The Survey of Deep Vein Thrombosis and Venous Thromboembolism Prevention: Japanese Vein Study XIII

深部静脈血栓症の症例と静脈血栓塞栓症の予防についてのアンケート調査

日本静脈学会サーベイ委員会

佐戸川弘之　八巻　隆　岩田　博英

坂田　雅宏　菅野　範英　西部　俊哉

孟　真　山田　典一

Purpose

Several years have passed since the guidelines of venous thromboembolism (VTE) treatment and VTE prevention were published. The treatment of deep vein thrombosis (DVT) is changing greatly. This study was performed to investigate the risk factors, diagnostic methods, distribution, and treatment of DVT and to investigate VTE prevention in Japan.

Objects and Method

A questionnaire survey was mailed to the members of the Japanese Society of Phlebology. The contents of the survey dealt with the treatment of new DVT cases in the year 2009 and the prevention of VTE. The results were examined and compared to the result of our former survey.

- DVT cases; characteristics, diagnosis, and treatment
- Prophylaxis procedure for VTE

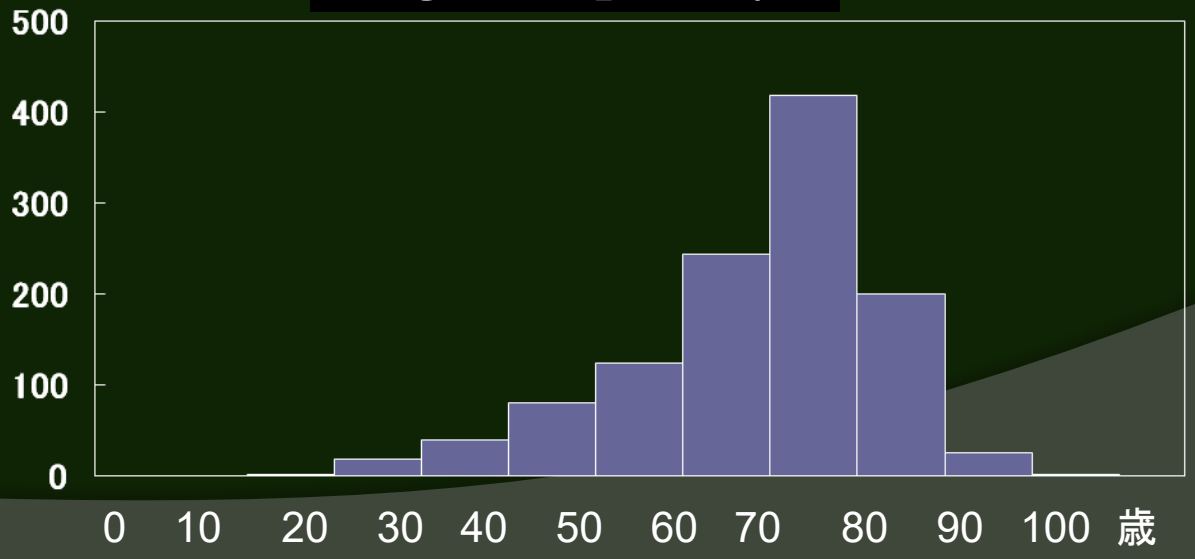
Characteristics of DVT cases

- 1,162 cases (70 institutions) were recorded. 1 ~ 267 （average17.9) case / insti.
- Age：15 ~ 102 (69.1) years male/female＝383：761

