

I: 記載されているIとその形式	C: 記載されているCとその形式
ethanol sclerotherapy	
硬化療法、エタノールやSTS or sodium morrhuate	なし
硬化療法、ポリドカノール(フォーム)	なし
硬化療法、ポリドカノール(POL) VS EO	液状硬化剤による硬化療法
硬化療法、フォームポリドカ	なし
Ethanolによる硬化療法	なし
硬化療法、エタノール	比較群なし

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<p>検討項目 : Clinical result: symptomatic, functional, and cosmetic improvement after PES. To determine predictors of a good response to PES, uni- and multivariate analysis were conducted on demographics (age, gender), clinical features of VM(location, size, depth of involved tissue, presence of associated lymphatic malformation, MRI findings; well-defined vs ill-defined margin, characteristics of venous drainage during PES) and treatment variables (number of PES sessions,maximal concentration and dosage of ethanol used in PES, adjuvant therapy. 結果: symptomatic, functional, and cosmetic improvement was 28%, 27%, and 34%. 42 patients (27%) had markedly improvement. 合併症 ; There were a total of 20 patients with nerve palsies</p>		<p>good clinical outcome の予測因子:</p>
	除外	<p>サンプル数が少ない、重篤な合併症なし</p>
<p>2患者で疼痛は完全消失、他の13患者では疼痛改善がえられた。1例で4,5指の運動障害を生じ、8ヶ月後に軽快。1例で膿瘍形成し外科的治療を要した。1例で伸筋腱障害による末節骨の一時的伸展障害を生じた。</p>		
	除外	<p>標準的手技から逸脱している</p>
<p>VMは44%で消失、28%で縮小した。最多の合併症は局所疼痛で82%で生じたが1週間以内に消失。血尿が14%でみられた。皮膚障害が3例で起きたが、皮膚壊死は見られず。深部静脈血栓や肺塞栓、脳梗塞などの重篤な合併症はなし。</p>		
<p>POL49例、EO40例。POLの方が使用量少ない。POLの方がtotal disappearanceとpartial recanalizationの割合が有意に高い(P=0.002)。</p>	除外	<p>コクラン文献と重複のため。</p>
<p>VMは縮小、合併症なし</p>		
<p>全例でgood、1例で2年後再治療、重大な合併症なし</p>		
	除外	<p>ビジパークとエタノールを混和すると結晶化するという報告。</p>
<p>エタノールによる重篤な心肺合併症あり</p>		

文献 No.	文献情報				
	ID	Lang uage	Authors	Title	Journal
	20483863	eng	Wang YA, Zheng JW, Zhu HG, Ye WM, He Y, Zhang	Sclerotherapy of voluminous venous malformation in head and neck with absolute ethanol under digital subtraction angiography guidance.	Phlebology
	24461130	eng	Vogelzang RL, Atassi R, Vouche M, Resnick S, Salem	Ethanol embolotherapy of vascular malformations: clinical outcomes at a single center.	J Vasc Interv Radiol
	11296353	eng	Villavicencio	Primum non nocere: Is it always true? The use of absolute ethanol in the management of congenital vascular malformations.	J Vasc Surg
	24196269	eng	van der Vleuten CJ, Kater A, Wijnen MH, Schultze Kool LJ, Rovers	Effectiveness of sclerotherapy, surgery, and laser therapy in patients with venous malformations: a systematic review.	Cardiovasc Intervent Radiol
	2090706	eng	van der Stricht	The sclerosing therapy in congenital vascular defects.	Int Angiol
	19582463	eng	Uehara S, Osuga K, Yoneda A, Oue T, Yamanaka H, Fukuzawa	Intralesional sclerotherapy for subcutaneous venous malformations in children.	Pediatr Surg Int
	17377179	eng	Tan KT, Kirby J, Rajan DK, Hayeems E, Beecroft JR, Simons	Percutaneous sodium tetradecyl sulfate sclerotherapy for peripheral venous vascular malformations: a single-center experience.	J Vasc Interv Radiol
	15242036	jpn	Tachibana K, Kobayashi S, Kojima T, Kaseno S, Kemmotsu	[Pulmonary emboli in sclerotherapy for peripheral vascular malformations under general anesthesia; a report of two cases].	Masui
	7899838	eng	Svendsen P, Wikholm G, Fogdestam I, Naredi S, Eden	Instillation of alcohol into venous malformations of the head and neck.	Scand J Plast Reconstr Surg Hand Surg

