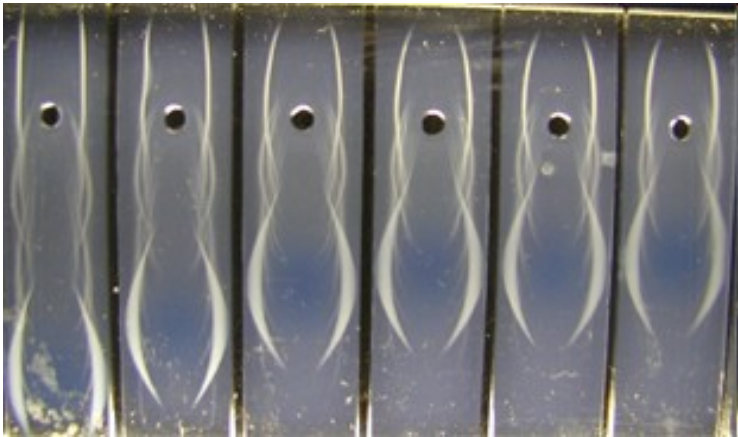
gamapatie



Elektroforéza



Imunoelektroforéza



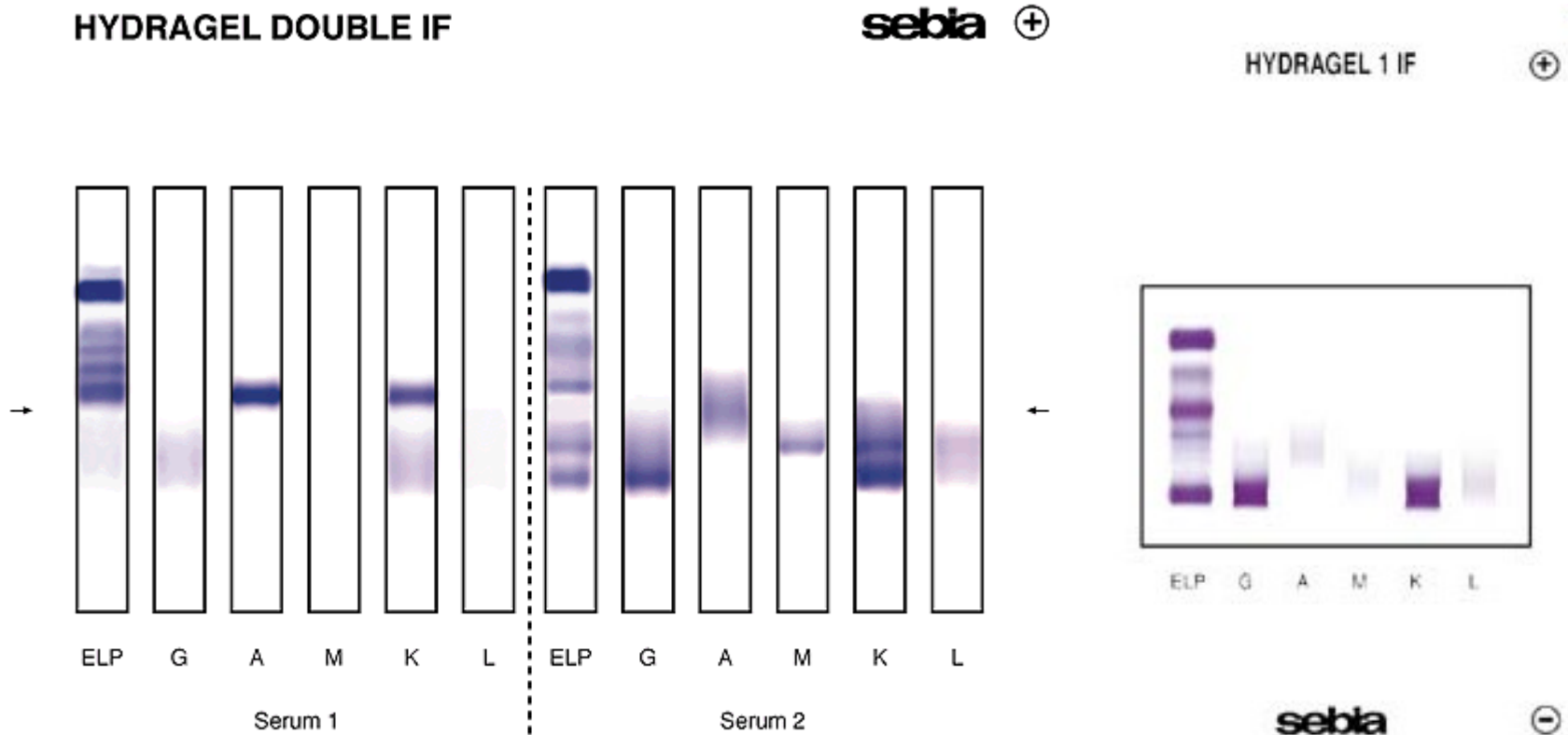
-kombinuje elektroforézu a imunodifuzi:

1. Elektroforéza séra
2. Do agar. gelu se vyřízne podél rozděleného séra žlábek, který se naplní specifickým antisérem (např. proti gama řetězci,..)

Immunoelectrophoresis. Serum from a normal control was placed in the top well and the patient's undiluted serum was placed in wells 2, 3, 5, and 7, reading down. Wells 4, 6, and 8 contained a 1:5 dilution of the patient's serum. The top trough contained antibodies to whole human serum. The third trough contained antibodies to human IgG; the fifth trough, antibodies to human IgA; and the seventh trough, antibodies to human IgM. The varied positions of the precipitin bands indicate the differences in migration of the proteins in an electric field.

Imunofixace

- určování typu paraproteinu (monoklonálního Ig)



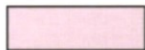
Pozn. 75 – 80% nemocných mnohočetným myelomem má v moči přítomny monoklonální lehké řetězce (Bence-Jonesova bílkovina/paraprotein). BJB poškozují buňky proximálních tubulů ledvin.

MGUS monoklonální gamapatie nejasného původu

Sector	Kappa	Lambda	κ/λ Ratio	Interpretation	
1	Normal	Normal	Normal	Normal serum	
2	Low	Low	Normal	BM suppression without Monoclonal Gammopathy	
3			High	Monoclonal Gammopathy	
4			Low		
5		Normal	Normal	Normal serum	
6			Low	Monoclonal Gammopathy	
7			High		
8			Low		
9	Normal	Low	High	Monoclonal Gammopathy	
10			Normal		
11		High	High	Normal serum	
12			Normal	Polyclonal Ig increase or renal impairment	
13			Low		
14		High	Low	High	Monoclonal Gammopathy
15			Normal	High	Monoclonal Gammopathy
16	Normal			Polyclonal Ig increase or renal impairment	
17	High		High	Normal	Monoclonal Gammopathy with renal impairment
18				High	
19		Low			



With bone marrow (BM) suppression



Without bone marrow (BM) suppression