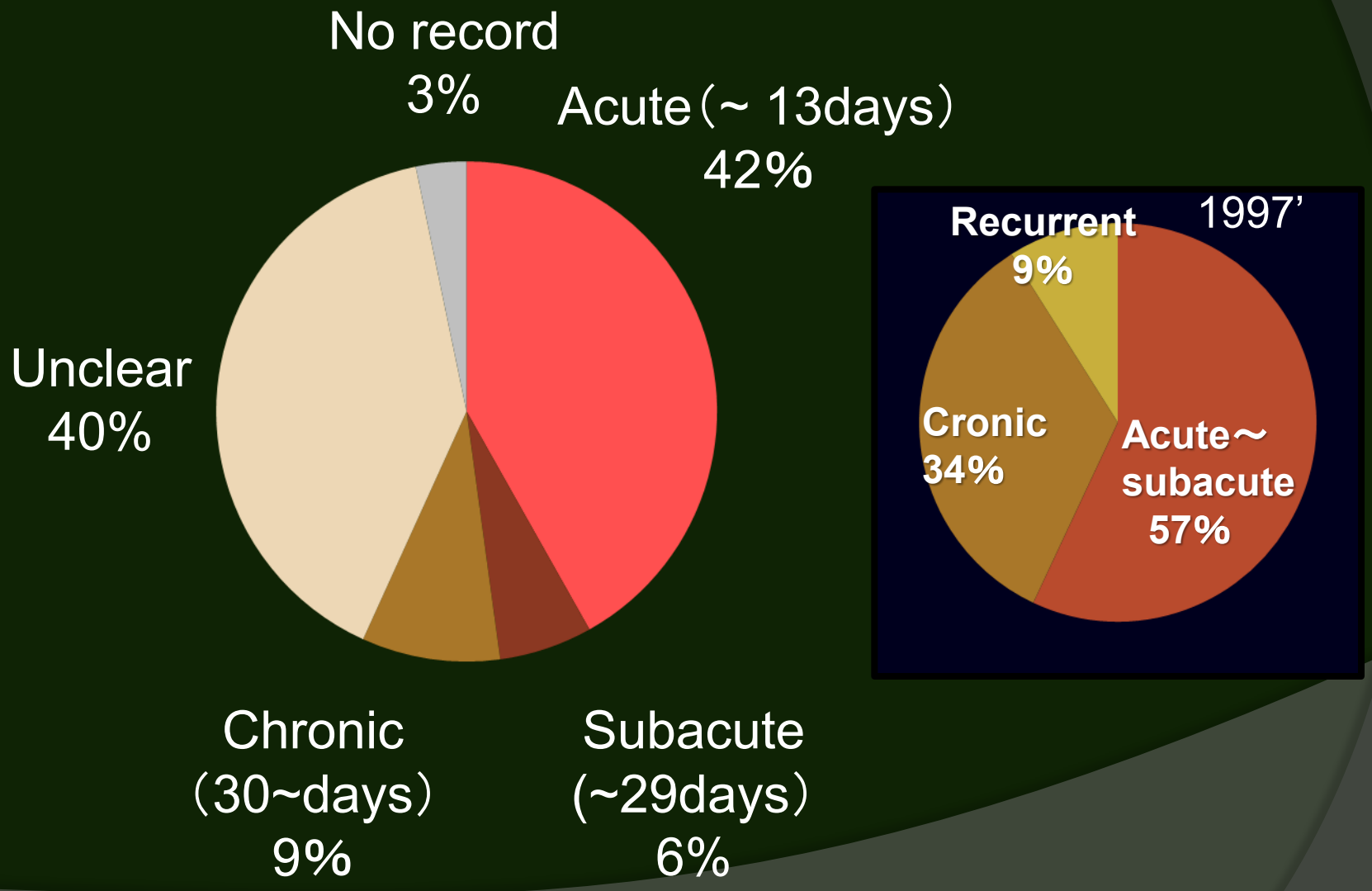
2004年
1~ 36(9.9) case / insti.