Year	Volume	Pages	研究デザイン	P: サンプル数、セッティング、Pの特徴
2010	25(3)	138-44	症例集積	23 patients with head and neck VMs
2014	25(2)	206-13; quiz 214		
2001	33(4)	904-6	その他(invited comment)	
2014	37(4)	977-89	その他(システマティックレビュー)	PubMed (1966 to April 2012) and Embase (1988 to April 2012) using the following terms—“VM”, “treatment,” “sclerotherapy,” “ethanol,” “polidocanol,” “aetoxisclerol,” “bleomycin,” “pingyangmycin,” “Ethibloc,” “sodium tetradecyl sulphate,” “laser,” and “surgery”—as well as their synonyms to identify papers on the treatment of VMs.
1990	9(3)	224-7		
2009	25(8)	709-13	症例報告	eight children with VMs(19 therapeutic sessions in total)
2007	18(3)	343-51	症例集積	72、静脈奇形 下肢42例、上肢19例、体幹9例、多部位2例
2004	53(6)	645-9	症例集積	2、静脈奇形 下腿
1994	28(4)	279-84	症例集積	頭頸部VM44例、うち31例にアンケート調査

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ethanol sclerotherapy	
sclerotherapy using polidocanol, ethanol and ethanolamine oleate	
硬化療法、STS	比較群なし
硬化療法 エタノール	比較群なし
Ethanolによる硬化療法、8例で手術併用	なし

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<p>検討項目 : number of sessions, mean total dose of polidocanol, Clinical (satisfaction of patient/family) and MRI evaluation、 complication 結果 : good。 17 patients(73.9%) achieved excellent responses and 6patients(26.1%) achieved good responses in MRI 合併症 ; no major complications. facial palsy, mucosal necrosis, hemoglobinnuria</p>		
	除外	不採用 対象疾患が混在しており outcome評価がVM以外も含まれている
	除外	硬化療法と硬化剤選択のためのコメント。エタノールはVM治療の経験豊富な術者であるべきや、フォームについて述べられている。新たな研究結果はないため除外しました。
<p>検討項目 : Thirty-five studies were identified studying the effectiveness of eight treatments: sclerotherapy/embolization with ethanol, gelified ethanol, bleomycin, polidocanol, sodium tetradecyl sulfate (STS), Ethibloc, surgery, and laser therapy。 病変の縮小について : The average biased reported success rates for ethanol, gelified ethanol, bleomycin, polidocanol, STS, Ethibloc, surgery, and laser therapy were 74, 89, 88, 90, 86, 65, 90, and 94 %, respectively</p>		laserやsurgeryを含めたreview 結論としてはThe choice for treatment should remain a shared decision between the patient and the multidisciplinary treatment group until further evidence is available. From a cost perspective, STS or polidocanol should be the treatment of choice
	除外	具体的手法などへの言及がない
<p>検討項目 : sclerorants, number of session, evaluation of clinical symptoms, efficacy of the treatment(MRI) 結果 : Clinical symptoms, such as bulging and pain were improved in 14 out of 19 sessions of treatment. MRI examination revealed size reduction in 11 out of 19 sessions of treatments 合併症 ; swelling and pain were the most common complications (55%) immediately after the treatment, Hematuria was seen twice in one patient (10%) who received the injections of ethanalamineoleate immediately after the procedure</p>		ethanol sclerotherapy後のhematuriaが一件あり
<p>症状に関しては、11例(15%)でcured(消失)、20例(28%)でgood(改善)、17例(24%)でimproved(やや改善)、20例(28%)でno change(変化なし)、4例(5.6%)でworse(増悪)。サイズは19例(54%)で縮小、11例(31%)で変化なし、5例(14%)で増大。合併症はminor 7例のみ(皮膚壊死5例、神経障害1例、軽度のアレルギー反応1例)、重篤な合併症なし。</p>		
<p>術中肺塞栓を生じたが、全例で回復。</p>		
<p>84%でgood or excellent、合併症の詳しい記載なし</p>		