（59.6) years

Age frequency



Onset of DVT cases



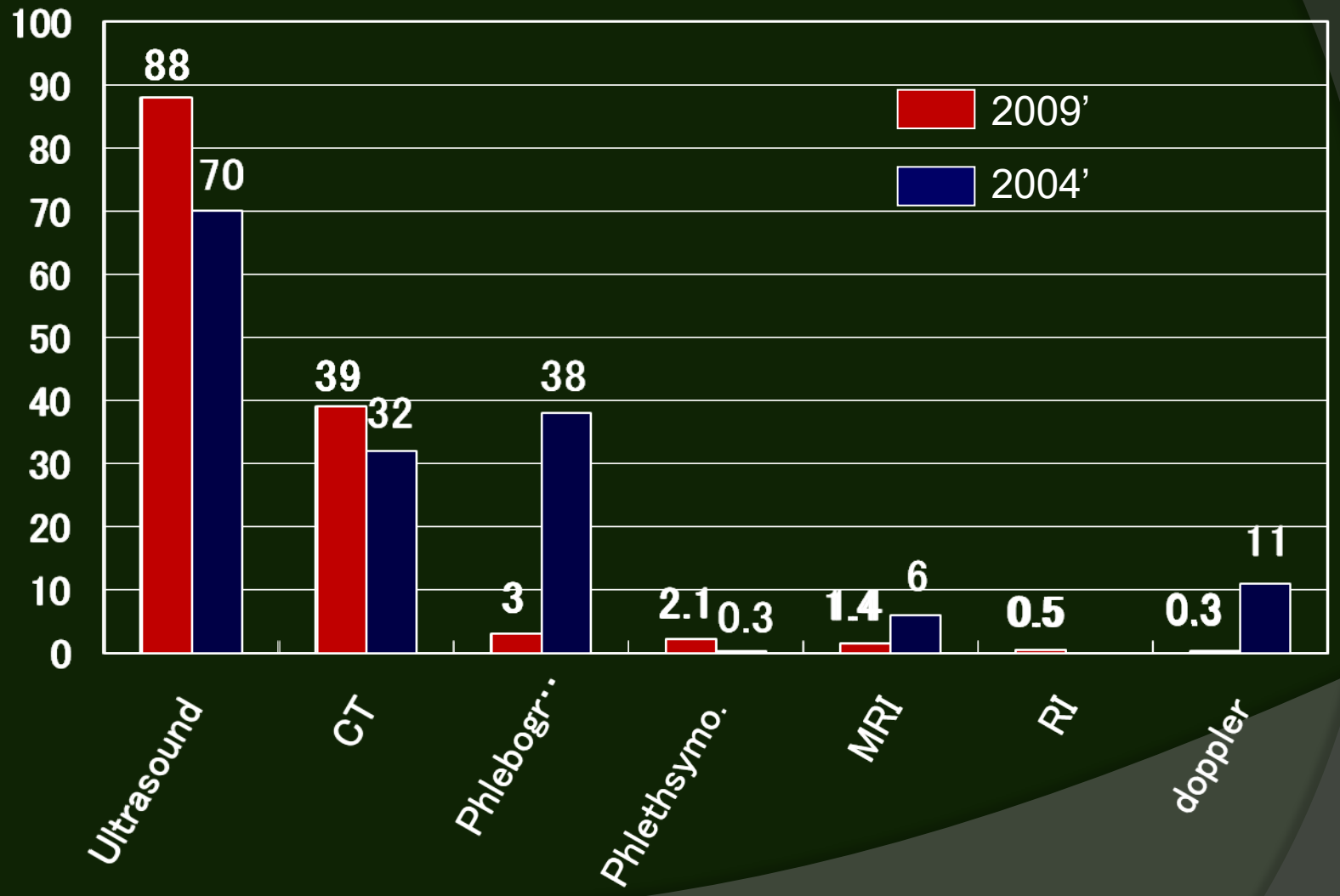
Specific Risk Factors for DVT

Risk factors	n = 1162 Patients No.(%)	2004’
Surgery	444 (38.2)	(23.9)
Malignant disorder	192 (16.5)	(18.2)
Immobilization	145 (12.5)	(15.6)
Trauma	40 (3.4)	(6.8)
Iliac compression	34 (2.9)	
Intravenous catheter	29 (2.5)	(3.7)
Dehydration	27 (2.3)	(4.9)
Cast fixation	15 (1.3)	
Pregnancy	13 (1.1)	(3.4)
Long flight	10 (0.9)	(1.5)

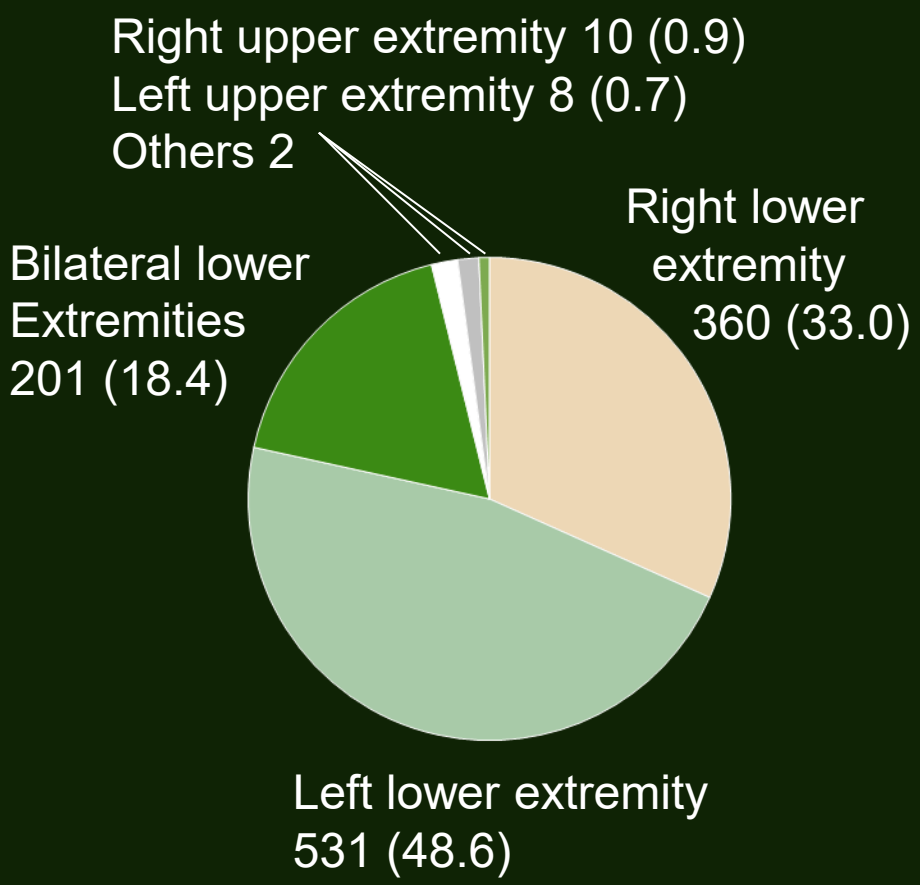
Concomitant and Subsequent Diseases

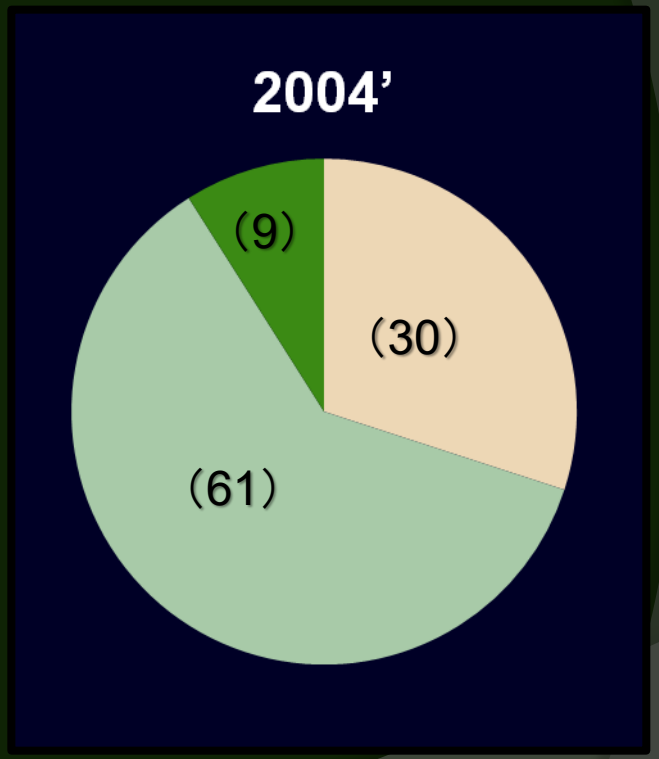
Disease	n = 1162 Patients No.(%)	2004’
Pulmonary embolism	174 (15.0)	(22.6)
Stroke	43 (3.7)	(6.4)
Chronic renal failure	8 (0.7)	(1.5)
Atrial fibrillation	8 (0.7)	
Thrombophlebitis	5 (0.4)	
SLE	2 (0.2)	
Inflammatory enteric d.	0	