文献 No.	文献情報				
	ID	Lang uage	Authors	Title	Journal
	9211773	eng	Suh JS, Shin KH, Na JB, Won JY, Hahn	Venous malformations: sclerotherapy with a mixture of ethanol and lipiodol.	Cardiovasc Intervent Radiol
	19962811	eng	Su L, Fan X, Zheng L, Zheng	Absolute ethanol sclerotherapy for venous malformations in the face and neck.	J Oral Maxillofac Surg
	25271855	eng	Stuart S, Barnacle AM, Smith G, Pitt M, Roebuck	Neuropathy after sodium tetradecyl sulfate sclerotherapy of venous malformations in children.	Radiology
	22341629	eng	Stimpson P, Hewitt R, Barnacle A, Roebuck DJ, Hartley	Sodium tetradecyl sulphate sclerotherapy for treating venous malformations of the oral and pharyngeal regions in children.	Int J Pediatr Otorhinolaryngol

Year	Volume	Pages	研究デザイン	P: サンプル数、セッティング、Pの特徴
1997	20(4)	268-73	症例集積	17例
2010	68(7)	1622-7	症例集積	A total of 60 consecutive patients with VMs of the face and neck region
2015	274(3)	897-905	症例集積	Two hundred four patients (children) of VMs underwent 647 procedures
2012	76(4)	569-73	症例集積	Twelve patients presenting with venous malformations in the oral and pharyngeal.

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硬化療法、エタノール・Lip (9:1)	なし
absolute ethanol under the guidance of digital subtraction angiography	
sodium tetradecyl sulfate (STS) sclerotherapy	
3% sodium tetradecyl sulphate (STS) foam	

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<p>17例に22回治療。全例で疼痛緩和された。疼痛を10 point scale (NRS?) で評価し、Excellent 4, Good 8, Fair 6, Poor 1, Failere 2, データlost1。重篤な合併症なし。</p>		
<p>検討項目 : Magnetic resonance imaging was used to evaluate the clinical outcomes of sclerotherapy. Complications were also evaluated. 結果 : all the patients had complete or partial resolution of their clinical symptoms and signs. 41 patients (68.33%) achieved complete volume reduction (Fig 2), 15 (25.00%) had a marked response, and 4 (6.67%) had a moderate response 合併症 ; Of the 60 patients, 6 (10%) had minor complications, and no procedure-related mortality occurred. The minor complications included skin necrosis and transient facial nerve palsy. Four cases of local skin necrosis healed with wound dressing alone. Two patients developed facial nerve palsy after treatment and recovered after 1 to 3 months of conservative management with corticosteroids and neurotrophic drugs. No permanent facial nerve palsy occurred in this series. Transient hemoglobin-uria was found in 5 patients (8.33%) after ethanol treatment. Renal impairment as a result of hemoglobinuria did not occur in any patient during the follow-up period.</p>		
<p>検討項目 : evaluation of technical and clinical success and complication (focusing particularly on nerve injury) 結果 : clinical success was achieved in 174 of 204 patients (85.3%). 合併症 ; Of the 647 procedures performed, 37 (5.7%) were associated with a complication including 11 cases of excessive swelling, nine cases of skin injury, two patients with infection, and two with pain. Motor and/or sensory nerve injuries occurred after seven procedures (1.1%). Five of the seven children had undergone at least one previous sclerotherapy procedure. Neuropathy resolved spontaneously in four patients and partially recovered in three, of whom two underwent surgery. Surgery included debridement of necrotic tissue, carpal tunnel decompression, and external neurolysis. In one patient (patient 7 in Table 4), the likely mechanism of nerve injury was identified during fluoroscopy at the time of the procedure, when STS foam was seen to reflux very briefly into a small artery.</p>		
<p>検討項目 : site/size of lesions, number and duration of treatments, treatment response and complications. 結果 : The overall response rate was 83% (10/12) 合併症 ; one patient suffered bleeding during transcutaneous injection.</p>		