Diagnostic Methods for DVT

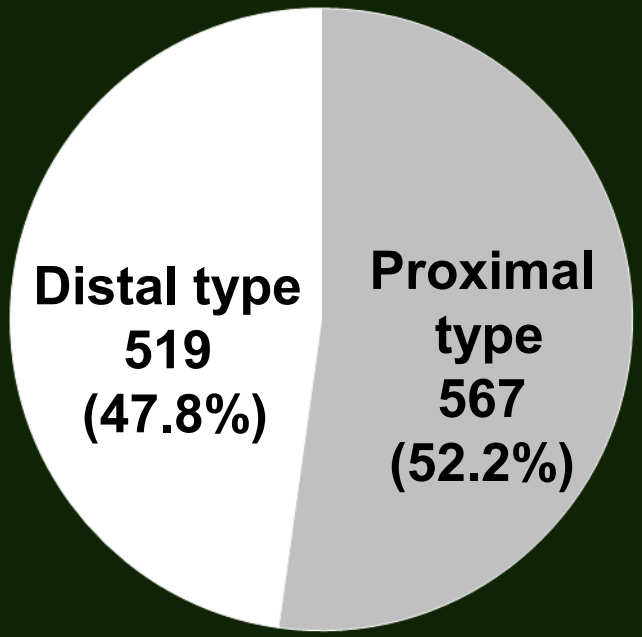


Distribution of Deep Vein Thrombosis I

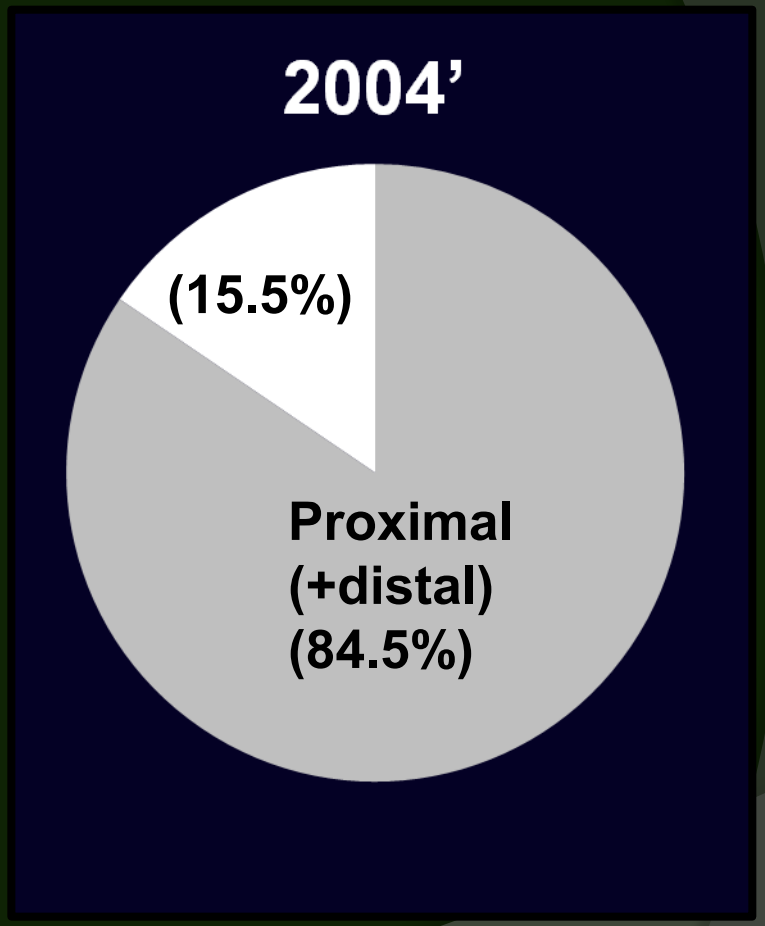




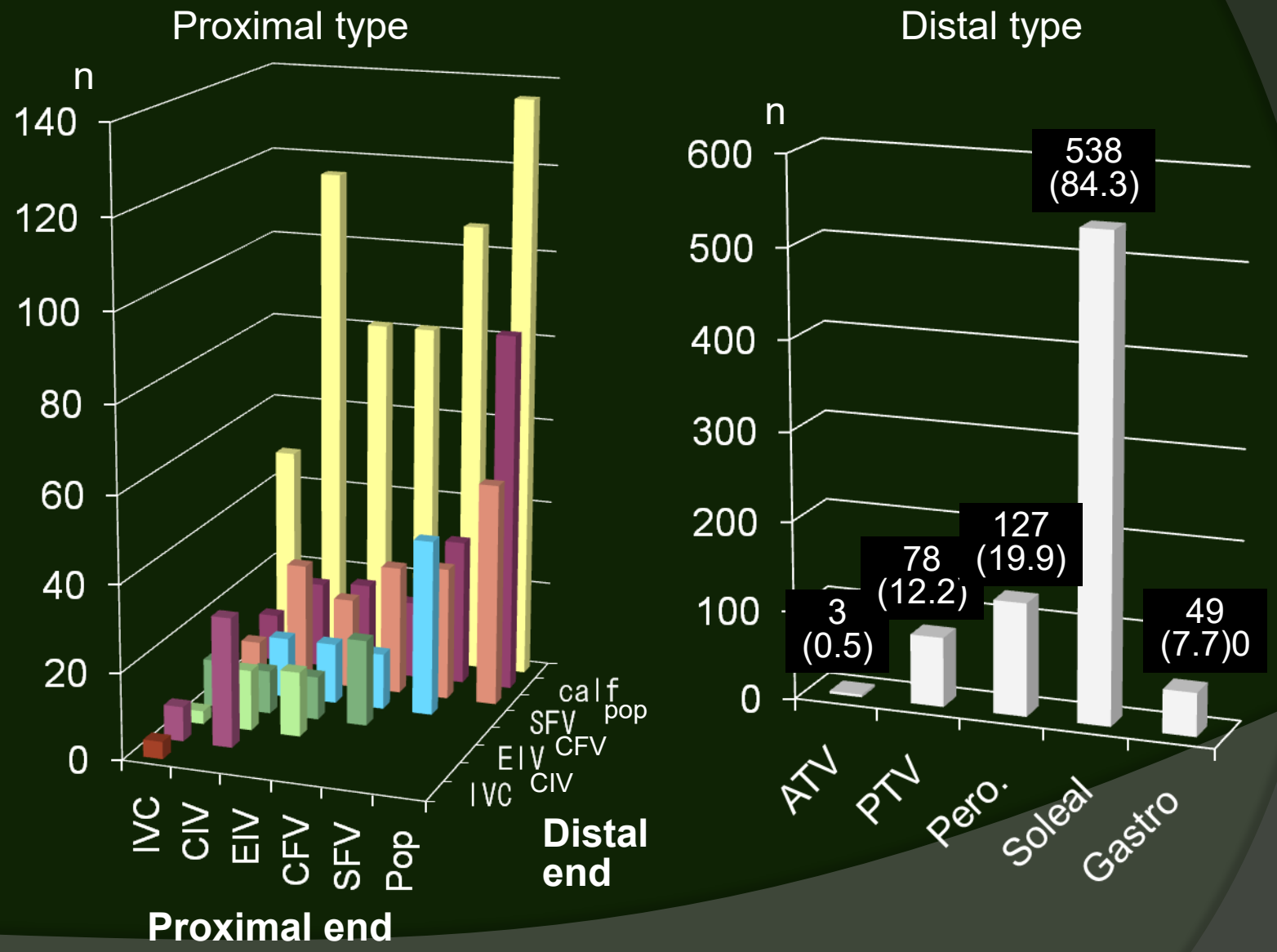
Distribution of DVT II



n = 1086



Distribution of DVT III



Medicinal treatment for DVT

Total cases	n = 901 Patients No.(%)	2004’
Medicinal treatments	728 (80.8)	473 (92.7)
Unfractionated heparin	514 (57.0)	312 (61.2)
dose 3,000 - 38,400 (mean 13,137) U/day		
duration 1 - 50 (mean 8.9) days		
Low molecular weight heparin	36 (4.0)	28 (5.0)
Urokinase	100 (11.1)	250 (49.0)
dose 12,000-960,000 (mean 366,093) U/da		
duration 1 - 16 (mean 5.7) days		
Tissue plasminogen activator	15 (1.7)	4 (0.8)
Warfarin	981 (75.6)	393 (77.1)
PT-INR 1.0 - 3.1 (mean 1.9)		

Surgical Treatments for DVT

Total cases	n = 901 Patients No.(%)	2004 ‘
Surgical treatments	14 (1.6)	15 (2.9)
Thrombectomy	14 (1.6)	14 (2.7)
Thrombectomy plus stent	7 (0.8)	
Bypass operation	2 (0.2)	1 (0.8)
A-V shunt	1 (0.1)	
Ligation of vein	0	