文献 No.	文献情報				
	ID	Lang uage	Authors	Title	Journal
	20044505	eng	Spence J, Krings T, terBrugge KG, da Costa LB, Agid	Percutaneous sclerotherapy for facial venous malformations: subjective clinical and objective MR imaging follow-up results.	AJNR Am J Neuroradiol
	20848431	eng	Spence J, Krings T, TerBrugge KG, Agid	Percutaneous treatment of facial venous malformations: a matched comparison of alcohol and bleomycin sclerotherapy.	Head Neck
	15750939	eng	Smithers CJ, Vogel AM, Kozakewich HP, Freedman DA, Udagawa T, Burrows PE, Fauza DO, Fishman	Enhancement of intravascular sclerotherapy by tissue engineering: short-term results.	J Pediatr Surg

Year	Volume	Pages	研究デザイン	P: サンプル数、セッティング、Pの特徴
2010	31(5)	955-60	症例集積	thirty-one patients with craniofacial venous malformations. with preoperative MRI imaging
2011	33(1)	125-30	症例集積	retrospective review of 17 cases of facial VMs treated by alcohol sclerotherapy
2005	40(2)	412-7		

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<p>percutaneous sclerotherapy by using bleomycin</p>	
<p>alcohol sclerotherapy</p>	<p>同施設内のreview board からbleomycinで治療した病変の中で、今回対象としたアルコールで治療した病変と complaint, size, location, and level of infiltration の一致した病変を選択。病変毎に1対1で比較。</p>

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<p>検討項目 : MR findings and clinical results of treatment were retrospectively reviewed. Clinical results were based on the physician's physical examination and interview of the patient; these were classified as worse, unchanged, or better. Objective results on MR imaging were classified as worse, no change, minor improvement(50% decrease in size), marked improvement (50% decrease), or cure. 結果 : Subjectively, in 29 of 32 (90.6%) cases the patients and in 30 of 32 (93.9%) cases the clinicians thought that the lesions improved. Twenty-one of 32 lesions (65.6%) showed objective improvement on MR imaging (Figs 1 and 2). Of these, 10 of 32 (31.3%) showed minimal decrease in size and 11 of 32 (34.3%) showed marked decrease. Eleven of 32 (34.4%) lesions showed no change on MR imaging. None of the VMs were worse; however, neither was there complete cure. 合併症 : Four patients developed complications secondary to treatment, none of them permanent. Of these, 1 developed an infection of the orbit that resolved with oral antibiotic treatment, 1 experienced moderate nausea that resolved after several days without treatment, 1 experienced severe nausea and vomiting that resolved with intravenous fluid administration, and 1 had temporary skin discoloration over the injection site that lasted for 1 month and resolved without treatment</p>		<p>縮小の程度と症状の緩和度は必ずしも相関しない。</p>
<p>検討項目 : treatment details, outcomes, adverse effect and complications結果 : All 17 (100%) patients treated with alcohol experienced clinical improve- ment, with 100% agreement between patients and clinicians. Fifteen of 17 patients (88.2%) treated with bleomycin experienced improvement after treatment and 2 of 17 lesions (11.8%) were unchanged, with 100% agreement between patients and clinicians. Nine of 17 patients (52.9%) treated with alcohol and 13 of 17 patients (76.5%) treated with bleomycin had MR imaging of their lesions done before and from 6 to 8 weeks subsequent to treatment. Most of the time, imaging demonstrated a decrease in lesion size after treatment, and there was no difference between the bleomycin and alcohol sclerotherapy groups. 合併症 ; events included skin discoloration at the injection site (that resolved spontaneously after 4 weeks); nausea; and a salty taste in the mouth, resolving without interven- tion after 3 days and local swelling that improved without treatment after 1 week. The only complica- tion of bleomycin treatment was severe nausea and vomiting in 1 patient, which precipitated an emer- gency room visit, where IV fluids were administered. muscle function, but was left with ‘ ‘crocodile tears’ ’ ; 2 patients had serious local swelling and pain that was more severe than usual, lasted lon- ger than the typical 3 to 7 days postinjection, and which required additional treatment. Both were treated with steroids, which resulted in resolution in 1 patient, with the second requiring surgical excision of the swollen and thrombosed lesion, located on the tongue. One patient had an area of necrosis at the injection site that resolved without treatment after 3 months.</p>		
	除外	動物実験