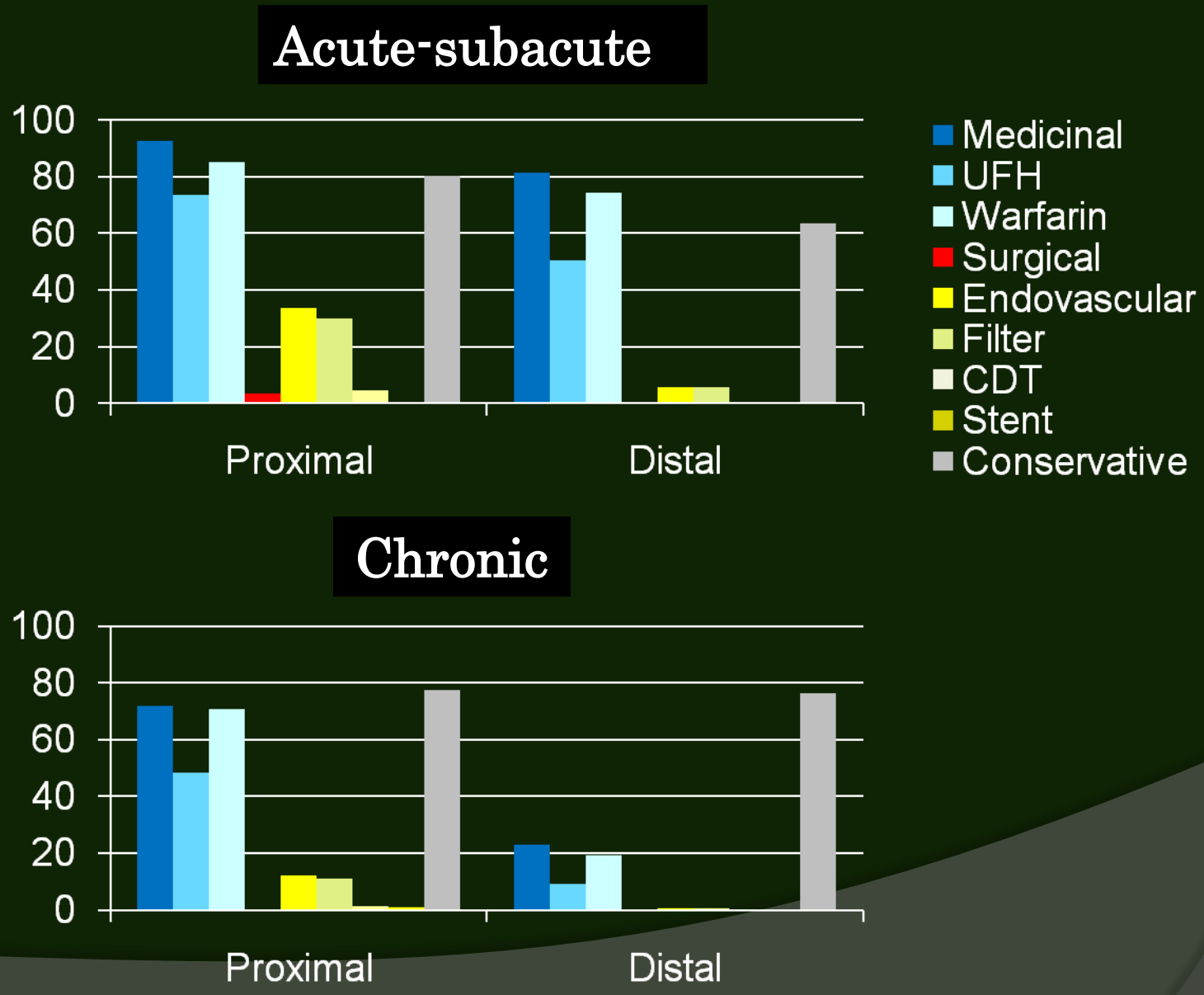
Endovascular Treatments for DVT

Total cases	n = 901 Patients No.(%)	
Endovascular treatments	162 (18.0)*	2004’
CDT**	22 (2.4)	46 (9.0)
Stent	3 (0.3)	5 (1.0)
IVC filter	155 (17.2)	130 (24.0)
retrievable type	103 (66.5)***	
permanent type	33 (21.3)***	(50.0)
temporary type	15 (9.7)***	(44.0)
no record	4 (2.6)**	

Conservative Treatments for DVT

Total cases	n = 901 Patients No.(%)	2004’
Conservative treatments	879 (97.6)	(70)
Elastic stocking	799 (88.7)	
Elastic bandage	152 (16.9)	
Elevation of lower limb	185 (20.5)	
Bed rest	79 (8.8)	

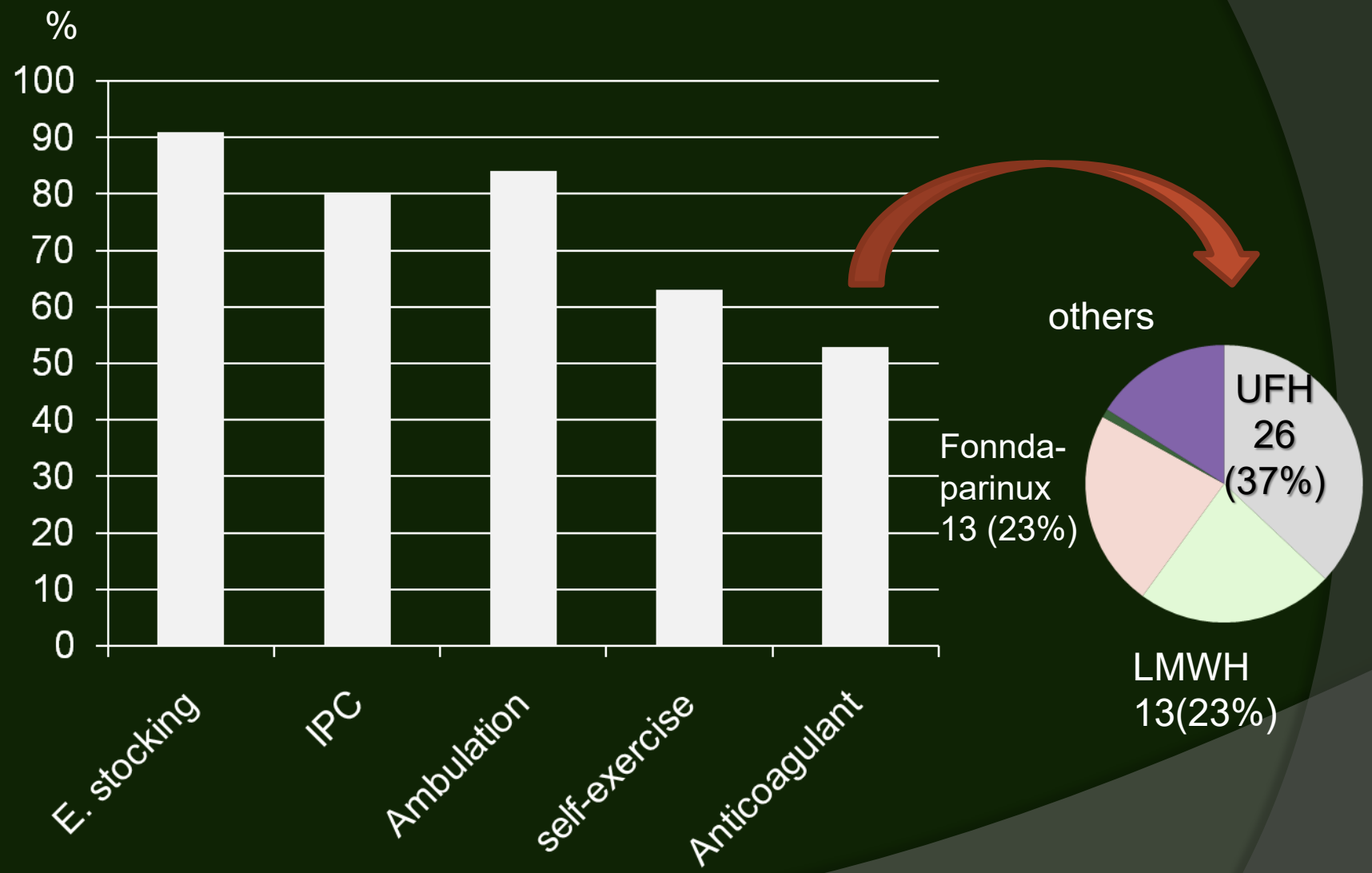
Onset, Anatomical Distribution and Treatments



Prophylactic Procedures Enforcements

Question	Institutions (%)
The present situation of prophylactic procedures	
unified procedures in the whole hospital	29 (48)
Other procedures of each department	30 (50)
Do you change procedures according to a patient risk?	
Different procedures according to a risk grade	53 (76)
Constant procedure	11 (16)
Do you use unfractionated heparin for high or higher risk?	
Yes	40 (57)
No	18 (25)

Prophylactic Procedures for VTE



Conclusion

A questionnaire survey was performed for the members of the Japanese Society of Phlebology.

1) The number of DVT patients has increased and the frequency of the distal type especially increased.
2) Anticoagulant therapy is most common medical treatment.
3) The total frequency of vena cava filter was similar to our previous survey; however, the use ratio of retrieval type increased comparatively.
4) DVT prophylaxis is not known to all medical personnel.
5) Prophylactic methods for VTE were used in most institutions, however, the rate of anticoagulation administration was not high and is considered to be insufficient in Japan.

アンケート協力施設一覧（アイウエオ順）

北海道　旭川医科大学付属病院、 旭川赤十字病院、 我汝会えにわ病院、
札幌厚生病院、 名寄市立総合病院
東北　会津中央病院、 岩手県立病院、 公立刈田総合病院、 弘前大学医学部付属病院、
福島県立医科大学付属病院、 盛岡友愛病院、 米沢市立病院
関東　愛誠病院、 菊名記念病院、 杏林大学医学部付属病院、 九段坂病院、
国際医療福祉大学病院、 国際医療福祉大学三田病院、 済生会川口総合病院、
埼玉医大総合医療センター、 榊原記念病院、 仁愛会茅根病院、
聖マリアンナ医科大学付属病院、 千葉県循環器病センター、つくば血管センター、
東京医科歯科大学付属病院、 東京医科大学病院、 東京大学医学部付属病院、
東名厚木病院、 都庁前血管外科・循環器内科、 平塚共済病院、 広田内科クリニック、
水戸赤十字病院、 横浜南共済病院
東海　久美愛厚生病院、 クリニックかねこ、 名古屋赤十字病院、 名古屋大学付属病院、
浜松医科大学付属病院、 浜松赤十字病院、 袋井市民病院、
藤田保健衛生大学第二教育病院、 三重大学付属病院
北陸　金沢医科大学付属病院、 金沢循環器病院、 かみいち総合病院、 市立敦賀病院、
市立砺波総合病院、 高岡市民病院、 立川綜合病院、 三島中央病院
近畿　市立豊中病院、 済生会和歌山病院、 高槻赤十字病院、 西の京病院、
東宝塚さとう病院、 兵庫医科大学付属病院
四国　高知大学付属病院
中国　岡山労災病院、 川崎医科大学付属病院、 倉田皮膚科・乳腺科、
済生会山口総合病院、 日立記念病院、 広島逓信病院
九州　鹿児島県立大島病院、 久留米大学病院、 豊見城中央病院、
ながさきハートクリニック、 南部徳洲会病院、 松本外科医院