文献 No.	文献情報				
	ID	Lang uage	Authors	Title	Journal
	15991171	eng	Smithers CJ, Vogel AM, Kozakewich HP, Freedman DA, Burrows PE, Fauza DO, Fishman	An injectable tissue-engineered embolus prevents luminal recanalization after vascular sclerotherapy.	J Pediatr Surg
	9232699	eng	Siniluoto TM, Svendsen PA, Wikholm GM, Fogdestam I, Edstrom	Percutaneous sclerotherapy of venous malformations of the head and neck using sodium tetradecyl sulphate (sotradecol).	Scand J Plast Reconstr Surg Hand Surg
	9372823	eng	Shireman PK, McCarthy WJ, Yao JS, Vogelzang	Treatment of venous malformations by direct injection with ethanol.	J Vasc Surg
	10429431	jpn	Shirai H, Imai S, Kajihara Y, Yamashita T, Goto T, Tokiya R, Koshima I, Moriguchi	[Usefulness of percutaneous sclerosing treatment for low-flow vascular lesions].	Nihon Igaku Hoshasen Gakkai Zasshi
	15717471	jpn	Shimo T, Hidaka K, Yanagawa S, Kadota W, Kawakami S, Tsuchida	[Two episodes of cardiac arrest in a boy receiving sclerotherapy with polydocanol—a case report].	Masui
	21458186	eng	Schumacher M, Dupuy P, Bartoli JM, Ernemann U, Herbreteau D, Ghienne C, Guibaud L, Loose DA, Mattassi R, Petit P, Rossler JK, Stillo F, Weber	Treatment of venous malformations: first experience with a new sclerosing agent—a multicenter study.	Eur J Radiol
	21109077	eng	Rosbe KW, Hess CP, Dowd CF, Frieden	Masseteric venous malformations: diagnosis, treatment, and outcomes.	Otolaryngol Head Neck Surg
	15544907	eng	Rimon U, Garniek A, Galili Y, Golan G, Bensaid P, Morag	Ethanol sclerotherapy of peripheral venous malformations.	Eur J Radiol
	6836059	eng	Riche MC, Hadjean E, Tran-Ba-Huy P, Merland	The treatment of capillary-venous malformations using a new fibrosing agent.	Plast Reconstr Surg
	15323391	eng	Rautio R, Saarinen J, Laranne J, Salenius JP, Keski-Nisula	Endovascular treatment of venous malformations in extremities: results of sclerotherapy and the quality of life after treatment.	Acta Radiol
	15624517	eng	Rautio R, Laranne J, Kahara V, Saarinen J, Keski-Nisula	Long-term results and quality of life after endovascular treatment of venous malformations in the face and neck.	Acta Radiol

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2005	40(6)	920-5		
1997	31(2)	145-50	症例集積	38患者、顔面頭頸部
1997	26(5)	838-44	症例集積	12例
1999	59(7)	325-32	症例集積	14例28病変
2005	54(1)	57-9	症例報告	1、静脈奇形 顔面・頸部・口腔内
2011	80(3)	e366-72	症例集積	75 patients in 172 sessions.
2010	143(6)	779-83		
2004	52(3)	283-7	症例集積	21、静脈奇形 四肢14、顔面頸部5、胸部2
1983	71(5)	607-14	症例集積	VM6例
2004	45(4)	397-403	症例集積	24、静脈奇形 四肢
2004	45(7)	738-45	症例集積	20、静脈奇形 顔面頸部

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硬化療法 (STS)、surgery	なし
硬化療法、エタノール	なし
硬化療法、主にポリドカ、一部でエタノール、NBCAを使用した	なし
硬化療法 ポリドカノール	比較群なし
a new sclerosing gel of absolute ethanol in the percutaneous treatment of venous malformations (VM)	
硬化療法 エタノール	比較群なし
Ethiblocによる硬化療法	なし
硬化療法 エタノール	比較群なし
硬化療法 エタノール	比較群なし

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	除外	動物実験
質問票による評価(excellent, good, no change, worse)。回答は34/38。うち硬化療法のみが31例、硬化療法+外科的手術が3例。Excellent 2, good 21, ??ed(読めませんでした、すみません) improvement 7, no change 3, worse 1。1例で片側の失明を生じた。他に、軽度の一時的顔面神経麻痺1例、6ヶ月以上の腫脹が1例。		
主な症状は痛みと出血。10例で改善したが、硬化療法不成功1例、効果不十分で症状持続1例。重篤な合併症の記載はなし。		
28病変中24病変が縮小 28病変中24病変で症状改善 エタノール、NBCA使用で潰瘍形成あり		
ポリドカノールによる心停止		
検討項目: Therapeutic outcome, adverse effect 結果: therapeutic outcome was complete (score2) and partial(score1) in 28 (37%) and 42 patients (56%), respectively, whereas treatment failure (score0) was observed in 5 patients(7%). 合併症: 21 mild isolated pain, and 4 inflammatory reactions or swellings 7 skin necroses (4%), 7 compressive neuropathies (4%), 4 product leakage/fistula (2.3%), 2 fibrous or granulomatous tissue		コクラン文献と重複。こちらを採用。
	除外	不採用 画像followもできておらず、合併症についての記載もない
17例で症状の完全あるいは部分的な改善。四肢の4例では症状改善は得られず。肺高血圧が1例、肺塞栓が1例、3例で皮膚障害が出現するも、最終的に回復。		
excellent results, 合併症なし		
2例で元々症状なし、4例で症状不変、16例で症状改善、2例で一過性に改善したが再発。1例で一過性の軽度な橈骨神経麻痺、1例で皮膚壊死。20の質問によるQOL評価では、概ね良好な結果だが、筋肉を含む病変や大きい病変ではQOLは低かった。		
1例で症状の消失、7例で症状の改善・病変縮小、3例で症状の改善・病変は不変、3例で症状の持続・病変縮小、6例で症状・病変いずれも不変。1例で一過性の顔面神経麻痺。20の質問からなる表を用いてQOL評価。治療後のQOLは健常人とほぼ同等		

文献 No.	文献情報				
	ID	Lang uage	Authors	Title	Journal
	23759722	eng	Qiu Y, Chen H, Lin X, Hu X, Jin Y, Ma	Outcomes and complications of sclerotherapy for venous malformations.	Vasc Endovascular Surg
	12557065	eng	Puig S, Aref H, Chigot V, Bonin B, Brunelle	Classification of venous malformations in children and implications for sclerotherapy.	Pediatr Radiol
	15981122	eng	Pascarella L, Bergan JJ, Yamada C, Mekenas	Venous angiomata: treatment with sclerosant foam.	Ann Vasc Surg
	21049209	eng	Orlando JL, Caldas JG, Campos HG, Nishinari K, Wolosker	Outpatient percutaneous treatment of deep venous malformations using pure ethanol at low doses under local anesthesia.	Clinics (Sao Paulo)
	20484881	eng	Orlando JL, Caldas JG, Campos HG, Nishinari K, Wolosker	Ethanol sclerotherapy of superficial venous malformation: a new procedure.	Dermatology
	25003923	por	Orlando JL, Caldas JG, Campos HG, Nishinari K, Krutman M, Wolosker	Ethanol sclerotherapy of head and neck venous malformations.	Einstein (Sao Paulo)

Year	Volume	Pages	研究デザイン	P: サンプル数、セッティング、Pの特徴
2013	47(6)	454-61	その他(システマティックレビュー)	PubMed was used to search the medical literatures for publication on the combined topics of ‘VMs and sclerotherapy.’ 検索:PUBMED、1986-2011、‘venous malformation,’ ‘low-flow vascular malformation,’ ‘vascular malformation,’ ‘sclerotherapy,’ ‘embolization,’ ‘endovascular,’ ‘percutaneous,’ and ‘NOT arteriovenous.’
2003	33(2)	99-103	症例集積	43患者、小児
2005	19(4)	457-64		
2010	65(9)	837-40	症例集積	Thirty-nine patients with Deep VMs
2010	220(4)	376-80	症例集積	81 SVM patients
2014	12(2)	181-6		